



# HUMAN SETTLEMENTS AND HOUSING FRAMEWORK



**National Development Planning Commission** 

## SPATIAL PLANNING AND HOUSING FRAMEWORK

of the

## GHANA INFRASTRUCTURE PLAN 2018-2047

The Ghana Infrastructure Plan is a companion document of the 40-Year National Development Plan (2018-2057)

It draws substantially from the National Spatial Development Framework (2015-2035) as a critical complement to infrastructure delivery through the efficient use of land and the planning of human settlements, including public transport

#### **ACKNOWLEDGEMENTS**

As a long-term document, the Ghana Infrastructure Plan (GIP) is a framework, or a master plan, for the preparation of medium-term and annual infrastructure plans by successive governments up to 2047, 10 years before the completion of its "mother" document, the *40-Year National Development Plan*. It was prepared with the support of many individuals and institutions. The vision and commitment of both the previous and current leadership of the Commission, particularly chairmen P.V. Obeng, Prof. Kwesi Botchwey, Prof. Stephen Adei, Prof. George Gyan-Baffour, and Dr. Nii Moi Thompson, proved highly valuable from the start to the completion of the GIP.

We wish to express our profound gratitude to the members of the Commission, especially the Energy as well as Infrastructure, Spatial Planning and Human Settlements thematic committees, who rigorously reviewed the plan and provided insightful comments for its preparation and finalisation.

We also acknowledge the team of specialists made up of government experts and consultants, led by Ing. Charles K. Boakye, who brought their vast experience to the preparation of the plan. Special appreciation goes to the Ministries, Departments and Agencies (MDAs) for providing the necessary data for the Plan and participating at every stage in its preparation and completion.

Last but not least, the staff of the Commission deserve special commendation for burning the proverbial midnight oil to ensure that the contents of the plan conformed to the development aspirations of Ghanaians as outlined in the 40-Year National Development Plan, officially known as "Ghana Rising: Long-term National Development Plan of Ghana (2018-2057).

Dr. Audrey Smock Amoah Ag. Director-General National Development Planning Commission Accra

October 2025

#### The GIP has been translated into the following frameworks:

- 1. Energy Infrastructure Framework
- 2. Transport Infrastructure Framework
- 3. Water Infrastructure Framework
- 4. Human Settlements and Housing Infrastructure Framework
- 5. Social, Civic and Commercial Infrastructure Framework
- 6. ICT Infrastructure Framework
- 7. Institutional Development Framework
- 8. Results Framework
- 9. Financing Framework

#### **HUMAN SETTLEMENTS AND HOUSING FRAMEWORK**

#### **TABLE OF CONTENTS**

## **HIGHLIGHTS** 1.0 SPATIAL PLANNING AND HUMAN SETTLEMENTS DEVELOPMENT 1.1 Introduction 1.2 Overview of the Human Settlement Sector 1.3 Proposed Development Strategy 1.4 Key Development Goals and Objectives 1.5 Programme Implementation FrameworK<sup>2</sup> 1.6 Indicators for Human Settlements 1.7 Existing Policies and Institutional Arrangements 2.0 SHELTER AND HOUSING SYSTEMS 2.1 Introduction 2.2 Overview of the Housing Sector 2.3 Housing Demand and Affordability 2.4 Land Requirements for Future Housing Need 2.5 Building Material Requirements 2.6 Basic Services for Housing 2.7 Overview of the Proposed Development Strategy 2.8 Proposed Development Initiatives 2.9 Programme Implementation Framework 2.10 Guidelines for Programme Implementation 2.11 Existing Policies and Institutional Arrangements

#### **LIST OF TABLES**

VII

16

16

19

19

19

24

26

27

28

29

30

31

37

39

Table 1.1: Changes in Settlement Size Classes, 2000-2010	2
Table 1.2: City Regions and the urban network metrics	7
Table 1.3 Key Development Goals and Objectives	8
Table 1.4: Indicators for human settlements in Ghana	16
Table 2.1: Stock of housing and occupancy	20
Table 2.2: National population growth scenarios	21
Table 2.3: Estimated housing needs per household (HH), 2010 to 2047 based on the medium variant	22
Table 2.4: Estimated number of rooms <sup>10</sup> available in Ghana in 2010	22
Table 2.5: Number of rooms per household required at 2 PPR in Urban Ghana in 2010	22
Table 2.6: Number of rooms per household required at 2 PPR in Rural Ghana in 2010	23
Table 2.7: Room needs by extra urban households over 2010 population at 2 PPR	23
Table 2.8: Room needs by additional rural households over Y2010 at 2 PPR	23
Table 2.9: Mortgage Portfolio of Financial Institutions (as at 30th June, 2015)	25
Table 2.10: Estimated minimum and maximum land area required for housing	
using medium population growth scenario (2018-2047)	26
Table 2.11: Estimated land area required for housing among the various administrative regions (2018-	
2047)	27
Table 2.12: Summary of Main Materials Used for Outer Wall	27
Table 2.13: Volume of materials required using medium variant (2018-2047)	28
Table 2.14: Key Development Goals and Objectives	29
Table 2.15: Average Number of Houses to be constructed in the Regions by 2028	35
Table 2.16: Distribution of Eastern Region houses (30,531) to be constructed	
throughout the Districts in 2028	37
Table 2.17: Institutional Arrangements in Housing	40
Table 2.18: Major Stakeholders and Roles in Housing Development	41

#### **LIST OF FIGURES**

Figure 1.1: Settlement Distribution in Ghana	1	Figure 2.5: Phasing Out Slums and Dilapidated Houses in Ghana	32
Figure 1.2: Changes in the Settlement Size Classes in Ghana	2	Figure 2.6: James town and Axim Fishing Communities	33
Figure 1.3: Built up footprint of GAMA between 1990 and 2010	3	Figure 2.7: Mud House in the Middle Belt and Northern Savannah Areas	33
Figure 1.4 The National Spatial Development Framework	5	Figure 2.8: Typical Urban slum areas	34
		Figure 2.9: Extreme poverty stricken areas – eg. Old Fadama	34
Figure 1.5: District Spatial Development Framework	5	Figure 2.10: Green Belts and City Boundary Concept	37
Figure 1.6: National Spatial Development Framework	6	Figure 2.11: Petronia City aerial concept	38
Figure 1.7: Northern Savannah Ecological Zone's SDF (2016-2036)	6	Figure 2.12: Rental Properties in Mixed Use Areas in London, Ontario	38
Figure 1.8: Growing Nodes Linked to Resource Endowment and Locational Advantages	7		
Figure 1.9: Singapore River and City Post Office Area – Before and After	9		
Figure 1.10: Boat Quay – Before and After	9		
Figure 1.11: Road Bridge on Singapore River – Before and After	9	LICT OF DOVEC	
Figure 1.12: Clarke Quay – Before and After	10	LIST OF BOXES	
Figure 1.13: Marina Bay – Before and After	10	Box 1: Urban Densification: The Cape Town Experience	4
Figure 1.14: The Cheonggyecheon River Recovery projectin Seoul – Before and After	10	Box 2: The Grid System	10
Figure 1.15: Manhattan – Satellite Image of Central Park showing the grid system	12	Box 3: Implementing the Grid System: The Manhattan Experience	11
Figure 1.16: 19c Manhattan Chinatown	12	Box 4: Cities Without Slums: Morocco's Success Story	13
Figure 1.17: 21c Manhattan Chinatown	12	Box 5: How Economic Diversification Saved the Image and Economy of Johanesburg	14
Figure 1.18: Models of Industrial Parks	14	Box 6: India Prioritises Housing as Infrastructure	20
Figure 1.19: Proposed Green Infrastructure Network	15	Box 7: Housing Provision in Seoul: The South Korean Experience	23
Figure 1.20: Proposed Agricultural Growth Corridors in Ghana	15	Box 8: Housing Finance - The Malaysian case	25
Figure 2.1: Houses to be delivered	22	Box 9: Housing Provision: The Singaporean Experience	30
Figure 2.2: Housing affordability pyramid <sup>16</sup>	24	Box 10: Addressing Ghana's Failing Traditional Mud Houses	32
Figure 2.3: Growth nodes linked to resource endowments, locational advantages	29	Box 11: The Petronia City Case	38
Figure 2.4: A Building being eroded from its Foundation	32	Box 12: Housing Provision in Turkey	38

#### LIST OF ACRONYMS AND ABBREVIATIONS

AGC Agricultural Growth Corridors

AMA Accra Metropolitan Area

CBD Central Business District

GAMA Greater Accra Metropolitan Area

GIIF Ghana Infrastructure Investment Fund

GIN Green Infrastructure Network

GIP Ghana Infrastructure Plan

KMA Kumasi Metropolitan Area

MDA Ministries, Departments and Agencies

MMDA Metropolitan, Municipal and District Assemblies

NCCP National Climate Change Policy

NSDF National Spatial Development Framework

PHC Population and Housing Census

SADA Savannah Accelerated Development Authority

SDF Spatial Development Framework

SHC State Housing Corporation

SHS Senior High Schools

SSNIT Social Security and National Insurance Trust

STEM Science, Technology, Engineering and Mathematics

TCPD Town and Country Planning Department

TDC Tema Development Corporation

TMA Tema Metropolitan Area





### **Chapter 1: Spatial Planning and Human Settlements Development**

#### 1.1 Introduction

Human settlements planning remains a very critical component of the overall infrastructure portfolio required to deliver the envisaged growth desired to fulfil the goals of the long-term plan.

This chapter presents the challenges of spatial planning and human settlements development and management in Ghana. It highlights the existing gaps in supply and quality, as well as forecasts the needs for the future within the context of the economic growth envisaged, and defines a pathway to meeting the current and anticipated needs.

The set of initiatives aimed at addressing the challenges in settlement planning and management to create settlements that are liveable and sustainable, as well as help fast— track the achievement of Ghana's socio—economic developments, are briefly discussed.

#### 1.1.1 Goal, Vision and Objectives

This aspect of the GIP is aimed at identifying and resolving the various challenges associated with the planning and management of human settlements. With inspiration from the National Spatial Development Framework (NSDF) the goal for this sector is to "safeguard the quality of the living environment", while the vision is "to create human settlements that are accessible, safe and sustainable" in the long term.

The objectives of this sector are:

- 1. To achieve balanced polycentric spatial development and improved infrastructure provision in medium to small size settlements:
  - Develop and build a hierarchical structure of settlements networks where each settlement grade performs its function and level of service delivery, as a way of reducing over concentration of infrastructure and activity in one place.
  - Identify and develop secondary cities as growth poles and major economic gateways or centres with high levels of infrastructure and service provision, to act as major centres of economic diversity and job creation, to minimise the over reliance on the few existing urban centres.

- 2. To improve connectivity at local, regional, national and international levels to make Ghana competitive in the West African sub-Region:
  - Ensure accessibility demands optimise and link up different spheres of human activity, i.e. where the household lives, works, socialises and recreates.
  - Achieve efficient accessibility through the integration of various transportation modes and networks at all scales, to ease the mobility of goods and people.
  - Develop multi-modal transportation possibilities within and between settlements to promote a more balanced regional development; for example bicycle lanes, road and rail networks, water transportation infrastructure, etc., constructed to meet international standards.
- B. To safeguard and improve the quality of the living environment:
  - Ensure the sustainable development of human settlements, while protecting the environment at the national and local levels.
  - Protect and preserve ecological assets such as forests and wetlands, coastline and water bodies in all development efforts.
  - Develop comprehensive inter-linkages between the above-mentioned resources, and the creation of open spaces (active and passive open spaces) in communities, thus forming a Green Infrastructure Network (GIN).

#### 4. To develop secondary cities:

• Identify and develop secondary cities as major economic gateways with high levels of infrastructure and service provision, to act as major centres of economic diversity and job creation, to minimise the over reliance on the few existing urban centres.

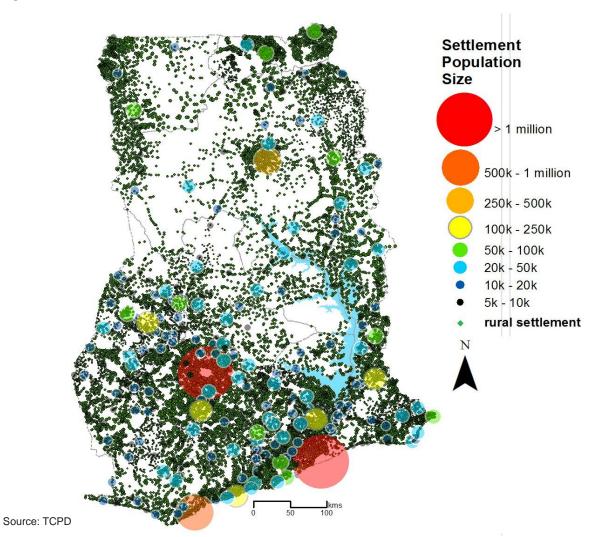
#### 1.2 Overview of the Human Settlement Sector

## 1.2.1 Human Settlements Distribution Patterns: Implications for Infrastructure Provision

The distribution of human settlements in Ghana still reflects imprints from the colonial era, where settlements growth followed the economic interests of the colonial administration and public investments favoured towns with mineral resources. Since independence, the growth and distribution of human settlements have been

primarily led by Accra as the nation's capital, followed by Kumasi, which derives its significance from intensive commercial activities and the deeply embedded cultural norms. Sekondi- Takoradi follows, driven by the strong economic function of the seaport. These combine to form the erstwhile "Golden-Triangle".

Figure 1.1: Settlement Distribution in Ghana



Many human settlements have subsequently developed naturally through population growth or (in and out) migration. Other towns have also emerged as extensions of existing ones, with the exception of Tema, Akosombo and Bui, which were designed and built from the ground up as part of the nation's industrialisation and national infrastructure drive.

Generally, the southern parts of the country exhibits a more nucleated, dense and mostly urbanised human settlement trend as opposed to the northern parts of the country, which present sparsely populated and mostly rural human settlements, usually in an elongated pattern along road networks, with a few medium sized settlements providing higher order services to the immediate surrounding settlements.

Infrastructure provision is therefore relatively higher in the south than in the north, where the sparse settlements distribution makes the provision of basic infrastructure more costly.

There is therefore the need for spatial planning and engineering efforts to facilitate the formation of more compact and dense human settlements in order to support infrastructure and services that are efficient and adequate, serving more people at a cheaper cost. The sparse population and human settlement distribution in the northern parts of the country offers great opportunities to plan and develop well-structured and compact human settlements with the needed infrastructure.

## 1.2.2 Urban Settlement Growth Trends: Implications for Infrastructure Provision

Over the inter-censal period between the year 2000 and 2010, the smaller sized urban settlements, with population ranging between 5,000 and 10,000, experienced the highest growth in numbers, increasing to 220 from a previous count of 157. This shows that rural settlements with population figures just below 5,000 are crossing the threshold rapidly. Infrastructure provision in the long term strategic plan will focus on these small sized urban settlements as well as large rural settlements that have high potential of attaining urban status.

Table 1.1: Changes in Settlement Size Classes, 2000-2010

		2000						
	Settlement Size Class	Count	Sum	% share	Count	Sum	% share	Change
1	> 1,000,000	2	4,106,641	49	2	6,058,071	49	3.96
2	500,001 - 1,000,000	1	373,916	4	1	588,987	5	4.65
3	250,001- 500,000	1	202,317	2	1	274,022	2	3.08
4	100,001 - 250,000	5	450,915	5	5	634,643	5	3.48
5	50,001- 100,000	11	495,818	6	11	751,471	6	4.25
6	20,001 - 50,000	45	957,837	11	45	1,308,962	11	3.17
7	10,001 - 20,000	96	975,112	12	103	1,365,014	11	3.42
8	5,000 - 10,000	157	894,811	11	220	1,484,913	12	5.20
		318	8,457,367	100	388	12,466,083	100	3.96

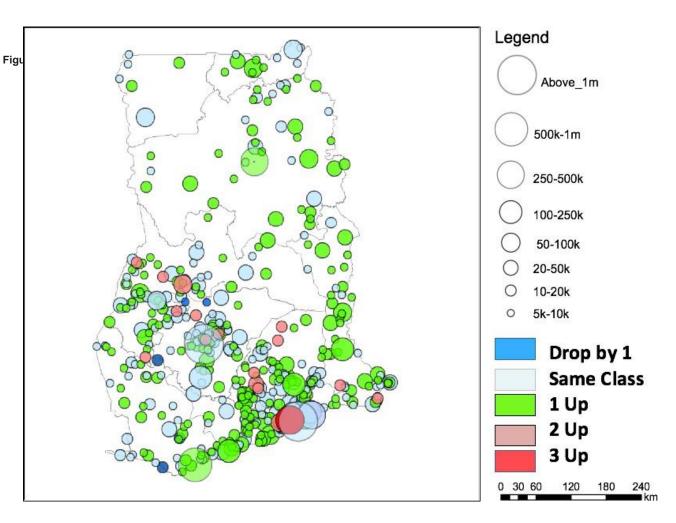
Source: TCPD, National Spatial Development Framework, 2015

While the absolute numbers of settlements with population above 50,000 did not change, significant population gains were made, thus making it essential to upgrade existing infrastructure and provide new ones where necessary.

Kumasi and Accra together constitute almost 30 percent of the entire country's population and about 50 percent of the urban population. Over the period, these settlements grew by almost 50 percent. Infrastructure interventions in these centres will therefore require enhanced efficiency through expansion and retrofitting of critical services such as water and sanitation, energy

supply and transportation etc. The National Urban Policy, however, defines initiatives to redistribute the urban population, ensure urban safety and security and improve the environmental quality of urban life, among others. It is important that these initiatives be adhered to, towards restructuring and reshaping the cities to be sustainable and secure in the long term.

The changing dynamics of settlement patterns (ranging from small, medium and large settlements) require the development of strong economic gateways or subcentres within the functional urban regions in Ghana.



Source: TCPD (2015), based on 2000 and 2010 Population and Housing Census by GSS

## 1.2.3 Settlement Expansion and the Formation of Greater Metropolitan Areas

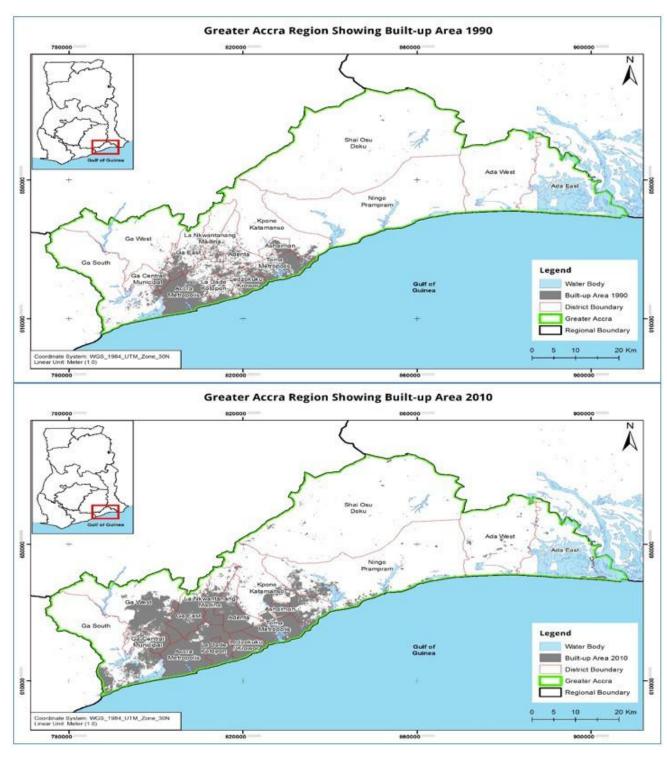
Settlement expansion is a phenomenon that is taking place rapidly, particularly in the leading core economic areas in the country. This occurrence happens when an existing metropolitan area extends beyond its administrative boundaries to merge with smaller towns, with which they share strong economic linkages, thus leading to the formation of what is termed greater metropolitan (functional) areas. A typical example is the Greater Accra Metropolitan Area (GAMA), which as at 2010, comprised the Accra Metropolitan Area (AMA) and seven (7) other surrounding districts, namely Tema Metropolitan Area (TMA), Ga East, Ga West, Ga South, Ashaiman, Adentan and Ledzokuku-Krowor Municipal Areas. By 2013, GAMA had grown to include La Nkwantanang Madina, La Dade Kotopon, Ningo Prampram and parts of Upper West Akim Districts.

Another greater metropolitan area that has been created is the Greater Kumasi conurbation, also referred to as the Greater Kumasi Metropolitan Area, delineated by the boundaries of KMA, Afigya Kwabre, Kwabre East, Ejisu Juaben, Asokore Mampong, Atwima Nwabiagya, Atwima Kwanwoma and Bosomtwe.

In the case of GAMA, however, the urban sprawl is currently spilling across the Central and Eastern regional boundaries, with places like Kasoa and Aburi serving as dormitory towns for people who work in Accra, and constituting a part of the daily commuting zone of the area. These are typical settlements that are merging with the built up footprint of settlements in Greater Accra. Figure

1.3 shows the settlement footprint of GAMA (between 1990 and 2010), growing to merge with the earlier mentioned settlements in the Eastern and Central regions.

Figure 1.3: Built up footprint of GAMA between 1990 and 2010



Source: TCPD, 2016

GAMA has over the twenty-year period expanded mainly towards the northern and western corridors of the region. The fast pace of urban sprawl or expansion of these metropolitan areas present serious implications for infrastructure provision. With the development of physical structures far outpacing planning efforts and infrastructure provision in the country, many settlements within these regions get established long before the needed infrastructure are provided.

It is important to emphasise that the formation of these Greater Metropolitan Areas requires effective spatial and infrastructure planning efforts, focusing more on these spatial entities as a whole rather than the separate jurisdictional (administrative) conceptualisations, which more often than not results in waste of economic resources and possible losses in the achievement of economies of scale.

It is imperative for spatial and infrastructure plans to be developed to manage the rapid growth of these areas as they hold a lot of economic potential and their neglect would lead to immense urban development managerial challenges with adverse environmental and economic losses. Spatial development frameworks of these areas should be developed with identified functionalities of the major towns/districts after which the structural plans of the districts/major settlements will be clearly detailed out. This will ensure effective management and growth of human settlements in the country.

Again, while population densities vary from city to city, it is important that authorities pursue strategies for building denser and more compact human settlements, maximising the use of space, promoting mixed-use development and ensuring that cities grow towards the centre rather than towards the peripheries. This will contribute to the effective and efficient provision of infrastructure and service delivery (Box 1.1).

#### **Box 1: Urban Densification: The Cape Town Experience**

"Planning is the single most important tool that governments have at their disposal for managing rapid urban population growth and expansion."

-Watson and Agbola1

With the abolishing of Apartheid in the early 1990s, the city planners of Cape Town had the arduous task of conceptualizing the foundational ideas that guided the processes of urban development from the past, in order to restructure current developmental processes and to use urban design and planning to stitch the city back together. In fact, like most South African cities, Cape Town's density profile is such that population grows with increasing distance away from the city centre. City authorities therefore, had to deal with such challenges as having single-family homes on individual plots of land, especially as one left the inner suburbs towards the peripheries; a major issue which instigated an endemic urban sprawl, bringing in its wake various economic, environmental and social challenges that threatened the city's longevity and sustainability.

The sprawl resulted in a scattered and disjointed urban pattern, which rendered the introduction of a dependable public transport system infeasible. This, hence, encouraged the use of private transport, which in turn inspired traffic congestion leading to an increase in carbon dioxide  $(CO_2)$  emissions, which negatively affected the city's air quality. Also, with agricultural lands at the peripheries of the city being developed and the sprawl affecting the unit cost of providing infrastructure, among other challenges, there was an urgent need to re-think development planning in Cape Town.

The city authorities thus envisaged a more compact and organised area that maximised the use of both horizontal and vertical space. Called the *Densification* approach, this was envisioned as a way to enhance social cohesion among the different social classes, and ensure the sustainability of the city's natural resources by drawing more people into the city centre from the densely populated peripheries.

The Planning and Environment Portfolio Committee subsequently sanctioned a densification task team in 2007, to prepare a Densification Policy to guide the decision-making processes as far as population density related issues are concerned. The team was mandated to integrate, update and rationalise existing documentation into a single policy document to inform the city's Spatial Development Framework, guide the detailed design of local level land use plans while strengthening the synergies between different land use forms, as well as to define realistic and achievable means to manage areas of high population densities.

The densification policy was finally adopted in 2012 with the firm belief that its implementation would at least triple the population density at the Central Business District (CBD) within a ten year period; while reducing the amount of resources consumed; and ensuring the efficient provision, functioning and use of infrastructure; boosting economic activity and supporting effective service delivery; providing improved housing facilities; and promoting safety.

Over the past few years, the CBD area has experienced some regeneration through investments from several strong and successful private-public partnerships. Some of these investments have been targeted towards the development of Bus Rapid Transit (BRT) systems, and the redesign and upgrade of Cape Town's Church Square and Central Square (as a way of making communal spaces more convenient for public interaction and cultural expression) among others.

One major issue that had to be strongly addressed in the provision of housing with accompanying facilities was that of land ownership and possession. The state had to play a major role in the restoration and redistribution of land and in certain cases, by actually compensating land owners, in order to free up land located in certain prime areas of the city, to facilitate the creation of more compact human settlements through urban infill developments and to address the issues of spatial inequalities.

The densification approach, as adopted by the city of Cape Town is generally viewed as a positive initiative, although its implementation has not been without limitations. However, experts have acknowledged that the weakness in this approach has been that government has not encouraged participatory planning approaches. It has been affirmed that establishing strong linkages with the populace through participatory approaches will be required to reverse the trend and enforce the expected outcomes from the densification approach.

Furthermore, the incorporation of greenery in the implementation process has been strongly highlighted, towards building sustainable densified urban patterns. It is believed that cities should preserve nature as part of efforts towards enhancing the lives of their citizenry.

Source: ¹Watson, V. and Agbola, B. (2013), Who will plan Africa's cities? Africa Research Institute, 12th September, 2013; and other sources.

#### 1.2.4 Policy and Institutional Linkages

The governance of human settlements is a function of the decentralisation framework set out in the Constitution (Chapters 2 and 20) as the preeminent legislation, and complemented by other subsidiary legislation including the Local Governance Act 963 (2016), National Decentralisation Policy Framework (2015-2019) and the Land Use and Spatial Planning Act 925 (2016). Presently, human settlements in Ghana are managed directly through 10 Regional Administrations, 216 District Assemblies¹ of varying administrative sizes, 25 Sub-Metropolitan Councils, 2,076 Town and Area councils, 1,100 Zonal Councils, 34 Urban Councils and 16,000 unit committees.

The Assemblies, created under Act 462 of 1993, perform their functions based on several legal edicts. Act 963 of 2016 details the departments of the local governments and their respective functions. Aligned to the instruments that devolve powers further to the substructures of the local governments, are the requirements for spatial and land use planning of settlements according to localities, sectors and neighbourhoods in the Spatial Development Framework (SDF).

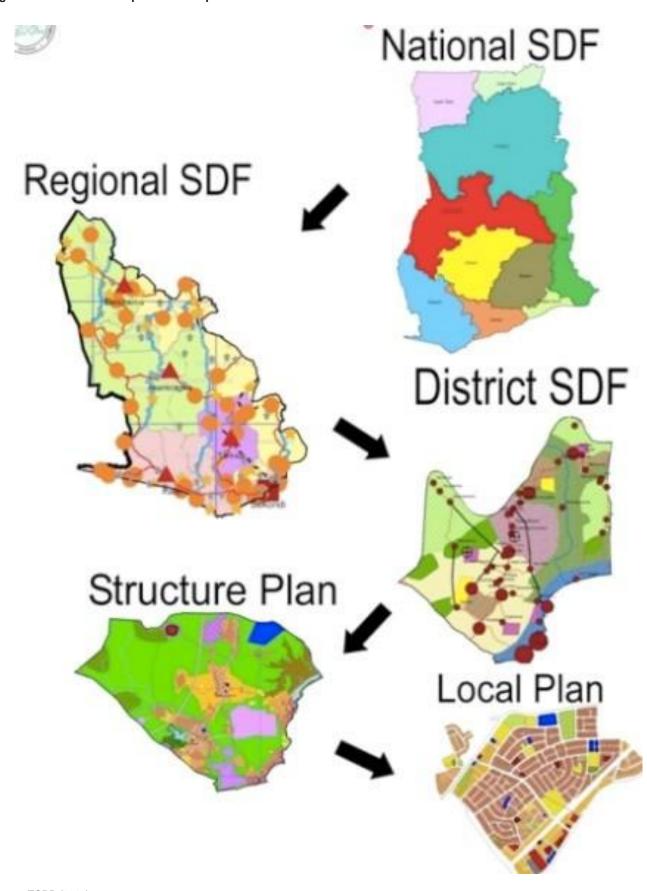
The SDF is a conceptual plan that represents the socioeconomic as well as other policy data, in a harmonised and efficient way. It is expressed as a three-tier plan that is prepared at the National (NSDF), Regional and District levels. The SDF thus identifies various opportunities and collaborations that could be taken advantage of for the development programmes/projects that are planned for implementation within the set period. At the national and regional levels, the SDF defines strategic issues to be considered for national development. However, the SDF at the district level presents the national, regional and local programmes and projects in spatial terms, to be captured in the medium term development plan.

From the district SDFs, structure plans (SP), which present co-ordinated land use and infrastructure proposals, are prepared. The structure plans then inform the preparation of the local plans (LP), which define the specific form of development that takes place on a particular plot of land within the SP area. The LP helps to define Unique Parcel Numbers (UPN), which provides a basis for land permit applications, and also informs street naming systems.

This new framework for planning has been in existence since 2011 and appears to be logical and systematic in its operations (figure 1.4 and exemplified in figure 1.5). However, the reality is that it has suffered from a lack of public awareness and participation, poor enforcement, lack of follow-up investments, and wanton abuse by interests from both public and private sectors as well traditional authorities. The aforementioned issues need to be adequately resolved so that all settlements in Ghana can be planned based on this framework.

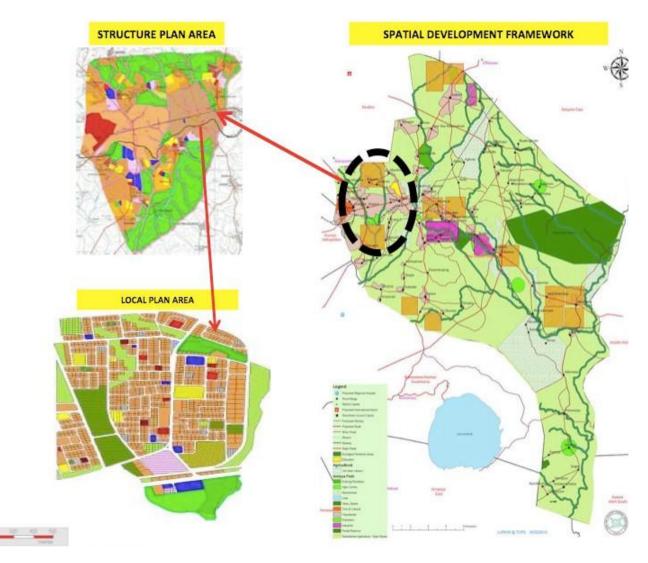
<sup>1</sup> At the time of this report, another 32 districts were earmarked to be created

Figure 1.4 The National Spatial Development Framework



Source: TCPD (2015)

Figure 1.5: District Spatial Development Framework



Source: TCPD (2011)

#### 1.3 Proposed Development Strategy

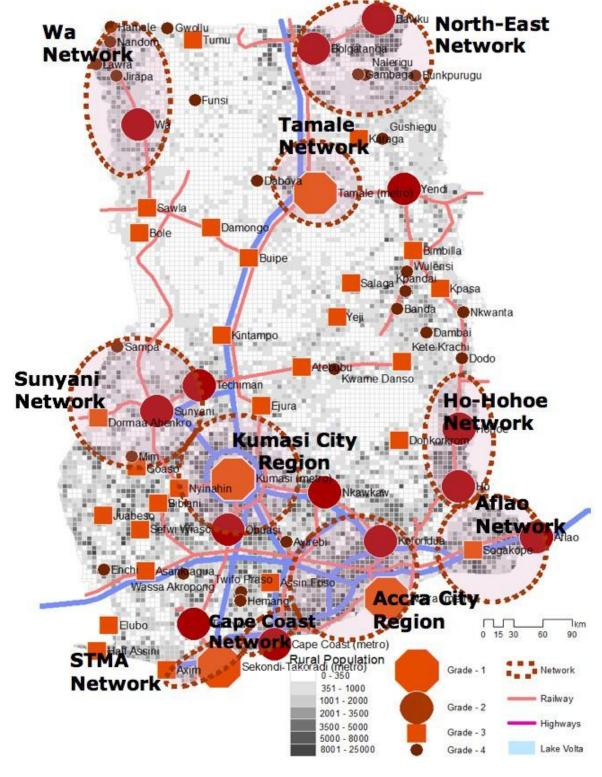
Taking advantage of their spatial distributions, the National Spatial Development Framework (NSDF) recognises and places human settlements in networks to create stronger symbiotic synergies between rural, small town, medium sized towns and towns at the zenith of the human settlements hierarchy. Further, a spatial growth pattern anchored on a natural resource based industrialisation and development of knowledge hubs is also proposed.

These networks are:

- i. Accra-City Region,
- ii. Kumasi City Region,
- iii. Cape Coast Network,
- iv. STMA Network,
- v. Aflao Network,
- vi. North-East Network,
- vii. Tamale Network,
- viii. Wa Network,
- ix. Sunyani Network, and
- ix. Ho-Hohoe Network

Apart from the strong transportation connections proposed between and within networks, infrastructure ranging from health, education, energy, and waste management would have to be provided to ensure efficient delivery of services. It is believed that when infrastructure provision is focused in these identified networks, maximum economic returns can be generated and there will be adequate and efficient infrastructure in almost all settlements in the country.

Figure 1.6: National Spatial Development Framework



Source: TCPD, 2015

With the completion of the NSDF, a sub-National Spatial Development Framework for the Northern Savannah Ecological Zone has been prepared by the Land Use and Spatial Planning Authority<sup>2</sup> in collaboration with SADA. This framework presents further detailed proposals for the development and management of settlements in the Northern Savannah Ecological Zone of Ghana. The framework makes modifications to the settlement networks identified in the NSDF and adds new settlement networks. The Tamale City Region is extended to cover Buipe to form the new Tamale-Buipe Cluster because of the strong transportation and economic linkages proposed and envisaged for the area.

The other newly identified networks or settlement clusters include the Nkwanta-Dambai Cluster, Yendi-Gushiegu Cluster and the Atebubu- Kintampo Cluster. The Wa Network (now the Wa-Jirapa Cluster) and the North-Eastern Network (same as the Bolga-Bawku Cluster) were maintained. Below the spatial development frameworks (SDFs) at the regional or subregional level, SDFs and structural plans are to be prepared for metropolitan, municipal and district levels for the management of settlements in Ghana. At the last tier/scale, local community plans should be prepared for all towns or communities.

Figure 1.7: Northern Savannah Ecological Zone's SDF (2016-2036)



Source: TCPD (2016) – NSEZ's Spatial Development Framework

<sup>2</sup>This used to be the Town and Country Planning Department until 2016 with the passage of the Land use and Planning Act 925

#### 1.3.1 Overview of Proposed Development Strategy

As previously indicated, the NSDF proposes spatial development along defined urban networks, ten (10) of which are identified in Table 1.2. These regions are in tandem with the character of existing settlements and population growth trends. The focus is on traditional growth nodes, with Kumasi, Accra and Sekondi-Takoradi continuing to play significant roles in the spatial growth of the country. These nodes will still attract large sections of the population with the coastal belt eventually develop- ing into a mega urban conurbation.

Table 1.2: City Regions and the urban network metrics

		2010					2035				Pop. Growth Rate			
	Network area (km²)	Total population ('000)	Rural population ('000)	Urban ('000)	Urbanisation level	Network density p/km²	Total population ('000)	Rural population ('000)	Urban ('000)	Urbanisation level	Network density p/km²	Total population ('000)	Rural population ('000)	Urban ('000)
Accra City Region	9,840	5,847	1,196	4,651	80	594	11,127	676	10,450	94	1,131	2.61	-2.25	3.29
Kumasi City Region	11,108	4,023	1,266	2,756	69	362	7,797	1,029	6,768	87	702	2.68	-0.83	3.66
Sunyani Network	15,496	1,652	828	796	49	105	2,374	611	1,763	74	153	1.53	-1.21	3.23
North-East Network	10,876	1,263	955	308	24	116	1,907	1.002	905	47	175	1.66	0.19	4.44
Aflao Network	5,449	890	597	293	33	163	1,136	503	633	56	208	0.98	-0.68	3.13
Ho-Hohoe Network	4,884	835	499	336	40	171	1,622	261	1,360	84	332	2.69	-2.56	5.76
STMA Network	905	752	120	632	84	831	1,896	500	1,397	74	2,096	3.77	5.86	3.22
Tamale Network	4,169	626	301	325	52	150	859	283	577	67	206	1.28	-0.25	2.32
Wa Network	9,027	598	494	104	17	66	881	749	133	15	98	1.56	1.68	0.97
Cape Coast Network	1.005	558	238	321	57	555	766	206	560	73	762	1.27	-0.56	3.35
Total in Networks	72,259	17,016	6,495	10,521	62	234	30,366	5,820	24,526	81	417	2.34	-0.44	3.45
Pop outside networks	154,774	7,643	5,613	2.030	27	49	11,325	5,680	5,645	50	73	73	0.05	4.18
TOTAL	227,533	24,659	12,107	12,551	51	108	41,690	11,500	30,191	28	183	183	-0.21	3.57
% population in Networks		69	54	84			73	51	81					

Source: NSDF Study based on data from GSS and the Forestry Department Satellite Imagery

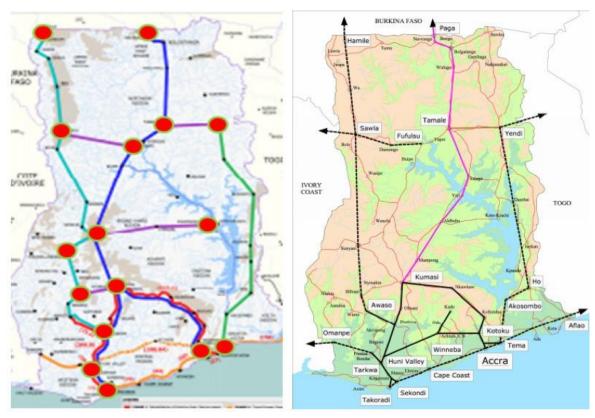
In this case, additional future housing provision will thus be linked to meet the new demand based on the anticipated growth in these areas, to address the deficits in the rural areas as well as the slow growth areas in response to the population dynamics. The intent of the plan, is to attract population away from the large traditional centres into smaller towns. A new spatial development pathway is therefore proposed, anchored on natural resources-based industrialisation and development of knowledge hubs.

This scenario seeks to promote industrialisation based on the resource endowments of the various regions and their competitive advantages, which may be economic – directly linked to their resource base or strategic purpose, created through man-made systems or linked to location.

This will require that each region will be uniquely known for the production of a particular product and/or service based on its competitive advantage – natural or manmade. The regional functions will thus be further assigned to the districts in the regional SDFs and subsequently to the respective towns in the various districts through the district SDFs. Housing needs assessment will be focused on these centres and the extra population to be attracted there because of the new economic activities.

Important for success is the need to directly link the work of the energy sector, transport sector, water, ICT among others to this scenario. Also, crucial for success are the human resources needed to drive this agenda, i.e. the technical and vocational skills needed to drive industrialisation, right from the production of raw materials, value addition, packaging and marketing etc. There will be the need for some information or knowledge of the potential production value chains this scenario is likely to generate since it can affect labour mobility significantly, hence housing and other basic social services. In this way, people are effectively attracted away from the traditional large centres to minimise their dominance and ease urban management efforts.

Figure 1.8: Growing Nodes Linked to Resource Endowment and Locational Advantages



Source: NSDF

To complement the industrial activities will be the creation of knowledge hubs to promote development through research and innovation. Such research should generate global outcomes as well as further enhance industrialisation activities.

## 1.4 Key Development Goals and Objectives

The implementation of the human settlements development plan will begin with addressing the current settlement gaps, and evolve towards the development, management and maintenance of sustainable cities in the long term. Within the first ten (10) years, existing cities will be re- engineered along sustainability principles. This process will involve land use reclassification, active urban regeneration and slum upgrading/ phasing out on the one hand, and the increase in the quality of housing, infrastructure and urban spaces on the other hand. The main thrust of the plan implementation within this intermediate phase is to transform planning practices in the country to reflect the demands of contemporary cities and societies. This will be pursued in tandem with efforts to re-engineer existing settlements into sustainable ones. This will be accompanied

by the necessary infrastructure complements over the period.

Programmes to re-engineer existing human settlements to meet sustainable city principles and in accordance with the NSDF will be extended into the long term phase of the plan implementation. New cities and city extensions will be established according to eco-city models. Complementary efforts to provide functional municipal services and infrastructure in existing cities and towns are a priority. These include social and civic services; health, education, markets, public parks etc. It is envisaged that by the end of this period, a significant proportion of infrastructure deficiencies in settlements will be addressed and existing settlements will begin to emerge as modern sustainable cities. This is to be seen as the stage where spatial management, infrastructure, social systems and housing have evolved to meet the vision of a high-income country.

Table 1.3 Key Development Goals and Objectives

GOALS	OBJECTIVES
1. Sustainable city planning and urban development	1.1 Improve planning and urban management capacities of local governments for developing sustainable cities
	1.2 Refine and formulate enabling policy and institutional mechanisms for district development planning
	1.3 Foster and promote knowledge exchanges and research on sustainability and urban resilience
2. Cities without slums and/or informal settlements	2.1 Enhance economic status of low-income households to improve their quality of living
	2.2 Ensure equity in access to housing and housing finance
	2.3 Regularise security of tenure of slum residents
	2.4 Build social capital, institutional capacity and framework to maintain slum upgrading and ensure that new ones do not emerge
	2.5 Initiate and sustain home improvement schemes across the country
3. Promote efficient use of urban	3.1 Reduce urban sprawl relative to population increases
land	3.2 Facilitate the rehabilitation, adaptive reuse, redevelopment of public housing estates
	3.3 Actively enforce zoning and building regulations to improve quality of urban space.
	3.4 Strengthen institutional capacities, structures and frameworks for effective urban governance
	3.5 Initiate and further implement comprehensive slum upgrading/phasing out programmes and urban regeneration programmes
	3.6 Promote urban (re)development schemes to maximise use of land

4. Improve functionality, efficiency and resilience of existing	4.1 Actively promote compact development, adherence to building codes, and sustainable growth of human settlements				
settlements	4.2 Explore innovative financing and foster new partnerships for urban development				
	4.3 Identify and develop balanced polycentric settlement hierarchies with high economic vibrancy				
	4.4 Stimulate growth poles to curb ineffective migration to the major urban conurbations				
	4.5 Develop and promote public green spaces in both urban and rural areas.				
5. Improve quality of life and environment of rural communities	5.1 Ensure housing market that effectively supplies and allocates housing to various household income groups				
and small towns	5.2 Increase access to green open spaces and parks				
	5.3 Promote non-motorised mobility and improve supporting facilities				
	5.4 Encourage mixed-used developments at specified locations				
	5.5 Encourage preservation of historical, cultural and distinctive character of rural areas				
	5.6 Pragmatic and robust planning regimes to manage the built environment				
	5.7 Improve housing quality in rural areas and small towns				
	5.8 Promote rural enterprises and innovation				
6. Improve institutional capacities	6.1 Ensure effective planning and management of urban growth and sprawl.				
to effectively manage urban development and space	6.2 Develop and implement settlement disaster and risk management strategies				
7. Improve functionality, efficiencies and resilience of	7.1 Incentivise the construction of compact, new mixed-use projects, maximise use of land resulting in the creation of liveable neighbourhoods				
human settlements	7.2 Ensure effective management of urbanisation and human settlements.				
	7.3 Accelerate slum upgrading and programmes to prevent the formation of new slums.				
	7.4 Develop resilience strategies and strengthen settlements' disaster coping mechanisms				
	7.5 Enable and synergise functional hierarchies of settlements				
	7.6 Promote urban development research				
	7.7 Increase investments in promoting cities as engines of economic growth				
8. Promote healthy, prosperous and equitable cities	8.1 Develop new towns and growth centres that attract migration away from the Kumasi and GAMA conurbations				
	8.2 Enhance capacity of local governments to effectively manage spatial planning and development				
	8.3 Develop safe and compact sustainable cities complemented with smart growth principles and energy efficient, transit oriented development to maximise use of public transport systems				
	8.4 Create an environment for increased public awareness of environmental issues and participation in decision making				
	8.5 Safe and equitable access to city services				
1 1 1 Implication of the	Proposed Dovolopment Stratogy on Land and				

## 1.4.1 Implication of the Proposed Development Strategy on Land and Settlement Management

Population and wealth increases have a positive bearing on demand and per capita consumption of municipal services. The expected population increases by 2047 puts tremendous pressure on capacities of service delivery and settlement management.

Similarly, solving the housing needs implies significant land consumption even with the proposed vertical developments. Availability of unoccupied lands as well as optimisation of usage of currently

occupied parcels of land through tools available to planning authorities like urban regeneration and densification will be central to the materialisation of increased housing production without exerting unnecessary pressure on environmental and land resources as well as curtailing urban sprawl. The slum upgrading/phasing out and urban regeneration programmes will seek to leverage about 90,000 acres of land across the country to provide housing within the existing urban fabric. This will take care of about 30 percent of the land needs for housing the additional households expected between 2010 and 2047.

## 1.5 Programme Implementation Framework<sup>3</sup>

#### **Programme Scoping**

The programme scope covers the period of the plan spanning 2018 to 2027. The following major flagship programmes are proposed to hasten the functionality and re-engineering of human settlements, with the notion that the successful implementation of the entire GIP rests on the backbone of a well-structured human settlements design.

## 1.5.1 National Urban Regeneration Programme

The National Urban Policy projects that by the year 2030, about 65 percent of Ghana's population will be living in urban areas, however, the current state of the urban areas, especially the city centres, continue to leave much to be desired. The policy further identifies several multi-dimensional challenges confronting urban areas in the country. These challenges include the overconcentration of growth and development in a few cities, weak environmental management systems, inadequate security, increased traffic congestion, etc., that have instigated and compounded sprawling, taking the very life from the city centre and putting it at the peripheries.

To ensure the efficient use of land, adequate provision of infrastructure with added value for money, and sustainability going into the future, it is imperative that the country be intentional about managing its urban environment such that the full potential of urban assets will be harnessed for further growth and development, towards the attainment of high-income status.

In this vein, each regional capital will be required to produce a city master plan, which will incorporate the principles of design excellence, strong

3 Further details are provided in respective sector policies and frameworks

environmental management and responsibility, economic strength, good governance and improved social wellbeing, as well as clearly defined strategies to ensure sustainability<sup>4</sup>.

The National Urban Regeneration Programme will ensure that comprehensive schemes are developed to improve the public environment, with increased access to social services, better access to quality and safe housing and an improved housing environment. Again, the skills of local artisans will be improved, while economic vibrancy and mutually beneficial economic relationships between city districts and the broader municipal/metropolitan areas will be enhanced and strengthened.

The programme implementation will involve brownfield developments within towns and cities, and the maximisation of land use through relative densification. Land pooling and redevelopment will be pursued within the major cities - Accra, Kumasi, Sekondi-Takoradi and Tamale. The programme will target general goals at improving traffic flow, waste and environmental management, drainage and sanitation systems, and urban security as well as promoting the general wellbeing of the inhabitants through the development and implementation of innovative ways of incorporating health and leisure as well as green infrastructure into the urban fabric etc. Attention will also be given to reviving the ecosystems within the cities by incorporating green parks and rejuvenating water bodies that go through the cities.

The National Urban Policy outlines initiatives to facilitate balanced redistribution of the urban population; promote spatially integrated hierarchy of urban centres; stimulate economic development in the urban areas; improve the environmental quality of urban life; ensure efficient urban infrastructure and service delivery; promote urban security and safety; strengthen urban governance; promote climate change adaptation and mitigation mechanisms etc.

The following figures show before and after photos of Singapore's success story of urban regeneration<sup>5</sup> and restructuring and South Korea's Cheonggyecheon river restoration period:

Figure 1.9: Singapore River and City Post Office Area – Before and After



Source: Mailonline, 2015

Figure 1.10: Boat Quay - Before and After



Source: Mailonline, 2015

Figure 1.11: Road Bridge on Singapore River – Before and After



Source: Mailonline, 2015

<sup>4</sup> Towards an Urban Renaissance, Final report of the Urban Task Force Chaired by Lord Rogers of Riverside.

http://www.dailymail.co.uk/travel/travel\_news/article-3181291/Swamp-land-skyscrapers-amazing-images-Singapore-s-transformation-high-rise-metrop- olis.html (accessed on 27th March, 2017)

Figure 1.12: Clarke Quay - Before and After



Source: Mailonline, 2015

Figure 1.13: Marina Bay - Before and After



Source: Mailonline, 2015

Figure 1.14: The Cheonggyecheon River Recovery project in Seoul - Before and After





Source: Google images

#### Adopting and Implementing the Grid System for Sustainable Urban Development

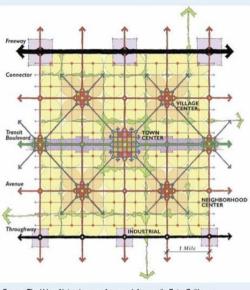
The NSDF also suggests that a grid-based system be adopted for urban expansion to promote compact development/densification, increase connectivity, promote mixed land use, avoid waste and improve

land values. The Greater Metropolitan areas and regional capitals, will implement their master plans

within this framework. Current settlements that are adaptable will be redesigned and laid out in a grid form, while future expansions will adopt this pattern of development.

A successful urban regeneration will require the strict enforcement of and adherence to zoning regulations, as well as strong linkages with the water resources, drainage and waste management sub-sectors, as well as the transportation, energy, ICT, climate change, construction, housing and civic infrastructure sectors.

**Box 2: The Grid System** 



Source: The Urban Network, a new framework for growth; Peter Calthorpe

The grid system for urban planning is a city planning tool where streets and avenues run at right angles to each other forming a grid. This system has proven to be a successful urban planning tool as has been implemented in Rome, Manhattan, Milton Keynes New Town, and Barcelona etc. It is a very adaptable system that can take on modifications as the city grows, as typified above. The grid system, which has been touted as the most efficient way of designing and laying out a city, presents several advantages. For example, its predictable and regular shape makes it adaptable, that is, easy to design, build and also re-design and re-build; It makes for easy navigation as rerouting to the next street in order to reach one's destination is easy, should the regular street be blocked temporarily. The grid offers such flexibility that any new development can be added or an old one removed without affecting the design or layout of the city. Given the proposal for Ghana to design more compact cities, the adoption of the grid system offers the most efficient way of going about this process of densification, while conserving land and providing infrastructure in a more efficient way.

Source: NSDF

#### **Box 3: Implementing the Grid System: The Manhattan Experience**

"There was a moment in the history of New York where the city realised it had an opportunity to shape its future."

-Ballon

In the early nineteenth century New York City was home to about 96,000 residents who lived, near the southern tip of Manhattan, in an environment that was not merely overcrowded, but even more rustic and disorganized. The main transportation route was nothing but a winding dirt road known as the Boston Post Road, and physical development was uncontrolled. For about a decade the city was struck with recurring public health epidemics, the spread of which were highly attributed to the constricted and irregular streets of Manhattan. Frustrated by these issues, New York City's Common Council (now City Council) petitioned the State Legislature to develop a street plan for Manhattan in 1807.

This task was assigned to John Randel Jr., who together with his team conducted a full survey of the Manhattan Island and marking out the grid, which was supposed to serve as the street system. Beginning in 1809, Randel and his team trekked up the hills and waded through the creeks and marshes on the Island, and fought through forests, briars and shrubs in areas that were not easily accessible, all in efforts at pinning the grid to the ground. In the course of executing their work, Randel and his team were often harassed by angry inhabitants, arrested for trespassing (often bailed by the mayor), sued for damages and attacked by dogs of property owners who were furious because their properties were being ploughed through. In some cases, the team had to resurvey certain areas because resentful property owners and rebels had removed their markers. With the passage of legislation authorising the surveyors to do any damage, for which owners would be compensated; Randel and his team meticulously measured each block, street and avenue, with a sense of precision that remains admirable and reliable to date.

The adoption of the Commissioners' Plan in 1811 established the Grid street system of twelve (12) carefully marked out North–South Avenues and one hundred and fifty-five (155) East–West Streets, which Randel and his team spent the subsequent 10 years marking out and staking with 1,549 pieces of three-foot-high marble monuments, and 98 iron bolts secured by lead (in areas where the ground was too rocky). It took the city a greater part of the nineteenth century to complete construction of the Grid.

During the period 1870 to 1880, New York City started to gain the reputation as the financial centre of the country. Businesses began to expand thereby increasing the demand for larger office spaces. Factories and warehouses began to encroach on spaces that were initially serving other purposes, and the rapid inflow of immigrants led to the creation of informal housing to meet the growing demand. With the introduction of steel frame construction techniques and the use of elevators, the technical restraints that previously limited the heights of buildings were quickly eliminated and the skyline of Manhattan began to peak, taking on a unique form.

By the turn of the twentieth century, the city was still plagued with congestion and declining land values. New York City residents also began protesting against the loss of light and air in the wake of the construction of taller buildings. The New York Board of Estimate and Appointment, a government body responsible for municipal policies and decision-making, was forced to impose extensive building controls. They also set up a Committee on City Planning to make recommendations on the possible restrictions on the heights of buildings within the city. As part of recommendations made in the report of the Committee issued in 1914 was the proposal to set up a permanent City Planning Agency. The report also contained a draft bill (which was eventually passed in the same year) to grant the Board of Estimate the powers to regulate the heights and uses of buildings.

These notwithstanding, the construction of the 42–storey Equitable Building in Lower Manhattan in 1915, standing at 538 feet and casting a 7–acre shadow greatly affected the value of adjacent buildings. This, coupled with rapid urban growth, made the need for controls on the height and form of buildings as well as the segregation of different land uses (residential, commercial and manufacturing uses etc.) even more apparent and urgent. Another committee was therefore set up and sanctioned to gather data to form a coherent land use plan. It was the results from this assignment that produced the landmark Zoning Resolution of 1916 to regulate the height of buildings specifically, and land use compatibility in general.

The creation of new mass transit routes and growth corridors, as well as the construction of government housing, were some of the achievements of the implementation of the 1916 Zoning Resolution. However, technological advancement and the resultant economic and lifestyle changes (e.g. increase in the use of vehicles) again instigated new land use changes. The 1916 Zoning Resolution therefore had to be regularly amended in response to the increasing population numbers and land use changes.

In 1961, the city adopted a new Zoning Resolution with a modern outlook to advance economic, physical, environmental and social development, and to reflect new ideas and realities for the city's development. It did not only coordinate land use and regulate the heights of buildings, it also incorporated and defined parking requirements and emphasized the creation of open spaces. Furthermore, the new resolution initiated the concept of incentive zoning to encourage developers of office and apartment spaces to incorporate shopping centres in their projects. In certain parts of the city, especially around the edges, the implementation of the 1961 Zoning Resolution led to the dramatic reduction of residential densities.

Since the city's adoption of the first zoning resolution in 1916, New York has played a very instrumental role in the history of planning, zoning and development in the United States of America, however, it cannot be discounted that the foundation that undergirded this process was the adoption and subsequent development of the grid system in 1811.

One of the major strengths of the grid system is its flexibility and ability to accommodate changing realities that have allowed the city to evolve over time, while maintaining its essence and character. For example, although the city failed to anticipate the incorporation of green spaces in the original plan, it currently has the Central Park merged with the city's design. The Madison and Lexington Avenues, the automobile and the subway routes, the water system and the electricity grid among others, were all latter additions that the grid system has been able to accommodate.

The grid also played a major role in shaping the real estate market in the city. As at 1807, the real estate value of Manhattan had a total assessed tax value of US\$25 Million. However, by 2004, it was valued at US\$169 Billion, with Central Park alone valued at US\$1.9 Billion. By close of the year 2015, research estimates reveal that the real estate value of Manhattan was more than US\$750 Billion.

John Randel, who pioneered implementation of the New York Grid, believed that the grid was definitely worth celebrating when he described it as the "pride and boast of the city." The grid allowed the city to develop safely, conveniently and uniformly, and most importantly, it greatly improved the land value of Manhattan.

Source: A visual history of Manhattan's grid (http://www.citylab.com/design/2011/11/visual-history-manhattans-grid/541/) and other sources

Figure 1.15: Manhattan – Satellite Image of Central Park showing the grid system



Source: Google Images (accessed on 17th March, 2017)

Figure 1.16: 19c Manhattan Chinatown



Source: Google Images (accessed on 30th October, 2017)

Figure 1.17: 21c Manhattan Chinatown



Source: Google Images (accessed on 15th March, 2017)

#### 1.5.2 Cities without Slums – "Make Slums History"

The UN-Habitat conference in Morocco in 2012 led to The principles of upgrading and progressively phasing the international agenda and declaration to "Make Slums History". The New Urban Agenda (2016) also stipulates the progressive phasing out of existing slums through upgrading and prevention measures taken to forestall the emergence of new slums.

To this end, and towards building cities that are attractive, liveable, secure and sustainable, the slum upgrading and phasing out agenda will be done in connection with the urban regeneration programmes, rather than targeting the individual pockets of slums for the upgrade. The programme will adopt a participatory approach to ensure that the development of such areas is holistic and sustainable. The issues of slum upgrading will therefore, be incorporated into sector policies that affect urban development, including transportation, energy, ICT, climate change, water and sanitation, etc.

out of slums, will be applied to all the existing slums in Ghana, which will be determined through detailed profiling of slums in the country, particularly in Accra, Kumasi and Takoradi.

The GIP approach to slums in Ghana will be one of progressive transformation, starting from upgrading of the infrastructure and allied services, enhancement of the building fabric, replacement of dilapidated buildings, and densification towards complete incremental modernisation. The process will also seek to improve the general environmental quality of the slum areas, making them fit adequately into the fabric of the regenerated urban areas.

Strong institutional commitment, proper coordination between the different levels of government and adequate stakeholder participation will be required to make these efforts successful.

#### **Box 4: Cities Without Slums: Morocco's Success Story**

Morocco has experienced huge success in stopping slum growth and eliminating the horrible living conditions of slums through its powerful Cities without Slums initiative. The programme was launched in 2004 in 85 cities, with a budget of approximately USD 3 billion. It outlined a strategy for urban development focusing on building affordable housing, developing infrastructure, and creating better sanitation. As of 2011, 100,000 new housing units have been built and about 1.5 million people have been helped out of the slums. Residents now have sewerage systems, clean water, electricity, and access to schools and health clinics. However, the government did not achieve all of this alone: cooperation between the private and public sector was integral to success. For example, PMCE Bank, one of Morocco's largest lenders, lends to those without property or regular income. The bank mitigates its risk by only lending up to 40% of someone's income. The government also secures 70% of the loan, extending credit to the country's poorest residents.

Property developers are also on board with the Cities without Slums initiative. Addoha, Morocco's largest property developer has been very active in building low-income housing. The government incentivises this focus on low-income housing to stem slum growth by offering subsidies and tax breaks, with up to 25% of production costs covered. As seen in Morocco, how incentives are crafted has a huge influence on the behaviour of banks and property developers, players that cannot be overlooked.

There are many lessons to take away from Morocco's success. First, the focus on basic services is crucial. Policies cannot just focus on housing but must focus on building a sustainable city. In doing this, Morocco not only ensured that the issues of sustainability were incorporated in the agenda, but they also preserved the culture, nature and history of the cities. Secondly, it is important to use secure tenure to restructure slums, as Morocco did. Land laws must be crafted so that the poor are not marginalised and vulnerable groups have access to land. Secure tenure prevents demolition, stabilising the community and allowing for housing investment. Lastly, a strong political leadership must unite local governments, the business community, and residents in the effort to achieve well-defined goals. Finding the money for urban development is one of the largest challenges governments face when fighting slum growth, and Morocco's cooperation with the business community offers valuable insight into overcoming this seemingly intractable problem. The case of Morocco highlights how there is a larger chance of success when motivation comes from within the country.

The success in Morocco was due to 5 main factors:

- 1. Government's political commitment;
- 2. Consistent strategy, in spite of changes in government;
- 3. Integration of housing policy with various policies related to urban issues;
- 4. Housing and urbanisation were designed as opportunities for economic growth and job creation, which has led to greater national prosperity; and
- 5. Housing policy was based on intelligent and balanced relationships between the national and local governments.

The main challenge was attributed particularly to monitoring and evaluation. To this end, parallel programs have been created to increase the number of beneficiaries and Morocco is already drafting a new proactive urban policy, advancing the social integration and to reduce disparities, to fight against social marginalization and the expansions of the unplanned city outskirts.

Source: Harvard International Review (http://hir.harvard.edu/article/?a=6038) and Making Slums History – UN Habitat Conference Report (2012)

## 1.5.3 Sustainable/Smart Growth of Small Towns and Rural Communities

Rural areas serve as custodians to the most important natural resources; the natural environment and landscape as well as highly important elements of natural heritage. Rural areas/small towns, which are mostly found in close proximity to urban areas, have such resources that include agricultural land, forests and water resources that need to be preserved. It is important that development is sensitive to the conservation of these resources and heritage while strengthening the economies of these rural areas.

Programmes will be initiated topromotesustainable growth of rural areas and small towns. The NSDF proposes certain key strategies to ensure sustainable rural development so as to safeguard agriculture; diversify rural employment options; maintain the character of rural communities; and to strengthen rural communities in order to retain the rural population. The national urban strategy document as well as the national climate change policy outlines other strategies, which include that communities must be climate sensitive and resilient.

Community action plans and local structure plans will be prepared and enforced as a basis for the transition of rural communities into sustainable ones. Decent housing, settlement structure, economic viability, improved access to basic services among others will all be promoted within a highly informed and educated rural populace. The implementation of any related schemes will be preceded by detailed community profiling supported by the respective local governments.

## 1.5.4 Revitalisation of Distressed Mining Towns

All mining towns in the country are depressed despite supporting the general economic growth of the country. Available housing, infrastructure and settlement organisation among others, need conscious (re)planning efforts. The following actions will therefore be pursued under this programme:

- Conduct a detailed profiling of mining communities.
- 2. Establish a technical committee to advise on revitalisation initiatives.
- Create partnerships among necessary government, mining companies and other private organisations.
- 4. Develop a fund for revitalisation of mining towns.
- Enhance the capacity of local government authorities to better plan and manage mining towns.
- 6. Commence corresponding initiatives including infrastructure development (including roads, water, electricity, drainage, sewerage& telecommunications), relocation, integrated housing programmes, awareness creation, working conditions of miners etc. based on profile of town.

Within the first phase of the plan, attention is placed on large-scale mining towns across the country with special focus on Obuasi, Konongo and Tarkwa. These settlements will be redesigned to host a population equivalent to a metropolis with corresponding supporting infrastructure. Efforts to revitalise mining towns will be integrated with economic, social, environmental and infrastructure systems. The overall objective is to transform mining towns into sustainable human settlements of which decent housing will be key. The support of mining companies operating in these areas will be necessary to ensure the success of the programmes.

## **Box 5: How Economic Diversification Saved the Image and Economy of Johanesburg**

The local name of Johannesburg is "*Egoli*", which means "*land of gold*". This reflects the significance of the gold mining industry to the overall development of the metropolis. Johannesburg has evolved along the whole value chain of gold mining. The Witwatersrand gold fields were first opened up in 1886. Since then, different periods of massive boom and declines were recorded. The declines resulted in efforts to transform mining activities in the region. In 1889, pyritic ore was reached at 100m and there was no technical means to continue mining. Johannesburg seemed doomed with no more gold.

In the early Twentieth Century, Johannesburg experienced a process of diversification. Within the mining value chain, demand was generated for complementary goods and services. Demand for industrial production such as iron and steel, explosives, construction materials and chemicals led to the establishment of industrial production facilities. In 1890, for example, there was a concession for the development of an explosives industry. The Chamber of Mines was also instrumental in the establishment of the Victoria Falls and Transvaal Power Company to provide electricity to the mines in 1906 and this supplied the mines electricity until 1922 when the Electricity Supply Commission was established.

By the end of the Second World War, manufacturing was important to the national economy, contributing 25% to GDP in 1945 – up from 10% in 1918. Other complementary services including housing were needed by mine workers. "Banks and building societies were either established in Johannesburg from the 1880s (such as the United Building Society, now part of ABSA Bank) or moved their headquarters to Johannesburg (for example, Nedbank and Standard Bank of SA). The formation of the Johannesburg Stock Exchange in November 1887, supported the equity requirements of the mining industry, and which also a critically important development in strengthening Johannesburg's position as the centre of South Africa's emergent industrial and business economy."

According to the Chamber of Mines, the mining sector contributes 18% of GDP and over 50% in foreign exchange earnings of the country. Of the R441 billion in expenditure generated by the mining sector, R407 billion is spent locally, further stimulating the economy. Mining also contributes significantly to the State Treasury – around R17 billion in corporate tax and R6 billion in royalties. Having helped found the JSE, today mining houses still provide around 30% of its market capitalization.

Source: Philip Harrison & Tanya Zack, 2012 (https://www.sablog.kpmg.co.za/2013/12/role-mining-south-african-economy/).

#### 1.5.5 Re-Planning of Informal Industrial Enclaves

Ghana's urban landscapes are littered with informally developed and progressively conscripted spaces as auto-repair industrial precincts that tend to be quite intense in activities, and yet are largely premised on poorly equipped garages using archaic technologies. Known by the generic reference of "Kokompe", the sites tend to be poorly serviced, and significantly unstructured in their layouts. The largest ones can be found in Accra (Kokompe, Abossey Okai), Kumasi (Suame Magazine) and Takoradi (Kokompe). The businesses there are dependent on extraordinarily innovative and highly skilled native acumen where knowledge is accumulated by tacit learning. Notwithstanding these constraints, Suame in Kumasi and Kokompe in Accra have grown in their reputation for industrial ingenuity in auto-repairs, drawing clientele from all over West Africa.

The potential for stimulating economic growth in these enclaves is not in doubt and gives reason for an infrastructure retrofitting and technology enhancement investment programme in these precincts. Under the GIP, this programme dedicated to upgrading the autorepair and light industrial sites enclaves must insert all the basic services — access roads, solid waste management, water and sanitation, and telecommunication. To enhance the identity of these precincts, it is proposed that facilities for learning and sharing such as buildings for demonstrations, and internet services must be incorporated into the upgrading. It is important that the environment within the enclaves have enough greenery incorporated and deliberately maintained as well.

Figure 1.18: Models of Industrial Parks



Source: Google Images

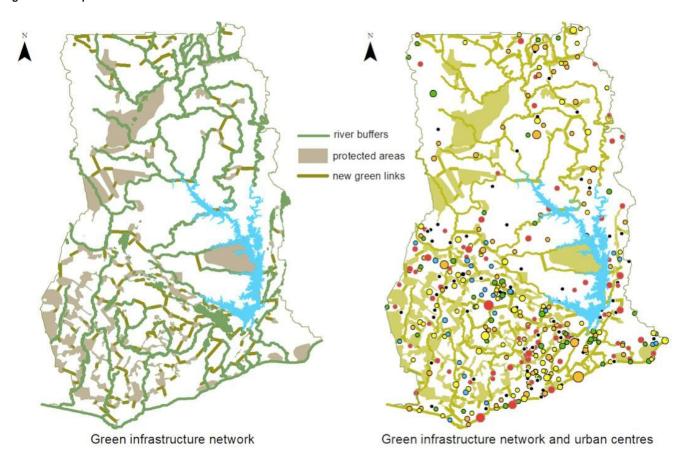
#### 1.5.6 Establishing Green Infrastructure Networks

The Green Infrastructure Network (GIN) comprises a network of green places and water systems that deliver multiple environmental, social and economic values and services to urban and rural communities. Simultaneously, a GIN serves as an ecological network, wildlife corridor or a river buffering system. It can also be an enhanced forest reserve network, a recreational asset and a visual amenity, as described in the NSDF. While the GIN protects natural systems and preserves open spaces, they also serve as a life support system for the urban environment, and mark where one settlement begins and ends.

The proposed GIN in Ghana comprises all protected areas, the entire coastline as well as the main water bodies. It will also include new connectors between these elements using green corridors along existing and new roads as well as railways.

The implementation of the GIN country-wide, will be led by the public sector (government agencies, local authorities, etc.), although strong partnership with the private sector and civil society will be strongly encouraged. SDFs and development plans, whether at the regional or district level will have GIN strongly incorporated. Sector agencies like the Forestry Commission, MOFA, MWRWH etc., will play major roles in the planning and maintaining of the GIN.

Figure 1.19: Proposed Green Infrastructure Network



Source: NSDF

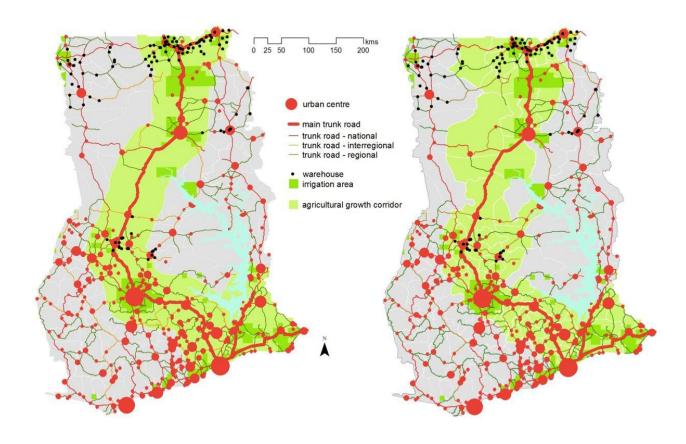
#### 1.5.7 Development of Agricultural Growth Corridors

the World Economic Forum (2009). This involves the conversion of land in regions with subsistence agricultural practices and huge unrealised agricultural potential into areas of commercial agriculture at an industrial scale. This does not necessarily mean bringing excessive physical development into the defined

According to the NSDF, the concept of the development areas, but to provide strategic infrastructure like of Agricultural Growth Corridors (AGC) emerged from transportation networks, irrigation schemes, storage and processing facilities, etc., which will attract the necessary investments and help promote commercial agriculture.

> In view of this, the NSDF suggests two options for AGC development in Ghana as presented in figure 1.20.

Figure 1.20: Proposed Agricultural Growth Corridors in Ghana



Source: NSDF

It is expected that the Ministry of Food and Agriculture (MOFA) will spearhead and define policies that will guide the implementation process. Opportunities for public-private partnerships (PPP) will be considered strongly for the successful implementation of this process. The NSDF defines the following actions as critical for effectively implementing the AGC:

- 1. The development of the required infrastructure.
- 2. Promotion of small scale farmers as out growers and contract farmers.
- 3. Strong opportunities for PPP.

It is important to acknowledge that as cities grow and expand, there is the tendency for agricultural lands to be converted into residential areas and so this concept strongly relies on the promotion of dense, compact and vertical cities in order for agricultural lands to be preserved.

## 1.5.8 Creation of a Model Modern City

The GIP proposes the establishment of a new model city in a pre-determined location in the country. This concept is not new, as Ghana has had similar experiences with the establishment of Tema and Akosombo. The new model city, which will be designed as a smart city, equipped with advanced technology, world class underground drainage and transportation systems, with strong environmental, sanitation and waste management schemes, built to be climate resilient and branded to serve a specific set of functions as a model sustainable city, could be built to possibly fit an area ranging from about 1km square to a large area, say 100km square. This model city will be a pivot around which other mixed use settlements will be built to serve as the following purposes:

- 1. A growth pole for the development of the area.
- 2. A model of efficient urban development and management, that would draw on state-of-the-art planning, technology and economic growth.
- 3. A population counter-magnet to reduce the pressure on existing cities.
- 4. A gateway connecting people with businesses within the country and around the world.

Lessons garnered from the setting up and running of this city could be replicated in other cities in the country, to be aesthetically appealing, technologically advanced and environmentally sustainable.

While they provide the aspirations of decongestion, enhanced functional, social and aesthetic conditions, etc., certain challenges have been associated with sustaining new cities. These include<sup>6</sup>:

- Low density development and lack of building consolidation reinforcing dependence on private vehicles,
- Lack of diversity in the fabric, services, social and cultural enterprises, and weak economies in creating jobs<sup>7</sup>,
- Lack of (organic) appeal of the residential and commercial centres, and
- 4. Disfiguring of building fabric over time with limited regeneration etc.

In order for the proposed model city to sustain itself in the long-term, the following recommendations are worth considering under the GIP:

- 1. Emphasise innovation in technology, social, cultural, and political development, and finance.
- 2. Contextually link the new city to the regional and national spatial policies.
- Base the development on strategic principles and a strong functional identity that is distinct from old cities and towns, for example globally competitive, sustainability, appealing to populations (liveability); pioneering (smart growth, smart cities based on cutting edge technologies) etc.
- Must be inclusive to accommodate households, businesses and interests as diversely wide-ranging as possible.
- 5. Must prioritise adaptable infrastructure and multiple modes of effective and efficient transportation to foster mobility.
- Must possess flexible but robust planning underpinnings.
- Must be ecologically sustainable based on green technologies, green financing and green production.

## 1.5.9 Capacity Building and Institutional Restructuring

Enhance planning and development control capacities of local governments through skills training, capacity building exercises, restructuring institutional relations and policy environment for planning.

#### 1.6 Indicators for Human Settlements

Based on the challenges identified with settlement planning and management in Ghana, a number of indicators have been developed to track settlement planning and management to fast-track the creation of liveable settlements envisaged for the country in the next 30 years. The indicators developed are based on the weaknesses of settlement planning and the poor state of most settlements in Ghana, which needs to be changed. The other source of indicators is the sustainable city indicators<sup>8</sup>. It is believed that tracking these indicators can provide valuable information for planning, settlement management and evaluation to further improve settlement planning and management in Ghana.

Table 1.4: Indicators for human settlements in Ghana

THEMATIC AREA	INDICATOR (S)
Land use planning and	Number of SDFs by the districts (%)
management	Number of structural plans
	Number of local plans in a district (% of district with local plans)
	Number of slums/blighted areas upgraded (% as a percentage of existing slums and % settlements)
	Number of district residents aware of structure plans/SDF/local plans
	Number of billboards with local plans displayed
	Percentage of land use conforming to local plans/structural plans
Transport	Transportation mode split (%)
	Availability of motor and bicycle lanes (% of existing roads)
	Availability of pedestrian lanes (ratio to existing roads)
	Availability of disability friendly traffic signals at road intersections
	Percentage of road ways in good condition (of built up areas of MMDAs)
	Percentage of trips made by bicycles/walking
Quality Open Spaces	Percentage of preserved areas, parks, water bodies etc. in relation to land area
(Environment)	Percentage of green space in relation to total land area
	Percentage of play grounds/ active open space in relation to total land area/ population
Access to water and sanitation	Percentage of population with properly engineered sewage systems (effective alternatives)
	Percentage of population with access to adequate and safe water
	Percentage of population with access to toilets
Air Quality	Level of particulate matter in major cities
Solid Waste Management	Percentage of solid waste recycled
	Availability of engineered land fill sites
	Availability of waste segregation systems in MMDAs/communities
Compact settlement / city	Access to local services like schools, health facilities and local shopping centres etc.

Source: Author's Construct

#### 1.7 Existing Policies and Institutional Arrangements

The following policy frameworks and institutional arrangements already exist to guide human settlements development in the country.

The National Spatial Development Framework establishes a national direction for land use and spatial planning and management. It is meant to guide the preparation of lower hierarchy plans and ensure balanced urban and rural development.

The Land Use and Spatial Planning Act (Act 925, 2016) guides land use planning at all levels within the decentralised contexts. It defines the planning procedures and the kinds of plans to be prepared at each decentralised level.

The Zoning Guidelines and Planning Standards (2011) is a two-part document, with the first <u>part detailing</u> out permissible land uses within classified zones, and the second part defining spatial 8 Issues of housing and informal settlements which are all urban planning issues are discussed under the housing section.

<sup>6</sup> Source: https://publications.parliament.uk/pa/cm200102/cmselect/cmtlgr/ newtowns.pdf

<sup>7</sup> Source: http://www.newtowninstitute.org/spip.php?article1161

planning standards and criteria for determining the site and sphere of influence of relevant facilities.

The National Urban Policy and Action Plan identifies urban challenges and their effects on the country's urban systems, and defines initiatives to promote sustainable, spatially integrated and orderly urban development.

The National Housing Policy (2015) provides the broad framework for addressing the variety of challenges in the housing sector and offers guidance to programmes and initiatives in the sector. The issues identified in the policy are segmented into those affecting the supply of housing on the one hand, and issues affecting the affordability of the delivered housing, on the other hand. The focus is to provide adequate housing that is accessible and affordable to satisfy the needs of all people.

The Ghana Infrastructure Investment Fund (GIIF) (Act 887, 2014) is a fund set up with the principal aim of obtaining financial resources from the public sector and other non-state sources towards the infrastructure needs of the country that are captured within a strategic plan. It is expected to act independently of the government in its outlook with an appropriate assessment of the risks, making room for partnerships in the execution of its mandate.

The 1992 Constitution and Local Government Act (1993) encapsulate all decentralised planning issues in the country. Chapter 20 of the constitution defines the contexts for local governance and administration, while article 242 makes district assemblies the highest planning authority at the local level.

National Climate Change Policy (2013) addresses climate change issues that relate either directly or indirectly to human settlements. The policy seeks to address the conflict between the sprawl of human settlements and preserving agricultural land uses in peri-urban areas. It also addresses ways to improve urban planning, building infrastructure that are resilient and adapting communities to climate change.

#### **Chapter 2 Shelter and Housing Systems**

#### 2.1 Introduction

A house is the single most important asset that one may acquire in their lifetime. Aside it being a basic human need required for social stability and cohesion, a house provides tremendous forward and backward linkages that spur economic activity in the building material, furniture and electronics industries as well as other consumer goods that provide these linkages. Housing is a means through which governments can impact the lives of the people through the provision of adequate, effective and efficient infrastructure among others.

The demand for housing has generally outpaced supply over the years in Ghana, due to rapid population growth and increasing urbanisation. This makes shelter a critically scarce commodity, thus prompting a yawning deficit between demand and supply. Overcrowding, declining quality of housing and reduced access to housing services characterise much of the housing stock in the country.

The housing challenge in Ghana, therefore, is presented in both quantitative and qualitative measures. The major issue of contention for the housing sector in the country has been to develop a strategy in the short term that will bridge the housing supply gap in the medium and long term, to ensure that every individual, particularly those in the low income cohort, has access to decent and well serviced housing, either by ownership or rental. The government has a major role to play, especially in the creation of an enabling environment for housing delivery.

The citizens' right to live in dignity and under habitable circumstances must be recognised as much as their right to choose what their own housing needs are, and their ability to access and leverage resources on collective basis. It must also be recognised that the housing sector plays an important role in the socioeconomic development of the country, thus:

- 1. Housing sector investments represent a large share of total capital formation at the national level.
- 2. Expenditure on the consumption of housing services accounts for a substantial part of the disposable income of private households.
- 3. Housing ownership, for most people, is the most important incentive to save, the principal asset they might own, a source of rental income,

and, perhaps most importantly, the basis of economic activities (the shop or workshop for small scale enterprises).

While previous attempts at resolving the issue have not been well defined, the gravity of the challenge requires that the country adopts a clear strategy or policy that will bring a boost to the housing sector and efficiently clear the housing deficit. This will also ensure that the country accrues the economic benefits (employment, fixed capital, and financial deepening) from the housing sector. Inherent in fulfilling the agenda for human settlements in Ghana for the period, lies the strong intent to develop an efficient housing market and housing system that equitably delivers different housing types to meet the diverse needs of the varying social classes of the population, while driving national and local economic growth through its multi-sectoral interconnections, and fostering strong public, private and community partnerships.

#### 2.1.1 Vision, Goal and Objectives

The vision for the housing sector for the plan period is dubbed "Housing for all by all". For this sector, therefore, the government desires to "create viable and sustainable communities through the provision of adequate, decent and affordable housing that is accessible and sustainable to satisfy the needs of Ghanaians".

#### **Objectives**

Central to this agenda therefore, are the objectives to create the following:

- 1. An efficient housing market that equitably delivers different housing types, on the back of strong public, private and community partnerships, meeting the needs of different social classes, and driving national and local economic growth through its multi-sectoral interconnections.
- 2. A housing market that stimulates the emergence of competitive developers and allied service providers capable of expanding their operations across the country.
- A central and local government system that

is well versed in strategically, and transparently, leveraging public resources to draw in private and community resources towards meeting housing needs across board, quantitatively and qualitatively. To meet this vision over the period requires that housing be:

- Built efficiently,
- ii. Serviced adequately,
- iii. Located appropriately, and
- iv. Be affordable to all households, irrespective of their income and social standing (including housing for the aged and the marginalised and students).

To fulfil this aspiration, the involvement of all stakeholders in all spheres of the housing value chain — planning, design, development and management — is required, and must be actively engaged. These stakeholders possess different assets, resources and the knowhow to achieve optimum output in terms of housing quantity and quality, as well as building and maintaining sustainable human settlements.

## 2.1.2 Housing Provision in Ghanathe Context of Human SettlementsGrowth

The nature of housing development and infrastructure provision has largely driven the growth of human settlements and attendant physical expansions. As populations have increased, so have towns and cities grown in the process. The lateral expansion or sprawl of settlements reflects the nexus of the socioeconomic factors influencing the availability of land for housing. In this regard, housing provision takes on distinct pathways dictated by the specific agents involved in the housing development process, which can be classified into four distinct categories, namely:

- Individual household—self-built and selfmanaged housing developments,
- 2. State-owned mass housing (estate) development and public-sector housing,
- 3. Corporate real estate developments and private sector housing investment initiatives, and
- 4. Vocation-based cooperative land aggregation and private housing developments.

The combined effects of these respective pathways manifest on a spatial scale as the observed sprawling of existing cities and towns.

Going forward, the state desires efficiency gains in land use and infrastructure development through the consolidation of residential neighbourhoods where policy objectives are geared toward building more compact settlements with higher densities. The identified goals will prioritise the promotion of high-rise buildings and limit the rate of settlement expansion. However, achieving this aspiration hinges on the ease of access to housing and the nature of housing delivery.

## **2.2** Overview of the Housing Sector

#### 2.2.1 Housing Supply

The national population and housing census results indicate an increase in housing stock over the different census years. Between 1984 and 2000, housing stock increased by 81 percent and a further 55 percent by 2010 to reach 3.4 million¹ units (Table 2.1), with about four in seven houses of the inventory being in rural areas. The increasing congestion suggests that the rate of construction of new dwelling units was slowing than the formation of new housholds. The increase in housing stock however, is without regard to housing quality.

In spite of the gradual increase in housing delivery, the housing sector is characterised by high rental prices and costs<sup>2</sup>, which caters for the needs of high-income households and expatriates. With the influx of large populations into the cities in addition to immigrants from the diaspora, housing supply (both formal and informal) is under substantial strain. A significant proportion of households are thus living in severe congestion and/or in poor housing conditions.

 $<sup>\</sup>overline{\mathbf{1}}$  The inventory captures absolute numbers. There is currently no data on the quality of the houses.

The nouses.The Bank of Ghana (2011) sees these as being overpriced.

Table 2.1: Stock of housing and occupancy

	1960	1970	1984	2000	2010
Population (Total)	6,726,815	8,559,313	12,296,081	18,912,079	24,658,823
Housing stock	636,189	945,639	1,204,395	2,181,975	3,392,745
% Increase in stock		49%	27%	81%	55%
Mean number of persons per houses	10.6	9.0	10.2	8.7	7.3

Source: GSS (2013)

While luxury apartments, condominiums and town houses, arranged in neatly organised precincts and occupied by high income households are common in GAMA, a significant number of households live in shanty conditions, often found side by side the high income neighbourhoods. Though there is uncertainty about the populations living in such deplorable conditions, reports estimate that about 20 - 45 percent of urban dwellers live in informal/ slum areas<sup>3</sup>. For slum dwellers and low-income families, cheap housing and proximity to centres of economic opportunities are critical. The result is the choice for the informal housing market for low-value solutions and other "do-it-yourself" approaches.

The increase in demand for housing that is affordable, particularly in the country's prime cities, is thus overwhelming even for the informal delivery systems to meet. The prices of properties even in the informal market are skyrocketing, further worsening the living standards of the urban poor. These households, therefore, require housing both in quantitative and qualitative terms.

One of the causes of such high levels of poor housing is the low prioritisation of shelter needs by the government, in the face of other pressing needs such as energy and sanitation. While focus on improving and sustaining incomes of households is rational and augers well for the long-term development goals of government, engineering housing solutions that meet what can be described as a housing crisis, is urgent.

#### **Box 6: India Prioritises Housing as Infrastructure**

India has a population of more than 1.3 billion, with more than 440 million urban dwellers. Given an estimated average urban growth rate of 2.1 %, an additional population of 900 million is estimated to be living in the country's urban areas, by the year 2050. Urban growth in India is largely influenced by rural-urban migration, and with the anticipated rapid industrialisation in the country, this trend is set to continue.

With the typically high cost of land and real estate in the urban areas, many people, particularly the low-income population, still dwell on marginal lands, in poor housing stock, characterised by overcrowding. As the concentration of people living in urban areas continues to increase, so does the population living in slums and squatter settlements, with deplorable housing existing side-by-side luxurious ones. In 2012, India's urban housing shortage was estimated at almost 18.78 million households, with 80 % of such households living in congested situations, and more than 500,000 households being totally homeless. A wide gap, therefore, exists between demand and supply of housing in India, not just in quantity but in quality as well.

The private sector developers in India focus on supplying high end and luxury apartment because of the higher returns from such projects. The process of targeting the supply of housing that is affordable to the lower income population, was greatly hindered by unfavourable banking policies, high land costs, severe licensing norms, delays in approvals from multiple local authorities, disputable tax regimes, among other things, which made low cost housing projects uneconomical and a disincentive for private developers. The supply of affordable housing has thus remained the purview of government.

3 UN statistics for example estimates 37.9% of urban population as living in slums in 2014. (http://mdgs.un.org/unsd/mdg/seriesdetail.aspx?srid=710)

Over the last few years, however, the housing sector in India has been modified to re-orient developers to focus more on affordable housing, having been affected greatly by the global liquidity crisis. This effort reduced the urban housing shortage by up to 25 % between 2007-2012, a margin which though significant, still left quite a substantial amount of shortages to be cleared. Having found the participation of the private sector to be essential towards dealing with the housing challenge in India, there was the need for the enactment of further policies by the government to encourage the greater participation of the private sector, especially in the provision of technological solutions, project financing and project delivery.

In 2015, the government launched a "housing for all" programme, in which 20million homes were expected to be constructed across the country, with refunds and interest waivers given for every home loan taken under the programme.

In February 2017, the government of India granted the housing sector "*Infrastructure Status*". Prior to this, the sectors that had infrastructure status were the Transport, Energy, Water and Sanitation, Communication as well as the Social and Commercial Infrastructure sectors, as these were considered fundamental components for the growth of the economy.

Having infrastructure status implies easier access to credit and other state incentives for participants in the housing sector. Particularly for the affordable housing sector, infrastructure status will ensure that the approval process for projects is simplified and made more transparent and the eligibility of builders for government subsidies and tax exemptions will be increased.

With these new policies in place, India is set to bring homes to all its 1.3 billion population, with its \$1.3 trillion housing drive, which is expected to yield 60 million new homes between 2018-2024, in addition to raising incomes and providing a level of affordability that is unsurpassed in decades. India seeks to use the provision of housing as a driver of economic growth, providing about 2 million jobs annually.

Furthermore, the government has enacted a law that comes into force on May 1, 2017, to ensure that:

- 1. Construction companies reinvest at least 70% of their proceeds back into the housing sector, to complete residential projects rather than siphoning the funds into other jobs; and
- 2. Developers do not pre-sell apartments before all building approvals are obtained, with a surety of jail term should these laws be flouted.

Over the plan period, it is expected that the compound annual growth rate in home construction will grow from zero to about 8%.

Source: Chaudhary, A. and Mahrotri, P. T. (2017) and other sources

#### **Approaches for Housing Supply in Ghana**

Housing is supplied by the public and private sector, as well as a third sector, which is referred to as the traditional or vocation based approach. This latter approach comprises of self-help and self managed housing delivery systems as well as the cooperative land aggregation and private housing developments systems.

#### **Public Sector Approach**

This is usually through periodic housing development activities of public housing agencies like the State Housing Corporation (SHC) and the Tema Development Corporation (TDC), under the patronage of the various Ministries, Departments and Agencies (MDAs) as well as various local government agencies for their (senior) staff. The efforts of the Social Security and National Insurance Trust (SSNIT) are included in the public sector approach for housing provision or supply in the country. Although the outputs of these agencies (SHC, TDC and SSNIT) may be put on the public market for sale, a few are reserved for some key staff of public sector agencies. Housing by the MDAs and MMDAs, however, are exclusively for public sector workers on rental basis.

#### Real Estate Developers (Private Sector Approach)

The role of the private sector in housing development is critical, particularly to the effective housing market and generally for economic

growth and national development. Currently, the

private sector is vibrant in the upscale housing market in Accra, and (marginally) in Kumasi and Sekondi-Takoradi. However, the overall output of the formal private sector accounts for less than 10 percent of the total housing stock in the country.

The private sector favours mainly single family bungalows and semi detached types of buildings, and are usually sited on undeveloped green fields close to the peripheries, as well as medium-rise apartment blocks, which are usually located in the central areas of the city. There is therefore the need to enhance their activities, especially in the middle to low income households' sub- market given the right conditions, and encourage the infilling development approach as part of strategies to build more densified and compact human settlements.

There is a third type of development by real estate developers utilising site-and-services approaches to make available serviced residential plots for individual households. However, it is known that most of such developers do not fulfil the servicing

as pledged and thus leave the emerging housing estate underserved. This calls for the provision of stricter oversight.

#### Traditional/Vocation Based Approach

This approach projects two distinct trajectories of housing delivery namely, self-help and self-managed housing delivery by individual households and then, the cooperative land aggregation and private housing developments.

#### Self-Help And Self-Managed Housing Delivery By Individual Households:

Housing provision in Ghana is dominated by individual households who engage in self-build or self-managed construction, usually attracted by the lower priced peripheral lands on the edge of urban areas. According to the 2010 PHC, these constitute about 69.8 percent of the entire housing stock<sup>4</sup>. The housing typology under this trajectory of housing delivery includes "compound houses" (which usually cater for the extended family system), however, a contemporary variant of this is the predominant single family dwellings, usually single storey, mostly found in urban areas. This contributes massively to urban sprawl and its consequent increase in the cost of infrastructure provision.

Tenure arrangements for compound housing tends to be a mix of ownership and rental as some of the rooms are let out. The modern forms tend to be mostly owner occupied. Given their share of the housing market, single-household housing

developments dominate the rental housing market with majority let out informally.

The latest developments in this market is the resort by land owners to lease land to prospective tenants to undertake the construction of the rental housing as apartments built in linear or quadrangular fashion and the investment calibrated as rent over an agreed (longer) period, following which the property reverts to the land owner.

## Cooperative land aggregation and private housing developments (vocation-based):

This housing delivery mechanism involves the joint acquisition of land by a group of people, mostly vocation-based collectives. The land is then subdivided and allocated to individual members, who then undertake the construction by themselves. This practice is particularly common at the peri- urban areas of towns and cities.

Presently, it is difficult to measure the output of this segment although its potential is enormous. Further work is required to assess the productivity and efficiency of this approach in order to determine how policy can enhance its output.

#### 2.2.2 Housing Needs<sup>5</sup>

Housing needs refer to the quality and quantity of shelter that is required by every household in spite of their status. The term further describes the needs of people without any housing at all, and that of persons whose household sizes call for expansion or improvement of their current dwelling units. This is different from "housing demand", which considers income levels as well as the capacity and willingness to pay for the housing required. It is important to establish the differences in order to appreciate which housing types meet the varying needs of different households as far as size and incomes are concerned, and to enable the design of the most responsive national housing policies and programmes during the plan period.

## **Segments**In order to establish the housing need, the Nationa

**Estimating Housing Needs and Market** 

In order to establish the housing need, the National Population Council presents three (3) population growth scenarios for the country, based on contraceptive prevalence (CPR) rates of 0.5, 1.0 and 1.5 percentage points per annum for high, medium and low variants respectively (Table 2.2). These scenarios provide the population bases for the housing needs assessment in this sub-section.

The urbanisation split of the population is based on the urbanisation scenarios provided by the NDPC.

Table 2.2: National population growth scenarios

Year	Urbanisation	Low birth rate scenario	Average birth rate scenario	High birth rate scenario
2018	54.0%	29,242,422	29,491,279	29,740,135
2020	57.2%	30,425,791	30,819,286	31,212,780
2025	60.0%	33,396,229	34,329,697	35,263,164
2030	62.6%	36,267,646	38,040,887	39,814,128
2035	64.8%	38,925,683	41,925,917	44,926,151
2040	66.8%	41,242,203	45,997,564	50,752,925
2045	68.7%	43,270,415	50,168,787	57,067,159
2047	70.5%	44,081,699	52,252,835	59,603,971

#### Source: National Population Council and NDPC projections, 2017 Housing Needs Based on Households per Dwelling Unit

The number of households in Ghana recorded in the 2010 PHC was 5.5 million with an average household size of 4.44 persons. The PHC report also suggests that ideally a household should occupy a house, although that is not the case in practice. Again, the number of houses at the time was estimated to be about 3.4 million (with 5.8 million dwelling units)<sup>6</sup>.

The inference from using the assumption of one household per house therefore produces a deficit of about 2.1 million houses in 2010.

It is expected that the number of households will increase by 6.7 million to 12.2 million by 2047 while the household size will reduce from 4.4 to 3.8 by 2047

<sup>4</sup> GSS (2013) pg. 383

<sup>5</sup> Housing need differs from housing demand, which describes the ability and willingness of households to pay for the housing required.

<sup>6</sup> The census report captures the number of houses as 3.4, with 5.8 million dwelling units. By definition, a dwelling unit refers to "a specific area or space occupied by a particular household and therefore need not necessarily be the same as a house, of which the dwelling unit may be a part of. Such a vague definition accounts for different figures.

#### Housing Needs per additional households by 2047 based on Average population growth Housing Needs According to Room<sup>7</sup> Occupancy scenario

Given the average population growth scenario (Table 2.2), where the total population of the country reaches 52.2 million by 2047, an extra 8.84 million houses (including the backlog from the 2010 PHC) must be added to the housing stock of the country in order to accommodate the additional households by the year 2047 (Table 2.3), in order to meet the vision of "housing for all, by all".

Table 2.3: Estimated housing needs per household (HH), 2010 to 2047 based on the medium variant

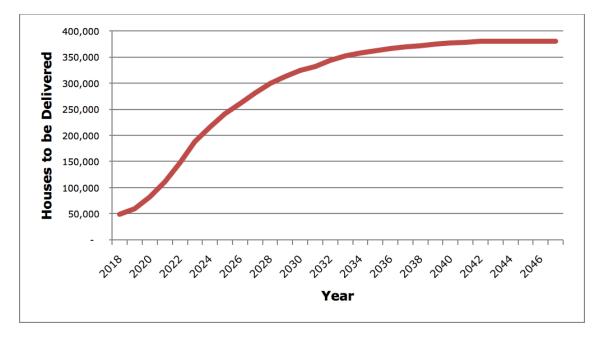
Year	Projected Population	Household Size (projected)	Additional Population after 2010	No. of new Households	No. of houses needed
2010*	24,658,823	4.44			2,100,000
2015	27,491,279	4.38	2,832,456	646,679	646,679
2020	30,819,286	4.32	3,328,007	770,372	770,372
2025	34,329,697	4.24	3,510,411	827,927	827,927
2030	38,040,887	4.15	3,711,190	894,263	894,263
2035	41,925,917	4.05	3,885,030	959,267	959,267
2040	45,997,564	3.97	4,071,647	1,025,604	1,025,604
2045	50,168,787	3.88	4,171,223	1,075,057	1,075,057
2047	52,252,835	3.8	2,084,048	548,434	548,434
TOTAL		·		6,747,603	8,847,603

Source: NDPC (2016) and Authors' estimates (2016)

\*Backlog from 2010 PHC

Figure 2.1 is a graphical representation of the number of housing units to be provided over the period in order to meet the set vision. It is based on the assumption and anticipation that by the beginning of the implementation period, housing delivery will start at a minimum of about 44,000 units per annum, growing to about 300,000 housing units by the year 2031. By the year 2047, it is anticipated that housing provision would have reached a total of 350,000 housing units per annum, which will be enough to meet the housing need by the end of the period, if this figure is at least steadily maintained.

Figure 2.1: Houses to be delivered



Source: Author's Construct

The 2010 PHC together with the GLSS 5 and 6 studies indicate that households often occupy a dwelling unit within a house, as is the case of compound houses, being the commonest housing type both in the rural and urban areas. Between 2000-2010, households occupying rooms in compound houses increased from 44.5 percent to 51.5 percent.8 Considering the housing need based on the number of rooms will provide a more realistic assessment, given that it follows the current tenure practice.

#### Estimating the number of rooms in Ghana

The 2010 PHC reports that 44.5 percent of households in Ghana occupy single rooms. With only 4.4 percent of households occupying nine or more rooms, the number of rooms available in Ghana in 2010 can be estimated based on this information9.

Table 2.4: Estimated number of rooms<sup>10</sup> available in Ghana in 2010

	Number of	Number of Rooms					
	1	2	3	4	5+	Mean rooms	Total Rooms
Percentage distribution of rooms	44.5	24.8	11.6	7.1	12.0		
Number of households occupying these rooms in 2010 ('000s)	2,432	2,712	1,903	1,553	4,286	2.4	13,116

Source: Authors' construct based on GSS (2013). \*In calculating the rooms occupied for households occupying 9 or more rooms, a class value of

Per Table 2.4, of the estimated 13 million rooms that existed in the year 2010, households occupied an average of 2.4 rooms, with an average household size of 4.4 persons. There were fewer rooms per urban household, as compared to rural households. In urban areas, about 51.4 percent of households occupied single rooms as compared to 35.9 percent in rural areas. This suggests significant levels of crowding, especially in urban households.

#### **Decongesting Existing Rooms**

As earlier indicated, per the 2010 PHC report, about one in every two urban households (with a household size of 3.6) occupies a single room. However, about 26 percent of this category of households, that were occupying single rooms (792,854 households), actually required more rooms, per the new zoning and planning standards. which proposes a maximum of 2 people per room (ppr)<sup>11</sup>, for high-density areas. Therefore, in order to decongest and maintain a recommended 2 ppr as at 2010<sup>12</sup>, urban households required an additional 1.7 million rooms<sup>13</sup>.

Table 2.5: Number of rooms per household required at 2 PPR in Urban Ghana in 2010

	Number of F	Rooms					
	1	2	3	4	5+	Mean* rooms	Total Rooms (,000s)
2 persons per room (%)	35.4	29.1	20.3	8.8	6.4	2.4	7,151
Percentage of households actually occupying these rooms	61.4	22.2	7.8	4.2	4.5		
Number of rooms actually occupied by these households ('000s)	1,872	1,354	714	512	961	1.8	5,413

Source: Authors' estimates based on GSS (2013) Household size data from 2010 PHC (pg. 76)

\*For 5 or more rooms, a class value of 7 was used.

Approximately 23 percent of households occupying one and two rooms (20 percent and 2.5 percent of households respectively) required additional rooms (Table 2.6). In total, therefore, 1.9 million additional rooms were needed to decongest households in rural areas to attain the desired number of 2 ppr in 2010.

<sup>7 &#</sup>x27;Rooms' as used in this section refers to sleeping rooms 8 GSS (2013)

<sup>9</sup> GSS (2013) pg. 381

<sup>10</sup> Rooms for sleeping 11 MEST (2011), used as threshold for the prognosis

<sup>12</sup> The analysis used 'sleeping rooms' as captured in the PHC. In an expected housing setting additional space for living, kitchen etc. should be anticipated

<sup>13</sup> This estimation does not take into consideration the quality of existing rooms

Table 2.6: Number of rooms per household required at 2 PPR in Rural Ghana in 2010

	Number	of Rooms	3				
	1	2	3	4	5+	Mean rooms	Total Rooms (,000s)
2 persons per room (%)	25.5	24.4	22.9	13.6	12.6	2.9	7,987
Percentage of households actually occupy- ing these rooms	45.5	26.9	13.1	6.8	7.6		
Number of rooms actually occupied by these households ('000s)	1,272	1,505	1,099	761	1,487	2.2	6,124

Source: Authors' estimations based on GSS (2013) Household size data from the 2010 PHC

\*For 5 or more rooms, a class value of 7 was used.

#### Room needs for extra urban households by 2047 according to average growth scenario<sup>14</sup>

By the year 2047, about 9.6 million households (70.5 percent of the population) are expected to live in urban areas in Ghana. Urban areas will therefore add on approximately 6.9 million households in relation to the baseline from the year 2010. Assuming the additional households retain similar household sizes as in the year 2010, the households can be distributed according to the number of rooms they will require at 2 ppr. Within the period, an additional 16.1 million rooms will be required to adequately shelter the extra households that will be living in urban areas.

Table 2.7: Room needs by extra urban households over 2010 population at 2 PPR

Year	Proportion of urban population <sup>1</sup>	Extra urban households over 2010	Total rooms needed (,000s)
2018	54.0%	728,107	1,707
2020	57.2%	1,183,561	2,775
2025	60.0%	1,843,380	4,323
2030	62.6%	2,804,132	6,576
2035	64.8%	3,584,225	8,405
2040	66.8%	4,947,680	11,602
2045	68.7%	5,882,576	13,795
2047	70.5%	6,884,297	16,144

Source: Authors' estimations (2017)

#### Room needs for additional rural households by 2047

Household sizes tend to be relatively larger in rural areas (averagely 5.1 persons), than in urban areas (averagely 3.6). However, given that the proportion of rural dwellers will progressively reduce within the plan period, reaching 29.5 percent by 2047, the extra households to live in rural areas by this period will require an additional 4 million rooms.

Table 2.8: Room needs by additional rural households over Y2010 at 2 PPR

Year	Proportion of rural population	Extra rural households over 2010 (,000s)	Total rooms needed (,000s)			
2018	46%	322	925			
2020	42.8%	304	854			
2030	37.4%	682	1,957			
2040	33.2%	1,191	3,418			
2047	29.5 %	1,397	4,012			

Source: Authors' estimations (2017)

Assuming the 2010 deficit of 3.6 million rooms (in both urban and rural areas) remains unresolved, a total of 23.7 million rooms must be supplied by 2047 – an average 66,000 rooms per month over the next 30 years.

14 Other scenarios are presented in the main report

#### **Box 7: Housing Provision in Seoul: The South Korean Experience**

"Residential satisfaction is not only an important component of [an] individual's quality of life but also determines the way they respond to [the] residential environment. An understanding of the factors... can play a critical part in making successful housing policies"

111

The success story of transformative development in South Korea is often described as "the miracle on the Han River", because it took the country a period of less than one generation to turn its economy into a modernised and industrialised one. The country accomplished in a period of about thirty years the structural transformation that took many industrialised countries centuries to achieve. Today, Seoul, the capital city, is counted among the mega-cities around the world, with a higher transformation rate that outpaces some other mega-cities, particularly in Europe and North America.

South Korea, upon its emergence as an independent state after the Korean War, had a largely agrarian economy until a military coup by General Park Chung-hee in 1961 overthrew its Second Republic. It was therefore under General Park's Third Republic that the first Five Year Plan was drawn and implemented, thus establishing the foundation upon which South Korea's industrial revolution was triggered. With increased industrialisation came increased employment, leading to a mass migration of people into urban areas, a phenomenon which instigated a severe housing shortage in the country's cities. The underlying factor for this was that the government, in the process of development, perceived housing as a low priority sector. As a result, very little resources were allocated to this sector, with much of governmental investments rather going into manufacturing and other infrastructural sectors that promoted rapid economic growth and brought about increasing returns.

Inevitably, the country soon had to define concrete strategies to deal with the issue of housing shortages given the development of many unlicensed shacks in the rapidly urbanising cities. As part of the government's policies towards the development of metropolitan areas, a housing policy was established which was very much geared towards increasing supply.

In order to tackle this issue vigorously, the government set up the Korean National Housing Corporation and the Housing Commercial Bank, and also enacted the Land Compartmentalisation and Rearrangement Projects Act in a space of five years (1962–1967). With the institutional and legal frameworks in place, Korea was ready to supply more affordable housing within the contexts of a planned urban environment, in pursuit of the goal of "one house per household", giving special cognisance to those seeking to own/purchase a home for the first time.

In the 1980s, the government allocated a significant amount of its budget to urban development, specifically to initiate a massive housing supply programme dubbed the Two-Million-Housing-Drive (TMHD), to meet the increasing demand for quality housing. Reasonable and practical steps were taken to involve the private sector within the contexts of a defined regulatory framework. The government among some of the major steps taken, made available large scale developable land, extended financial support through a pre-established National Housing Fund, implemented regulations on the construction and the distribution of new buildings and provided tax incentives and subsidies to contractors and patrons where needed.

The housing sector began to experience rapid expansion due to the TMHD, with housing stock growing from 200,000–250,000 units per annum in the 1980s to over 500,000 units per annum by the late 1990s. This figure dropped during the Asian financial crisis in 1998, but by the early 2000s, as the economy began to recover, the numbers of added housing settled within the range of 400,000–500,000 per annum. From the 1980s through to 2010, the recorded consumption of housing space has more than doubled, and the share of housing facilities with fitted modern equipment, has also significantly increased.

The country practices a three–tier urban planning system comprising the Regional Plan at the top, the Urban Master and Management Plans in the middle and the Implementation Plan at the bottom. Giving that housing policy was integrated with urban planning, the requisite infrastructure to enhance urban living and connectivity were all incorporated in the implementation process. Seoul, as well as the other cities in South Korea, has been designed to support healthy lifestyles through the creation of the urban greenway routes and improved physical activities through the establishment of mixed use urban environments that promotes walking among inhabitants, and the creation of bicycle routes etc.

In spite of the substantial improvement in housing conditions, there still remains room for improvement as the welfare of low-income earners and the disadvantaged in society remains a cause for friction. Although a 10-year plan was developed to supply 1 million houses to support this category of persons, the plan was confronted with financial challenges from the Land and Housing Corporation (the state owned enterprise responsible for the provision and management of public rental units). A new policy was thus developed and implementation began in 2015 to cater for persons who fall within this category.

Although South Korea is criticised for falling short on a key international indicator for high income countries, which is, the amount of floor space per person, there is no denying that the country has made significant strides in improving overall housing conditions (in terms of quality and quantity) over the past 40 years. In fact, the housing supply ratio (i.e. total number of houses/total number of households), which improved greatly in the 1990s reached its optimum in the 2000s, with as many dwelling units as households living in the country. As of 2008 this ratio has exceeded 100%, thanks to the adoption of effective and efficient housing policies and the strong commitment of the government towards implementing them.

It is important to note that the success of implementation of the housing policy rested heavily on public sector institutions, which played a key role in ensuring optimum housing supply. Key among them were the Korea National Housing Corporation and the Korea Land Development Corporation, which later merged to form the Land and Housing Corporation in 2009. These institutions were responsible for the implementation of all large-scale land development projects. With vested power from the government to purchase non-urban land in prominent areas, they facilitated the process of acquiring developable land for the construction and provision of housing facilities.

The public sector was at the forefront throughout the development process, driving the agenda. From the selection of locations and the size of land parcels, through determining the number and composition of housing units to be developed as well as allocation of houses to buyers, the government, through these entities, regulated the process. The role of the private sector was restricted to construction. The simple idea underlying this decision was for the public sector to recoup the gains from developing the land in order to reinvest in the provision of infrastructure and affordable housing.

Sources: Kim, K. H. & Park, M. (2016), Lu, M. (1999), and Kim, K. S. (1991)

#### 2.3 Housing Demand and Affordability

#### 2.3.1 Housing Affordability

The demand for housing in Ghana is influenced by the ability of the individual/household to afford it and the willingness to pay for it.

The general notion is that housing in Ghana is affordable, however, the following illustration (Figure 2.2) reveals that if households can spend up to three times their salaries on housing, 35 percent of all urban households can only afford a house priced at Gh¢ 12,000 as the capital cost of their housing, with 85 percent able to afford less than Gh¢ 72,000. The figure also reveals that only the top 20- 25 percent of urban households can afford any house either for purchase or rental, at one-third of their income. Rental levels at the current rent to household income of 10 percent or less are also very low, showing 50 percent capable of paying GH¢300 or less per month and 35 percent requiring accommodation with rents of Gh¢ 10 or less<sup>15</sup>.

Percentage of all Households Monthly Income Income Maximum Housing affordability cost aimed maximum rent GHC/Month Range HC:Y=3at the levels affordable thresholds at R:Y of 10% >4,000 180,000 476,000 & 500+ Very High 5% 204,000 High 3,001-4,000 144,000 163,200 400 10% 95,200 Mid-high 2,001-3,000 108,000 300 50% of households Middle 1,001-2,000 72,000 Up to 200 can afford 54,000 housing costing Moderate 501-1,000 36,000 100 between GHC12,001 and GHC72,000 101-500 18,000 50 Low Income 51-100 12,000 10 No wage 0-50 of households can afford housing costing less than GHC12,000

Figure 2.2: Housing affordability pyramid<sup>16</sup>

Source: UN-Habitat, 2011

The government of Ghana must adopt and follow sustainable housing processes, which will enable Ghanaians to acquire housing with secure tenure, within an integrated society, in a safe and healthy environment, and in liveable and productive communities within the shortest possible time, all in a bid to clear the housing deficit.

#### **2.3.2** Housing Finance

Housing Finance is a mechanism that facilitates the production and consumption of housing. It basically refers to the money that is used to build and maintain the nation's housing stock, as well as money for rents, mortgage loans and repayments<sup>17</sup>. In some countries, housing finance systems have been developed extensively to meet their basic housing needs. Ghana needs to create a properly functioning housing finance system, to meet the country's needs over the plan period.

Currently, of the 31 existing banks in Ghana, only 15 of them officially offer mortgage loans as a product. The GHL Bank, formerly the Ghana Home Loans, is the leading bank institution exclusively focused on residential mortgage lending.

With interest rates generally ranging between 24 percent to 36 percent p.a., average mortgage rates are around 32 percent p.a. This high cost of borrowing constrains mortgages among Ghanaian homebuyers. In year 2000, home ownership through mortgages in Ghana reportedly constituted 1.1 percent of the housing stock, dropping to 0.8 percent by 2010.

The patronage of mortgage portfolios is exclusive to high-income earners, as majority of households are unable to afford the high costs of mortgages. Less than 3 percent of loans granted by banks in Ghana go into housing finance. From Table 2.9, the total home loans book in Ghana in 2015 was in excess of US\$ 200 million and the number of borrowers just under 6,000. The housing finance system (as a share of GDP) is only 0.5 percent, as compared with the African average of 15.7

<sup>15</sup> Sourced from the UN-Habitat, National Housing Profile, (2011)

<sup>16</sup> Sourced from: http://www.housingfinanceafrica.org/country/ghana/

<sup>17</sup> Peter King, Understanding housing finance

percent of GDP. This shows the inadequacy of the size commitments<sup>18</sup>.

A Building and Road Research Institute (BRRI) study conducted in 2005 revealed that, while the formal real estate developers (GREDA) delivered

1.9 percent of homes constructed in that year, about 95 percent of homes constructed in that year were developed by individuals using the informal system of housing finance. The challenge in using the formal mortgage system of housing finance is thus on the demand side. The funding structure of commercial banks is such that, they are enabled to finance the construction of residential properties with on-site infrastructure if there is effective demand. In a well-managed national economy, state and local governments finance off-site infrastructure from taxes and/or infrastructure and municipal bonds.

#### Financing the demand side of housing:

Mortgage loans are the time tested and acknowledged formal means of home acquisition typically offered by deposit money banks.

Where mortgages are unavailable, developers provide long-term finance to buyers. Housing Microfinance is provided to the informal sector for home improvement or progressive housing.

The penetration level of home loans in Ghana is dreadfully low. This trend could be attributed to the chronic macro economic instability, which has led to the low demand for home loans over the years. In 2013, when the average mortgage debt to GDP ratio in middle income countries ranged between 7 percent to 15 percent, the penetration rate in was pegged at just 1 percent.

Table 2.9: Mortgage Portfolio of Financial Institutions (as at  $30^{\rm th}$  June, 2015)

		Portfolio in US\$	Market share (%)
1.	GHL Bank (Ghana Home Loans)	85,742,890	43.2%
2.	HFC Bank	65,501,679	33.1%
3.	Fidelity Bank	26,583,222	13.4%
4.	Barclays Bank	14,463,391	7.3%
5.	GCB	5,374,418	2.7%
6.	GN Bank	458,310	0.2%
7.	SG SSB	128,286	0.1%
	Total	198,223,593	100%

Source: Akuffo, (2015)

#### **Box 8: Housing Finance - The Malaysian case**

Since the 1970s, the Malaysian government instituted a home-ownership democracy by adopting and pursuing a policy to increase the supply of affordable and quality housing, thus promoting active home ownership especially among low and middle-income households. Mortgage lending was pursued. In Malaysia the mortgage lenders are the commercial banks, with 80% of the market, the Malaysia Building Society and other Financial Institutions.

Specific government interventions includes the exemption of residential properties from capital gains tax, the tax relief on interest paid on housing loans, the enabling environment to utilise the employees provident funds for home acquisition or repayment of an existing housing loan and a monthly withdrawal from employees providing fund for loan repayment.

The central bank also promoted the mortgage business by instituting a mandatory lending requirement for housing (and other priority sectors). They also lowered the risk weighting for residential mortgages from as low as 35% to 50%. Finally, the CAGAMAS, which is the national mortgage corporation, was established to issue debt securities to finance the purchase of homes.

The CAGAMAS plays a major role in the Malaysian Housing Finance System. Among it's functions include the provision of liquidity and hedging to mortgage financiers, narrowing the gap between the maturity structure of housing loans and source of funds, linking the mortgage market to the capital market and standardising the primary mortgage market.

#### Strengthening the mortgage market in Ghana

As previously indicated, the primary mortgage market in Ghana is quite basic to instigate a strong capital market activity. To have a secondary mortgage system work, there is the need for a healthy well-developed primary market, with sufficient volume of attractively priced, well-documented and underwritten mortgage loans that are serviced by reputable organisations.

In order to strengthen the primary market, the following must be adhered to.

- 1. The required data on mortgage application instruments as well as other supporting documentation must be standardised across banks.
- 2. High underwriting standards must be followed in order to reduce the probability of defaulting.
- 3. Data on the appraisal/valuation of house prices to be made available.
- 4. There is the need for proper credit reporting.
- 5. There must be mortgage instruments with foreseeable cash flows ie, adjustable rate mortgages and fixed rate mortgages.
- 6. There must be effective servicing backed by good foreclosure laws and electronic payment systems.

While issues like bad macroeconomic environment and weak appraisal of properties among others persist, there are certain existing potentials that can be tapped into or fuelled towards instituting a strong mortgage market in Ghana.

For example, in the new Ghana Housing Policy, greater private sector participation is encouraged in housing delivery. Key features described include:

- 1. Funding Sources; GOG, private sector, NGOs, Individual Households.
- 2. Provision of land banks for private developers.
- 3. Fiscal and Monetary incentives for home ownership.
- 4. Establishment of National Housing Fund.
- 5. Introduction of rent to own schemes.
- 6. Tax measures to discourage speculation in land and retention of vacant land in Urban and Semi-Urban areas.

Again, as far as underwriting is concerned, there is adequate knowledge of quality underwriting in Ghana. There is also the presence of credit bureaux, whose services can be enhanced to provide credit reporting. What is needed is the establishment of strong foreclosure laws that will meet the expectations of lenders in Ghana.

Finally, over the plan period, disposable incomes must be consistently increased to enable Ghanaians patronize good quality products. There exists a positive correlation between growing income levels and the quality of housing demanded. Incomes can only be raised by pursuing policies that promote economic growth, value addition to mineral resources and increased productivity in the economy. Increasing the disposable income of Ghanaians is inextricably linked to the performance of the economy as a whole.

## **2.3.3** Housing Maintenance and Stock Management

Currently, homeowners and renters undertake maintenance and repairs as and when necessary in commensuration with their income flows. Further data is however required on the number of houses in need of major repairs in order for pragmatic policy interventions to be made.

In the long term, continuous and sustained stock replacement estimated at 3 percent of existing stock per annum, is necessary (Table 2.10) to guarantee access to housing in both qualitative and quantitative terms. This requires effective and collaborative efforts with local governments and local building inspectors, to ensure that:

- Developers duly follow building and zoning regulations, and
- Planning authorities regulate the quality of building materials and can either authorise alterations or demolitions where the siting or the condition of a building poses significant treat to life and property.

<sup>18</sup> http://www.housingfinanceafrica.org/country/ghana/

#### 2.4 Land Requirements for Future Housing Need

The average population growth rate scenario as projected in Table 2.2, shows that Ghana will be inhabited by 52.2 million people, made up of over 12.2 million households; implying that an additional approximately 6.7 million households will be added over the plan period (in relation to the 5.5 million households in 2010).

To house the anticipated 8.8 million households alone in single dwellings by 2047, would require a gross land area of 953,000 ha<sup>19</sup>; nearly 2.9 times the land size of the Greater Accra Region. The amount of land required is reduced by more than five-fold if the new housing is provided in line with the new density standards — a minimum gross density of 176 p.p/ha and a maximum of 330 p.p/ ha<sup>20</sup>— translating to 177,000 ha and 94,000 ha of land respectively.

## **2.4.1** Land Administration and Management

Ghana needs strong land administration strategies that are effective and efficient in its quest to attain a high-income status. The country currently relies heavily on primary economic activities, especially on agriculture, forestry and mining, etc., for its economic sustenance and growth. These activities, which provide about 70% of the country's GDP, depend heavily on land. One major constraint to be encountered towards achieving the objectives of the Ghana Infrastructure Plan is the availability and lease of land. This calls for strong strategies to streamline issues pertaining to land management and administration in the country.

Lands in Ghana are either public/state owned or privately owned. Public/state owned lands are those lands that have been compulsorily acquired by the government, vested in the President and held in trust by the state for the entire population of the country, through the invocation of an appropriate legislation. Private lands, on the other hand, are mostly communal land held in trust for the community by the traditional authority or a family. There are also vested lands, which are lands with split ownership between the state and the traditional owners.

As a result of the different types of ownership, land administration and management in the country involves a multi-faceted process, which includes state, private and customary systems. There are agencies like the Town and Country Planning

Department, which is responsible for developing spatial plans, and the new Lands Commission, responsible for managing all public lands and land title registration. As part of recent reforms, a new Lands Commission was formed which is an integration of four Land Sector Agencies; the 'Old Lands Commission', Land Valuation Board, Land Title Registry and the Survey Department.

Land acquisition processes are quite cumbersome and wrought with several challenges, including multiple land sales, etc. The Land Administration Projects 1 & 2 were initiated to address these challenges. There is also the draft Land Bill (2016) with the objective to revise, consolidate and harmonise the many laws governing land, and to ensure sustainable land administration and management, effective land tenure and efficient survey and mapping regimes. This Bill, together with the Rent Act and the Condominium Bill need to be finalised, validated by stakeholders and ratified into law as soon as possible.

#### Land availability for housing

In the context of direct housing delivery, demand for land is affected by its availability, price, ease of acquisition, land use and zoning regulations and the systems for acquiring titles. Generally, availability of land is measured in quantitative terms. But the heterogeneity of land makes locational issues relevant in the discussions of land availability. Availability of land in the right acreage and at good locations is a prerequisite to meeting the real housing needs of households and property developers. Ghana's housing sector

now has to adequately address the wanton destruction of urban agricultural lands and the traffic congestion arising from the distant locations people are finding for housing.

Inferring from the national housing policy, if objectives to create an environment conducive to investment in housing for rental purposes; to promote housing schemes that maximize land utilization; to accelerate home improvement (upgrading and transformation) of the existing housing stock; and to promote orderly human settlement growth with physical and social infrastructure will be achieved, then strategies underpinning these objectives must also pay particular attention to locational issues besides availability of land.

#### Land acquisition

The customary system for land acquisition, while fairly simple, is however fraught with litigation and multiple sales. The national urban and housing policies both identify this as a limitation to increasing housing supply. The national housing policy lists access to land as one of the major supply side constraint. The national urban policy associates the multiplication of slums and squatter settlements to the rise in urban unemployment and problems of access to land and other resources. Evidently, difficulties in accessing land partly explain the slack in growth in housing production and housing delivery in Ghana.

#### Cost of Land

Closely linked to ease of acquisition is the cost and system for processing land titles. This has been mentioned together with other factors such as security of tenure, systems for land disposal, and land use controls and standards, as the real challenges to housing delivery rather than the unavailability of land. Ghana Real Estate Developers Association (GREDA) describes it as "an expensive and cumbersome process" involved in land registration. This has further been highlighted by many other housing related documents such as the National Urban Policy, National Housing Policy and the National Housing Profile. In reality though, Land Title Registration (1986) L.I. 1241 provides the legal framework for the registration of land titles.

The regulatory system in the land sector is fraught with such challenges as long bureaucratic processes, corruption and weak institutional collaborations. However, should these issues be addressed, such uncertainties surrounding acquisition, proof of acquisition and fraudulent land sales will be largely resolved.

#### Making land available under the GIP

A large amount of land would be required during the next 30 years under the programme, for housing and commercial infrastructure, railway development, power transmission and distribution systems, water and sewerage treatment plants, etc. The total amount of land required for housing provision has been computed as shown in Tables

2.9 and 2.10 using the median population scenario. It is expected that the President invoke the State Lands Act of 1962 or any appropriate instrument to acquire the land in advance for development. The State Land Act provides for the acquisition of land in the national interest. Whenever it appears to the President in the national interest to do so, he may declare land to be required in the public interest. On publication of an instrument made for the acquisition, the land shall be vested in the President on behalf of the Republic. The sector Minister may pay compensation or may offer land of equivalent value. Further disputes that arise may be referred by the sector Minister to the Tribunal for redress

Table 2.10: Estimated minimum and maximum land area required for housing using medium population scenario (2018-2047)

Year	Projected Population ('000)	Extra Dwelling units/ houses required	Housing replacement	Total dwelling units/ houses required	Total maximum land required/ households (ha)	Total minimum land required/ households (ha)
2018	29,000	4,608,012	230,401	4,838,413	24,192	12,096
2027	35,000	5,592,800	279,640	5,872,440	29,362	14,681
2037	43,000	6,801,753	340,088	7,141,841	35,709	17,855
2047	52,000	8,100,443	405,022	8,505,465	42,527	21,264

Source: Author's Estimates

<sup>19</sup> Using a typical government built bungalow, which usually occupies a plot size of 750m². This gives a gross of 8.6 plots per ha (1 plot = 22.9°30.5m). Additional details are found in the main report. For details on methodology see UN-Habitat (2011). 20 TCPD (2011)

Table 2.11: Estimated land area required for housing among the various regions (2018-2047)

Year/Land Requirement(Ha)	AR	ER	BAR	GAR	VR	CR	NR	UER	UWR	WR	Total
2018	2,397	1,212	1,117	1,863	955	1,138	1,321	539	354	1,159	9,698
2027	2,803	1,373	1,285	1,978	1,138	1,363	1,610	652	424	1,332	11,148
2037	3,253	1,552	1,472	2,105	1,1614	1,614	1,930	777	502	1,524	12,758
2047	3,704	1,731	1,658	2,233	1,865	1,865	2,251	902	580	1,716	14,369
Total	12,157	5,869	5,532	8,178	5,980	5,980	7,112	2,869	1,861	5,731	47,973

#### 2.4.2 Geographic Implications for Future Housing Demand

Over the plan period, housing need is projected to be a predominantly urban development issue. Housing deficits in rural areas will reduce progressively as settlements become more urbanised. As significant growth is expected mostly in small and medium sized towns and

cities, demand for housing will become more critical in these areas. While the Northern and Central regions have the highest growth rates of

3.9 percent and 3 percent respectively, however, due to migration the populations of Greater Accra and Ashanti are expected to reach 8 million and

8.8 million respectively by the year 2035<sup>21</sup>. If the current momentum of city growth persists, the Upper East and Upper West regions will still have less than half a million inhabitants by the same period. The major challenges to housing delivery over the plan period will be:

- 1. The housing typology required
- 2. Securing land in good locations

Towards achieving the required quality of urban development, the following conditions must be considered:

- 1. Adhering strictly to the conditions set out in the planning and zoning regulations.
- a. Promoting efficient utilisation of urban lands, i.e. promoting densification and compact mixed-use developments consistent with the values and norms of Ghanaians.

These are crucial in tackling the current as well as future housing needs.

Meanwhile, the performance of the private sector led informal housing supply shows that the current system is incapable of delivering the volume, diversity and quality to meet annual housing demand. Also, the dependence on personal savings for home construction delays completion

rates. To meet the acute demand therefore, there is the need for concerted efforts from public institutions and formal private delivery systems. Such efforts should seek to improve access, construction, inputs and finance in particular.

Currently available home financing products are mostly for home purchase. The mortgage to GDP ratio is less than 1 percent and falls short of the average in the sub-Saharan region. The total mortgage portfolio across the country was estimated at US\$ 200 million as at 2013 with 6,000 borrowers. Construction finance products for real estate companies, account for 20 percent of construction cost. In South Africa, which has a more developed housing finance market for example, an estimated 1.7 million mortgages have been granted amounting 30.4 percent of GDP. The non-mortgage housing finance alone was valued at USD 121 million as at 2015<sup>22</sup>. This means that developing Ghana's housing finance market is critical to supplying the volume of housing needed in the country.

#### **2.5** Building Material Requirements

#### 2.5.1 Building Materials and Construction Technology for Housing Supply

Building materials used in the country are either imported or locally manufactured. Those that are imported include paint, locks, tiles, ceramics, fittings and fixtures for water supply, sanitation and electrification. Over 90 percent of building materials are imported, which thus exposes the market to shocks from external sources and leads to instabilities in the currency<sup>23</sup>. Enhancing local alternatives will promote competition in the local market (as is happening currently in the cement

industry in Ghana), leading to price reduction, which will in turn contribute to driving down the cost of housing delivery, as well as creating a positive trickle down effect along the construction value chain. Sandcrete is widely used in building construction in urban areas and is fast catching up in the rural areas (Table 2.12). In GAMA for instance, nearly all buildings are constructed using sandcrete blocks. In the rural areas however, the use of sandcrete blocks is often associated with prestige, as against the use of earth based and organic materials. Sandcrete materials are evolving into different forms, in attempts to efficiently use cement and sand. Hollow blocks<sup>24</sup> of different

forms are increasingly becoming popular among new homebuilders to increase speed of housing delivery and profit from cost reductions.

Table 2.12: Summary of Main Materials Used for Outer Wall

	Accra (0	GAMA)	Other l	Jrban		All Ur	ban			All R	ural	
Main materials used for outer wall	GLSS V (2008)	GLSS VI (2013)	GLSS V (2008)	GLSS VI (2013)	PHC (2000)	GLSS V (2008)	PHC (2010)	GLSS VI (2013)	PHC (2000)	GLSS V (2008)	PHC (2010)	GLSS VI (2013)
Mud / Mud bricks/Earth	2.3	0.6	26.5	15.0	21.5	18.5	12.4	10.4	74.5	72.9	60.5	56.9
Wood	7.5	6.5	0.5	0.6	5.4	2.8	4.8	2.5	2.7	1.0	1.8	0.7
Metal / sheet/ slate/asbestos	0.5	1.0	0.1	1.0	0.9	0.2	1.0	1.0	0.3	0.1	0.5	0.5
Stone	0.2	0.2	0.5	-	0.3	0.4	0.2	0.1	0.2	0.3	0.2	0.1
Burnt bricks	0.3	0.1	0.8	0.4	2.0	0.6	0.7	0.3	1.1	0.6	0.6	1.3
Cement blocks/ concrete	88.4	91.5	69.4	82.5	65.3	75.7	78.5	85.3	16.6	21.8	32.1	39.7
Landcrete		-		0.4	2.9		1.2	0.3	2.6	3.1	2.5	0.3
Bamboo/Palm leaves/Thatch grass /Raffia/ Others		0.1		0.1	1.6		1.3	0.1	2.0	0.1	1.7	0.5

Source: GLSS 2008 and 2013; PHC 2000

A new trend is however emerging in the urban landscape where new buildings are clad with glass and aluminium. Glass is also used for partitioning, especially in commercial properties. In other instances, in new buildings in the cities, where sandcrete was used for partitioning or filling in the structural frame, glass windows are equally becoming popular.

<sup>21</sup> TCPD (5015) 22 CAHF (2016) 23 UN habitat (2011)

<sup>24~</sup> GAMA blocks from Parakuo for example promises up to 30% reduction in cost and up to 50% savings in time.

# **2.5.2** Material Requirements to Meet Housing Need

Based on the premise of the average population growth rate scenario, and assuming that cement will be the major construction material during the period, approximately 299 million Mt/year of cement will be required to meet housing needs by the year 2018<sup>25</sup>. Currently, Ghana's installed cement grinding capacity is about 7.65 million Mt/year, i.e. GHACEM (4.4 million Mt/year), West African Cement (1.75 million Mt/year) and Dangote (1.5 million Mt/year).

The current collective capacity for cement production cannot meet the anticipated demand as it clearly falls short of the lowest estimated demand of 60 million Mt/year.

This presents both opportunities and challenges, where the opportunities lie in the fact that businesses can take advantage of the huge demand for materials, and the challenges, in the huge environmental effects of the demand for such materials as sand, chippings, wood,

There is therefore the urgent need for research and development of new construction technologies, wood plantation development, development of an iron ore industry, cost effectiveness analyses and standardisation of design of building components, etc.

Table 2.13: Volume of materials required using medium variant (2018-2047)

Year	Total Dwelling Units/ Houses Required	Cement	Iron Rod	Wood	Roofing Sheets	Paint	Tiles	Glazing	Sand	Chippings
per 3	ities needed 3-bedroom elling unit	61.85 tonnes	7.59 tonnes	2.5m <sup>3</sup>	461m²	7 m <sup>2</sup>	404 m²	69 m²	150 m <sup>3</sup>	50 m <sup>3</sup>
2018	4,838,413	299 mil	36 mil	120 mil	2,230 mil	33 mil	1,954 mil	333 mil	725 mil	241 mil
2027	5,872,440	363 mil	44 mil	146 mil	2,707 mil	41 mil	2,372 mil	405 mil	880 mil	293 mil
2037	7,141,841	441 mil	54 mil	178 mil	3,292 mil	49 mil	2,885 mil	492 mil	1,071 mil	357 mil
2047	8,505,465	526 mil	64 mil	212 mil	3,921 mil	59 mil	3,436 mil	586 mil	1,275 mil	425 mil

Source: Authors' estimations (2017)

With the presence of deposits of such raw materials as limestone, bauxite, manganese etc. in the country, several potentials exist for industry creation along the value chains of the different materials required to feed the housing sector for the period and beyond.

### **2.6** Basic Services for Hous- ing

Ghanaian cities appear to have two distinct layers of municipal infrastructure in neighbourhoods. One layer comprises of well-serviced neighbourhoods inhabited by bourgeoisies and top income classes. Pockets of such neighbourhoods abound in prime cities; Accra, Kumasi, Sekondi-Takoradi. These areas have functional water, sewerage, solid waste and electricity supply systems. Often in close proximity to these settlements are the second layer of ill-serviced neighbourhoods occupied by low and middle income households. The rate of servicing settlements fast out paces the growth and expansion of cities in Ghana.

#### Potable Water

Access to safe drinking water is an important

indicator for assessing slum settlements. Adequacy of water is determined by the proportion of households having access to potable water — not less than 60 litres/person/day<sup>26</sup>, quality of the water, affordability and ease with which water is accessed<sup>27</sup>. The Water and Sanitation Progress Report, 2010, puts water supply coverage at

64 and 62 percent for urban and rural areas respectively and an overall coverage of 63 percent<sup>28</sup>. This implies that nearly 37 percent of Ghanaians do not have access to potable water, an indication of poor housing. By the end of the plan period, it is anticipated that up to 99 percent of Ghana's population will have access to potable water, with at least 90 percent having piped water in their homes.

### Improved Sanitation

Sanitation is broadly defined to encompass both solid and liquid waste disposal. Sanitation coverage in Ghana for liquid waste was estimated at 18 percent and 7 percent respectively for urban and rural areas with an overall coverage of 13 percent as at 2010<sup>29</sup>. As at 2010, a total of 54 percent of the population shared toilet facilities, with 30 percent of households depending on public toilets, while more than 5 million people practiced open defecation. Only an estimated 5 percent of urban settlements were connected to a sewer system. Over the plan period, when toilets in particular are defined in relation to housing, the following are anticipated:

- At least 70 percent of households report access to flush toilets
- 2. The facility must guarantee privacy
- The sharing arrangement must be between a maximum of two households
- 26 MEST (2011) recommend 60l/person/day for low income households
- 27 Medal and Boyer (2010)
- 28 Ministry of Water Resources, Works and Housing (2010)
- 29 MWRWH (2010)

The 70 percent coverage requirement measures availability whereas the privacy and sharing criteria exclude public toilets, open pits and bucket latrines as good sanitation facilities.

Also critical to the analysis is the pricing of sanitation services, accessibility, and supply constraints. Although households' expenditures on sanitation are generally low due to the high numbers of patrons who do not pay for sanitation services, it is still useful that affordability of same is ascertained. In order to address the sanitation and water infrastructure gap, an estimated USD 1.3 billion is needed for rehabilitation and expansion of urban water infrastructure<sup>30</sup>.

### Electricity

Electricity is mostly used at the household level for the dual purposes of lighting and cooking. For some households, particularly in rural areas, cooking with electricity is totally out of the question since they are either not connected to the national grid or cannot even afford it for lighting. Electricity coverage at the end of 2010 was 72 percent overall but was lower in rural areas. Charcoal and LPG are fast becoming the dominant energy sources for cooking. It is worthy to note that there exist a significant number of households that are still using unclean cooking energy sources such as biomass or plant residue, which produce a lot of smoke. The target over the plan period is to have at least 99 percent of the total population with secure access to electricity, and to reduce drastically the use of unclean cooking energy in the process.

<sup>25</sup> It is assumed that housing construction technology, which is currently cement based will remain the same throughout the plan period without substantial technology changes.

<sup>30</sup> http://www.oecd.org/countries/ghana/38562673.pdf (the estimate is over an unspecified period)

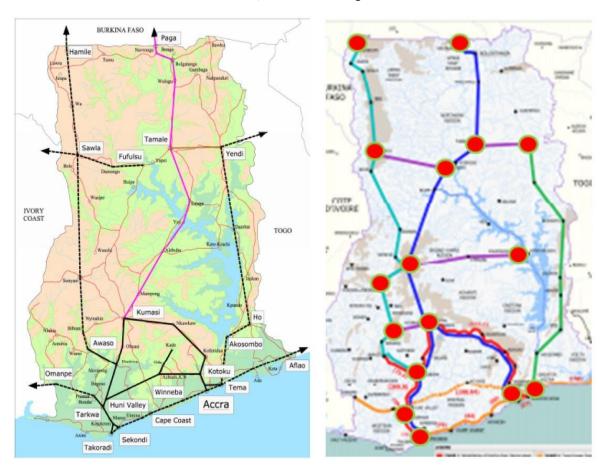
### 2.7 Overview of the Proposed Development Strategy

A new spatial development pathway anchored on the proposed urban regions of the NSDF and natural resources based industrialisation is recommended. This scenario seeks to promote industrialisation based on the resource endowments of the regions and their competitive advantages.

Housing needs assessment must be aligned to these centres and the extra population to be attracted there because of the new economic opportunities. Important for success will be the need to directly link the energy, transport, water, and ICT sectors among others to this scenario. Also

crucial for success will be the human resources, i.e., the technical and vocational skills needed to drive the whole industrialisation process right from the production of raw materials, through value addition, packaging, marketing, etc. There will be the need for some information on or knowledge of the potential production value chains this scenario is likely to generate since it can affect labour mobility significantly, hence housing and other basic social services. In this way, population is attracted away from the traditional large centres to minimise their dominance and ease urban management efforts.

Figure 2.3: Growth nodes linked to resource endowments, locational advantages



Source: Town and Country Planning Department (2015)

Knowledge hubs will be created to complement the industrial activities, to promote research and innovation through research and development. Such research should generate global outcomes as well as further enhance industrialization.

### 2.7.1 Key Development Goals and Objectives

In the short to intermediate phase, the focus must be to address the acute housing deficit, targeting both the quality and quantity of housing. The focus for the intermediate to long-term phase is to ensure effectiveness in the supply and demand systems of housing to provide the diversity of housing financing needed. Although this will be started in the short term, it will be strengthened in the intermediate to long term.

Table 2.14: Key Development Goals and Objectives

GOALS	OBJECTIVES				
1. Provision of adequate new housing through stimulation of market efficiency	1.1 Explore new sources of finance and partnerships for housing delivery including from the voluntary sector.				
and competition with public assistance for no and low-income households who	1.2 Promote commercialisation and use of local building materials				
cannot afford adequate housing.	1.3 Promote decent affordable housing particularly for targeted populations; including low-income households, the disabled, young professionals and retirees.				
	1.4 Provide opportunities for construction of dense mixed-used and mixed-income dwellings.				
	1.5 Promote sustainable housing design and production.				
	1.6 Facilitate access to land and security of tenure for all socio-economic groups.				
	1.7 Initiate and promote training programmes to improve labour skills for housing construction and maintenance.				
2.Sustainable management of existing housing stock through enhancement	2.1 Facilitate the rehabilitation, adaptive reuse, and redevelopment of public housing estates.				
of market mechanisms and land redevelopment to ensure optimum housing choice.	2.2 Actively enforce zoning and building regulations to eliminate blight and improve building quality and initiate refurbishment programmes for substandard housing.				
	2.3 Upgrade existing slums in major cities				
3. Develop and enhance systems for sustainable housing supply and inventory	3.1 Promote greater private sector delivery of housing that meets the need of the various market segments.				
management.	3.2 Initiate and promote growth of the housing finance market and products.				
	3.3 Attain full industrialisation building materials production backed by research and development.				
	3.4 Encourage research into building materials and construction technologies.				
4. Ensure sustainable human settlements growth and development that encourages	3.5 Incentivise the construction of compact, new mixed-use projects an maximise use of land.				
liveable neighbourhoods with compact mixed-use development.	3.6 Ensure participation of all stakeholders including infrastructure service providers in housing development decisions.				
	3.7 Periodic revision and update of the building code and the national zoning regulations				
5. Improve institutional capacities to	5.1 Effective management of urbanisation and human settlements.				
effectively manage urban development and space.	5.2 Accelerate slum upgrading and programmes to prevent the formation of new slums.				
6. Improve functionality, efficiencies and	6.1 Ensure effective planning and management of urban growth and sprawl.				
resilience of human settlements.	6.2 Provide and improve supporting infrastructure in cities				
	6.3 Develop and implement settlement disaster and climate risk managemen strategies.				
7. Ensure a mature, robust and	7.1 Ensure equity in access to housing and housing finance.				
functioning housing market to efficiently supply and allocate through the market system.	7.2 Enhance economic status and viability of low-income earners to improve quality of household livelihoods.				
9,500	7.3 Eliminate customary and legal barriers to land tenure.				
	7.4 Continuous innovation in housing supply and financing.				

#### **Box 9: Housing Provision: The Singaporean Experience**

"Cities as we know them today are already dramatically changing. Our living environments are reshaping the way we live. This new 'urban age' presents a unique opportunity for us to remake and reinvent our cities.

How well we plan and design our living environments will matter."

-Serene and Serene Singapore's ability to transform itself from a third world country to a modern industrialised and developed economy has been touted as one of the greatest achievements of the country, as well as one of Asia's greatest success stories. For the most part of the 19<sup>th</sup> Century as well as the early parts of the 20<sup>th</sup> Century, Singapore experienced rapid physical development that was largely disorganised and unregulated. When the country attained self government in 1959, it was a poor, tropical island with very little natural resources, bedevilled with rapid population growth, substandard housing and severe housing shortages that was described, at the time, as one of the worst in the world, with about 250,000 to 300,000 squatters living in deplorable shanty housing.

To address these deficits, the State acknowledged the need to define and implement an effective housing policy. Executing agencies and statutory boards vested with broad legal powers and limited resources were set up to solve the housing crisis. These institutions were charged to prioritise the use of their limited resources judiciously to ensure economic growth through the enhancement of the quality of life for the ordinary Singaporean, while maintaining a clean and green environment. A Housing and Development Board (HDB) was also formed in 1960, to coordinate the provision of housing in the country. Within a period of five years, the HDB constructed more than 50,000 housing units, and by the end of 1970, there was adequate housing for a greater portion of the population in Singapore. Ten to fifteen storey buildings were initially put up, graduating to twenty and thirty storey structures. Currently, fifty-storey housing complexes can be found in Singapore, and till date, the practices of the HDB have guided and influenced Singapore's urban planning policies.

Singapore also collaborated with the United Nations Planning Team to develop a Concept Plan for urban renewal in 1971, to help address the housing challenges as well as urban decay. The Concept Plan was a strategic document to guide land-use and transportation development in Singapore over the ensuing 40 – 50 years, to be reviewed every 10 years. This document regulated the city's street and zonal layouts, while ensuring that there is sufficient available land to meet the needs of the future population; influenced the provision of quality living environments for the people; and stimulated economic growth. The preparation of this strategic document led to the formation of the Urban Renewal Unit, which eventually became the Urban Redevelopment Authority (URA). The URA is Singapore's national land-use planning authority, mandated to prepare long-term strategic plans.

Together with other relevant government agencies, the URA translates the Concept Plan into Local (Master) Plans to guide physical development. It also coordinates and guides efforts to ensure that plans are implemented.

The Concept Plan conveyed the vision for the development of high and low-density residential areas, industrial areas and commercial centres with a network of expressways and mass rapid transit (MRT) systems to enhance connectivity. It also set land aside for the construction of the Singapore Changi Airport. The government undertook major steps to totally remove all slums from the city centre, relocating their residents to the suburbs, and pursuing an extensive public housing agenda, all as part of the State's Urban Renewal effort. The city centre was then revitalized, with the overall living environment improved. This was operated as part of an economic development package supported with State funds. Average spending rose from between 7.2% and 8.9% of GDP in the 1970s, to 15% in the 1980s and 1990s. The high government expenditure was complemented by a number of policy reforms. Key institutional changes added on to high government spending to support the public housing programme. Notable among these developments were a vigorous land policy and a supportive financial system.

Having passed a stringent land acquisition law in 1966, the State acquired land compulsorily at below market rates, to make it possible for government to attain about 80% of the land mass, compared to the earlier government land holding of about 40% in 1960. The public dominance in the land market discouraged land speculation and made it possible for involvement of the public sector in the development of public housing and industrial estates. There was also the introduction of the Central Provident Fund in 1968 to promote housing finance.

A fully funded, pay-as-you-go social security scheme was therefore promoted. This scheme mandated all employers and employees to pay a percentage of the employee's monthly contractual wage toward the individual's account in the fund. The contribution rate to the fund, as a proportion of an employee's gross salary, currently stands at 20%. Under the scheme, members can withdraw up to about 80% as down payment for housing.

The implementation of the Concept Plan, over time, has been generally successful. By the early 1990s, almost 90% of the entire population of Singapore owned a home in a modern, well planned and developed neighbourhood. The country has managed to ensure the harmonious mix of various land uses such as residential, commercial, institutional and industrial thereby making infrastructure provision more efficient. Development has also been well integrated with seamless interconnectivity all country round to facilitate the efficient movement of goods, services and people. In 2013, Singapore was ranked second in the World Economic Forum's Report on Global Competitiveness Index, which attributed the country's success largely to its world-class infrastructure.

Again, the quality of life of Singaporeans has been greatly enhanced. The State has made great strides in making cities liveable and functional with cognisance to environmental sustainability, with specific awareness to safeguard sufficient land to support continuous economic progress as well as future development of the country. While majority of the inhabitants live in affordable public housing, there is increased addition of greenery to ensure that its people live closer to nature. New parks and waterways with their attendant facilities and amenities are constantly being included in the living space. Also, pedestrian mobility is encouraged as residential, recreational and working spaces are within walking distances of each other, thus promoting health and social cohesion, while reducing the strain on public transport facilities. This success can be attributed to the government's strong commitment to the housing sector and the implementation of effective policies.

Source: UN-Habitat and other sources

# 2.8 Proposed Development Initiatives 2.8.1 National Urban 16.8 Regeneration and Economic Renewal of Lo

# Regeneration and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials, Construction Technology and Economic Renewal of Local Building Materials and Economic Rene

This will employ comprehensive schemes that will improve the public environment, increase access to social services, and improve access to housing and the housing environment. It will also target improving the skills of local artisans, ensuring economic vibrancy and strengthening mutually beneficial economic relationships between city districts and the broader municipal/metropolitan areas. The first hotspots for such initiatives are the GAMA and Greater Kumasi Metropolitan Areas.

# 16.8.2 Commercialisation of Local Building Materials, Construction Technology and Skills Improvement

There is the need for continuous investments in research and effective partnerships with industry and the private sector to translate research findings into commercially viable products. Public education and awareness creation will ensure social acceptability of local building materials and promote mass usage. This is necessary to trigger further research and production. Production facilities to be established will be based on the local resource base.

<sup>31</sup> See sub-section 15.5 of the Human Settlement Chapter

# 2.8.3 Capacity Building and Institutional Restructuring

Capacity building has a wide scope and includes knowledge and skills on the one hand, and tools, technologies and logistics on the other. These must complement each other to ensure that agencies, departments and institutions responsible for urban management and local governance are adequately equipped to translate this plan into the anticipated results

## 2.8.4 Land Banking and Site & Services

Acquire 100,000 acres of land to be held in reserve for directed private sector investments in housing as well as service a further 10,000 acres (of already existing publicly held lands) with infrastructure (including roads, water, electricity, drainage, sewerage & telecommunications).

# 2.8.5 Public Institutional Housing Scheme (Redevelopment & Rehabilitation)

This will seek to rehabilitate existing as well as develop new accommodation for 10,000 public and civil servants, and to rehabilitate, refurbish and maintain 2,500 existing public residential facilities.

# **2.8.6** National Adaptive Re-Use of Properties Programme

This will seek to identify government owned properties dotted around the country, that have been constructed to serve specific purposes but are currently lying in ruins and being inhabited by squatters. These buildings will be re-engineered, fixed and adapted to meet the basic requirements of housing infrastructure that is safe for human habitation, towards contributing to the reduction in the housing deficit. Avenues for private sector involvement will be explored.

### **2.9** Programme Implementation Framework

### **Programme Scoping**

In the intermediate period, the following flagship programmes are proposed to hasten housing supply

# **2.9.1** Formation of an Institutional or Regulatory Body (National Housing Authority) to Manage the Housing Sector

In view of the envisaged economic growth, as well as the anticipated growth in population, the amount of housing required over the next 40 years must have a strong institutional framework to facilitate and enable mass production, efficient allocation and sectoral integration. The National Housing Policy (2015) calls for the establishment of a National Consultative and Coordinating Committee on Housing<sup>32</sup>, to streamline activities by government agencies (MDAs) and local governments (MMDAs) affecting housing. The housing directorate of the Ministry of Works and Housing will serve as secretariat to this committee. This committee will operate on the policy and strategy levels by which the state plans the adequacy of housing and its viability as an economic sector. Government will be expected to utilize the housing sector as:

- 1. A stimulant for national and local economic productivity and job creation,
- 2. A base for industrial development based on the local building materials sector,
- 3. The vehicle for welfare distribution in shelter for the poor and vulnerable, and
- 4. An input into the development o sustainable built environment.

In this regard, the government must develop and lay out its priorities in housing through the annual plans of the National Consultative and Coordinating Committee on Housing. The National Housing Authority (NHA) proposed by the National Housing Policy (2015) is a necessary organisational vehicle involved in operations through which housing production, allocation, and market regulation will be organised. This type of organisation can be found in many developing countries in Asia, Africa and the Caribbean Islands<sup>33</sup>.

The proposed NHA will work with the respective local governments and the Ghana Statistical Services and the Ghana Population Council to develop strategies for local housing needs across the country, taking account of the growth in population and changes in the character of households over the period. Secondly, in collaboration with the Land Use and Spatial Planning Authority, the NHA will establish standards for production, environmental quality and space use, and set periodic targets for all cities and towns in tandem with the population growth projections and housing stock replacement for dilapidated units.

The NHA will also coordinate the pooling of funds from the central annual budgetary grants and other local and international sources including annual budgetary allocations, investments from (multi-tiered) pension and insurance funds, credit from mortgage and commercial banks, microfinance institutions, credit unions, and cooperatives, and through innovative mechanisms help meet housing finance requirements across the country<sup>34</sup>.

Following the passage of The Local Governance Act, (2016) Act 936, there shall be District/Municipal/Metropolitan Housing Departments<sup>35</sup> that will act as primary managers of the local housing markets, involved in the following activities:

- 1. Translation of national policies and programmes into detailed community-level activities in housing.
- 2. Commissioning of locality-specific housing targets and projects.

- Detailing appropriate typological mix (in terms of size, tenure – ownership/rentals; affordability standards – market rate, affordable, social housing).
- 4. Elaborating quality and space standards for private developers, state housing agencies, housing cooperatives and households involved in housing development.
- Mobilization of investors and developers towards opportunities in housing development and housing management
- 6. Designing effective locally contextualized meanstesting tools and formulating rules for equitable allocation of publicly subsidized housing.
- 7. Directing growth patterns through land-use plans and building permit conditions.
- 8. Operationalizing a housing waiting list.

This role in housing for the local governments is a departure from the orthodox approaches of local governments whereby they presided only over land use planning and enforcement. This shift is now towards local governments becoming proactive influencers of the housing sector and assuming greater responsibility for local housing supply for the present and the future. The housing departments must exercise oversight over developers — be they (local and international) private developers, public housing agencies, cooperatives and households.

### **Establishment of a Consortium for Housing Research**

Allied institutions required for effective delivery of housing for the next 40 years include organisations in the research and development cluster comprising the Building and Roads Research Institute, the research unit of the Department of Rural Housing, and the engineering and building technology departments of the public and private universities. For coherence of effort, it is proposed that the actors in the research and academic community be pooled into a formal Consortium of Built Environment and Materials Research Organizations (BEMRO).

<sup>33</sup> NHAs (or by other variations of the name and with the similar objectives) are commonplace in developing countries of Asia, Africa and Caribbean Islands including the Thailand, Philippines, Bangladesh, Sri Lanka, Kenya, Zambia, Liberia, Trinidad and Tobago. There are ongoing discussions in Ireland on the establishment of such an agency (see: https://www.irishtimes.com/opinion/letters/time-for-a- national-housing-authority-1.3206444) 34 The housing finance stream comprises construction finance (short term lending for contractors), development finance (medium term lending for developers), and mortgage finance (long-term lending for households and individuals

<sup>35</sup> The Housing Departments draw their mandate from the First Schedule (Item 9 and referencing Section 77) listing of decentralized public service sectors. The Fourth Schedule lists housing among the new departments to be established after dissolving existing agencies exercising allied strengths, in this case the Department of Rural Housing.

<sup>32</sup> Presumably at Cabinet level

### **National Housing Fund**

There shall be a National Housing Fund, which will receive annual budgetary allocations for housing from the Government. It shall also draw additional resources as investment from pensions, life insurance and reinsurance funds to generate a pool of funds supporting:

- 1. The direct financing of community infrastructure (in the form of municipal infrastructure bonds).
- 2. The creation of a local reserve for
  - (i) lending to property developers, and
  - (ii) secondary mortgage operations.

## Reforms of the Public Housing Agencies

It is proposed that the existing public housing agencies, the State Housing Company (SHC) and the Tema Development Corporation (TDC), be subjected to reforms that would create competition in the local government housing projects from the public sector without losing the welfare perspective of public support. The reforms must include the splitting up into smaller operational units for both firms, and the expansion of the coverage of TDC's mandate to the entire country. The entities that emerge from the reforms must compete against private developers for the local government housing initiatives to neutralize monopolies and exorbitant pricing.

# 2.9.2 Cities Without Slums – "Make Slums History" 36

A slum household<sup>37</sup> is defined as a group of individuals living under the same roof in an urban area, who lack one or more of the following:

- 1. Durable housing of a permanent nature that protects against extreme climate conditions.
- 2. Sufficient living space, which means not more than three people sharing the same room.
- 3. Easy access to safe water in sufficient amounts at an affordable price.
- 4. Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people.
- 5. Security of tenure that prevents forced evictions.

In connection with the proposed National Urban Regeneration Programme, towards building sustainable cities that are attractive, liveable and secure, it is important to comprehensively upgrade and progressively phase out all slums and dilapidated settlements and houses, thereby creating viable and functional suburbs with improved quality of life, services, and livelihoods as well as secure tenancies for the inhabitants.

This strategy will seek to identify and profile existing slums and informal settlements in Accra, Kumasi and Takoradi, which would be redeveloped to provide quality and well serviced housing units in high rise structures, employing densification measures to create mixed use, functional and viable settlements.

### **Box 10: Addressing Ghana's Failing Traditional Mud Houses**

Ghana's traditional mud houses form a part of national architecture and heritage, and they give shelter to a large number of Ghanaians especially those under the extended families systems. In villages, towns and peri-urban areas of the cities, traditional and compound houses that provide accommodation for households have been built from clay or laterite. Many of these buildings are sseveral decades old, however, because of poor maintenance, they are in a dilapidated state.

A core challenge is that most of these buildings are poorly maintained and the foundations have been exposed to many years of erosion. Most of the materials used for constructing the buildings was clay, which was sun dried rather than burnt, thus the particles are lose and very vulnerable to adverse weather conditions.

Research in Ghana's southern forest belt shows that the foundations of many buildings are severely exposed, sometimes to a depth of almost a metre, which leaves the structure weak and vulnerable. The collapse of mud houses is therefore a common occurrence. Although there is no systematic statistics about the number of mud houses in Ghana, it is believed that it houses more than a quarter of Ghanaians, in the middle belt and also in northern Ghana. Some of the buildings are family owned and passed down from several generations. There is currently no government policy on erosion. It is therefore left to occupants to keep the phenomenon in check in the best way they can.

Though erosion is a serious problem in many places, most people simply do not know what to do about it. While planting grass around such buildings and simple drainage systems could help, this step may not be enough without strong governmental policies geared towards that purpose. The introduction of cement and sandcrete blocks has also led to less use of clay for construction of the foundations.

#### Remedies:

The Ministry of Water Resources, Works and Housing will recognise the traditional clay houses as an important component of the country's housing stock and develop policies to sustain them. The Ministry of Environment, Science and Technology will prepare and implement a policy programme outlining steps to address erosion-threatening buildings that are compounding the housing crises, to be implemented at the MMDA level. Generally, community members will be sensitized and educated on low-cost erosion control measures, e.g. planting grass around housing units, to protect their buildings from erosion. In the long run, most of the settlements in the areas will be redesigned and the buildings phased out. The TCPD will support the MMDAs to undertake joint action to implement land-use plans to enhance housing delivery. The local government acts will be amended to enable the MMDAs be mandated to tackle housing needs in their jurisdiction.

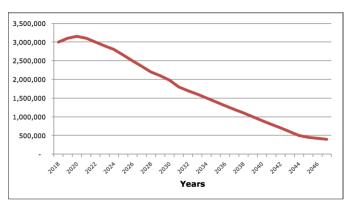
Reference: Ofori, B. D and Ayivor, J. S (2013), Crumbling Structures, Development and Cooperation, Monthly Newsletter, Print Edition no. 6 2013, 2013/06, Page 254

Figure 2.4: A Building being eroded from its Foundation



Source: Ofori, B. D and Ayivor, J. S (2013)38

Figure 2.5: Phasing Out Slums and Dilapidated Houses in Ghana



Source: Author's Construct, 2017

With the implementation of economic interventions and increased economic activities, there will still be migration of individuals into urban areas, which will increase the demand for cheap accommodation, thereby increasing the incidence of slums and other informal settlements with dilapidated structures. However, with the implementation of the outlined strategies, and increased supply of improved and affordable housing infrastructure, it is anticipated that from about the year 2021, the incidence of slums will gradually reduce, as more people have access to decent and safe housing.

<sup>36</sup> See sub-section 15.5 of the Human Settlement Chapter

<sup>37</sup> National Housing Policy, 20

<sup>38</sup> Ofori, B. D and Ayivor, J. S (2013), Crumbling Structures, Development and Cooperation, Monthly Newsletter, Print Edition no. 6 2013, 2013/06, Page 254

### **Existing dilapidated structures**

### Typical New and proposed structures

James town and Axim fishing Communities: Fishing communities such as James Town, Teshie, Axim, Winneba, Mumford, are particulary known for having some of the most dilapidated housing structures.

Figure 2.6: James town and Axim fishing Communities



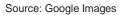


Source: Google Images

Mud House in the Middle Belt and Northern Savannah Areas: Mud houses have been affected by erosion in the middle belt.

Figure 2.7: Mud House in the Middle Belt and Northern Savannah Areas







Typical Urban slum areas: Generally, more than half of Ghanaians live in slum areas, zongos and inner cities. These include communities such as Nima, Maamobi, Ashaiman, etc.

Figure 2.8: Typical Urban slum areas



Source: Google Images

Extreme poverty stricken areas: Located on the outskirts of the CBD in Accra, along the Odaw River and Korle Lagoon, Old Fadama, also known as Sodom and Gomorrah is home to more than 80,000 people. Regarded as the slum capital of Ghana, the settlement is characterised by dilapidated housing, overcrowding, conflict, poverty and social vices. The community will be carefully planned and high- density commercial and residential development will be undertaken.

Figure 2.9: Extreme poverty stricken areas – eg. Old Fadama



Source: Google Images

Kiosks and Containers houses: According to the population and housing census, hundreds of thousands of Ghanaians live in kiosks and containers in Ghana. About 1 million people are said to live in kiosks, containers and open spaces in Ghana.





# **2.9.3** National Home Extension, Improvement and Repair Programme

This will pursue the improvement of the quality of existing buildings in both urban and rural areas in partnership with the private and non-profit sector. It will also ensure that such facilities as energy, water, sanitation etc., are available within the homes. Improvements in housing quality will include the integration of renewable energy into the existing building fabric as well as repair schemes to improve efficiency. It should extend to include improvements in buildings' facades and support business development for commercial buildings or properties and businesses located within downtown areas and home completion.

# 2.9.4 Delivering 8.84 million houses by 2047

The housing deficit in Ghana is large and growing at a fast rate and every effort is required to bridge the deficit as quickly as possible. A combination of spatial plans and cities master plans will be put in place to achieve this objective.

### **Spatial planning**

The Ghana National Spatial Development Framework prepared in 2015 establishes a national direction for land use and spatial planning and management. It is meant to guide the preparation of both higher and lower hierarchy plans and ensure balanced urban and rural development in a harmonised and efficient way. This is expressed as a three-tier plan that is prepared at the national, regional and district levels. The plans will be implemented towards re-engineering existing cities, towns and communities to meet sustainable city principles.

Each regional capital will be required to produce a city master plan by 2020, and each district by 2022. These plans will incorporate principles of design, excellence, strong environmental management, economic strength, good governance and improved social well being, with clearly defined strategies towards ensuring sustainability.

The plans will include goals at improving traffic flow, waste management, drainage and sanitation systems, energy and green economy, urban security and the general well being of inhabitants. They will also include ways at incorporating health and leisure as well as reviving the eco systems within the cities and rejuvenating water bodies.

Table 2.15: Average Number of Houses to be constructed in the Regions by 2028

			ASHANTI	BRONG AHAFO	CENTRAL	EASTERN	GREATER ACCRA	NORTHERN	UPPER EAST	UPPER WEST	VOLTA	WESTERN	TOTAL
Α		Health Professionals & Workers	2,981	1,606	1,531	1,831	2,444	1,714	1,070	831	1,472	1,652	17,132
	i	Hospitals Staff	950	350	240	300	720	214	220	190	240	265	3,689
	ii	Medical Schools	150	-	125	130	120	90	80	-	120	130	945
	iii	Polyclinics	250	180	146	210	210	180	95	80	146	170	1,667
	iv	Health Centres	280	130	120	160	280	150	150	130	110	130	1,640
	٧	Nursing Training schools	220	160	170	190	180	180	150	150	160	170	1,730
	vi	Hygiene Schools	50	130	75	91	80	90	25	21	70	82	714
	vii	Veternary Schools	80	56	60	80	83	120	40	30	56	80	685
	viii	Private Health services	440	220	195	220	250	210	80	70	190	195	2,070
		Students Accommodation											
	ix.	Medical Schools	61	-	95	120	61	120	50	-	90	110	707
	X.	Nursing Training schools	250	200	190	190	240	220	110	100	180	200	1,880
	xi.	Other Health Schools	250	180	115	140	220	140	70	60	110	120	1,405
В		Education Professionals & Workers	4,547	2,560	2,366	3,065	5,238	3,460	1,994	1,770	2,170	2,581	29,751
	i.	Research Institutions	175	80	140	150	390	250	120	90	80	110	1,585
	ii.	Universities	262	150	130	180	360	230	60	50	80	150	1,652
	iii.	Colleges of Education	760	380	370	430	850	450	215	195	365	385	4,400
	iv.	Technical Universities	350	250	210	260	420	280	110	90	130	140	2,240
	V.	Polytechnics	350	120	110	155	330	210	150	140	160	180	1,905
	vi.	Other Tertiary	480	260	225	290	378	310	160	150	210	270	2,733
	vii.	SHS	1,240	750	650	980	1,150	990	860	770	770	860	9,020
	viii.	Basic Schools Accom.	150	80	110	120	110	130	95	85	110	140	1,130
		Students (Halls of Residence)								,			
	viii.	Universities	350	220	175	210	450	220	60	50	80	120	1,935
	ix.	Colleges of Education	120	80	76	90	150	120	54	45	55	76	866
	X.	SHS	260	160	130	160	550	210	90	85	110	120	1,875
	xi.	Graduate Quarters/Studio	50	30	40	40	100	60	20	20	20	30	410
С		Public Workers	5,216	2,811	2,635	3,201	4,740	2,880	1,890	1,420	2,455	2,730	29,978
	i.	MDAs	466	90	100	101	450	70	120	40	85	90	1,612
	ii.	MMDAs	4,500	2,650	2,450	2,980	3,950	2,650	1,720	1,350	2,350	2,550	27,150
	iii.	Research Institutions (CSIR, etc.)	250	71	85	120	340	160	50	30	20	90	1,216
D		Security Personel	750	530	445	485	1,010	845	479	402	508	565	6,019
	i.	Armed Forces	85	65	-	-	150	90	50	-	40	70	550
	ii.	Police	240	160	145	175	355	275	132	120	148	150	1,900
	iii.	Prison	155	120	120	120	165	145	115	115	120	120	1,295
	iv.	Fire Services	135	120	115	115	150	150	112	112	115	120	1,244
	vi.	Customs/GRA	60	25	50	60	100	120	40	30	50	60	595
	vii.	Immigration	30	20	-		25	20	20	15	20	30	180
	viii.	Special Staff, eg. BNI,	45	20	15	15	65	45	10	10	15	15	255

Е		General Agriculture	8,350	4,610	4,640	1,270	1,575	890	305	305	1,880	2,770	26,595
	i	General Farmers/Food crops	3,450	2,450	1,180	190	20	120	65	65	45	300	7,885
	ii	Fishermen	-	-	2,400	450	1,450	-	-	-	1,650	1,550	7,500
	iii	Poultry/Lifestock	2,250	960	900	180	80	120	80	80	95	170	4,915
	iv	Cocoa/Shea/cashew Farmers	2,650	1,200	160	450	25	650	160	160	90	750	6,295
F		Oil & Mining Apartments	1,340	530	250	710	1,740	245	140	118	105	1,550	<i>6,728</i>
	i.	Senior Officer	40	30	10	10	20	25	10	10	5	50	210
	ii.	Middle Level staff	650	250	120	350	860	110	65	54	50	750	3,259
	iii.	Junior/Support Staff	650	250	120	350	860	110	65	54	50	750	3,259
G		Other Private Sector	23,050	12,874	13,394	16,018	21,997	16,088	9,359	7,274	12,684	14,059	146,797
	i.	Manufacturing	3,500	1,800	2,300	2,450	3,800	2,950	1,850	1,160	1,750	2,150	23,710
	ii.	Industrial Parks/Estates	1,800	1,100	1,794	2,060	2,650	2,650	1,720	1,250	1,745	2,360	19,129
	iii.	Built Industry/Construction	2,450	2,250	2,100	2,450	4,650	2,348	1,350	1,250	1,670	2,239	22,757
	iv.	Transport Services	3,100	2,120	2,200	2,250	3,550	2,340	989	1,104	2,050	2,300	22,003
	٧.	Artisans/etc.	7,700	2,200	1,700	3,200	2,580	2,600	1,950	1,350	2,569	2,050	27,899
	vi.	Market women/men/other pvt	4,500	3,404	3,300	3,608	4,767	3,200	1,500	1,160	2,900	2,960	31,299
Н		Other Support Workers (Junior Staff)	4,347	2,342	2,232	2,670	3,565	2,515	1,560	1,212	2,147	2,410	25,000
	i.	Junior Officers	1,521	820	781	934	1,248	880	546	424	752	843	8,750
	ii.	Basic	2,826	1,522	1,451	1,735	2,317	1,635	1,014	788	1,396	1,566	16,250
J		Private - Non regulated/ non residential/ diplomatic staff/faith based	2,087	1,124	1,071	1,281	1,711	1,207	749	582	1,031	1,157	12,000
	i.	High End	626	337	321	384	513	362	225	175	309	347	3,600
	ii.	Medium End	1,085	585	557	666	890	628	389	303	536	601	6,240
	ii.	Lower End	376	202	193	231	308	217	135	105	186	208	2,160
		<u>TOTAL</u>	52,668	28,988	28,565	30,531	44,020	29,844	17,546	13,914	24,452	29,473	300,000

A city is not merely a place of dwelling. It is a catalyst in the process of economic and social growth and innovation. Social, civic and commercial infrastructure will therefore be incorporated in the plan. Green belt zones will be created to serve as boundaries and to check unrestricted sprawl of large built up areas. A Legislative Instrument will enforce this.

An agricultural growth corridor, as proposed by the NSDF will be implemented, by converting areas with huge unrealised agricultural potential into commercial agriculture at an industrial scale.

Another effective cure for urban congestion is to connect industrial and business zones to residential areas such that a large part of their personnel can either walk, cycle or use a public bus; or take a railroad train to work.

### **Housing demands**

There are more than 1,000 Zongo and inner communities scattered all over Ghana with deplorable living conditions. Under the plan, these communities will be transformed under a massive urban planning and redevelopment program. Mud houses built several decades ago have been affected by erosion in several parts of the city.

Fishing communities along the countries coast have also have a greater effect on the squalor.

A successful slum upgrading and phasing-out projects will allow for the rejuvenation of the Korle Lagoon and lay the foundation for the revitalization of the area, with large-scale commercial and residential development. Not only will such a waterfront development be economically viable but it will also greatly improve the tourism potential of the capital city

### **Accelerating housing delivery**

By 2047, the number of households will increase to 12.2 million, with addition of 6.7 million more households; thus, the rate of housing delivery will be scaled up. To accommodate the new households and clear the housing deficit of 2.1 million, about 8.84 million houses will be needed from 2018 to 2047. By 2028, therefore Ghana should be producing 300,000 quality houses annually, across the nation, in all regions across the entire sphere of the economy, for the health and educational institutions, public servants, agriculture institutions, security services.

### Regional and district breakdowns

The housing challenge in Ghana is presented in both quantitative and qualitative terms. Table 2.14 shows the number of houses to be construction throughout the country in 2028. The computation of the housing needs was based on the population of the regions, the current state of development in the region, the type of economic activity in the regions and the potential for growth and development.

Table 2.15 shows the breakdown for all the districts in the Eastern Region in 2028. The issue is not necessarily about the number of houses indicated but rather the fact that a wide area of the economy needs houses, throughout the country. The phasing of implementation will be slow during the initial first six years, (2018 to 2024) as the National Housing Authority and other institutions and factories are built, but it would be scaled up quickly thereafter.

#### **Construction sector**

At the same time, the construction sector will be developed and the industrial sector will produce the needed materials to fuel the construction boom at competitive prices. Construction materials – cement, steel, aluminium, timber, bitumen, plastic piping, quarrying and laterite materials will be produced. Issues relating to building the absorptive capacity, equipment and financial capacity, personnel (high-level, middle-level and skilled manpower), construction materials and the regulatory framework are all addressed in the report of the construction industry.

A large number of built-industry professionals would be engaged to oversee the preparation of the master plans which will be done under the newly-enacted Land Use and Spatial Planning Act (Act 925, 2016).

Table 2.16: Distribution of Eastern Region houses (30,531) to be constructed throughout the Districts in 2021

i abie 2.	16: Distribution of Eastern Region h	Capital	Current Population (2017)	% of population	Houses to belivered in all towns in the MMDAs in 2028
1	Birim South	Akyem Swedru	139,770	4.51	1,377
2	Birim Municipal	Akim Oda	170,813	5.51	1,682
3	West Akim Municipal	Asamankese	127,339	4.11	1,254
4	Suhum Municipal	Suhum	105,605	3.41	1,040
5	Nsawam Adoagyiri Municipal	Nsawam	102,495	3.31	1,010
6	Akuapim North	Akropong	161,508	5.21	1,591
7	New Juaben Municipal	Koforidua	217,389	7.01	2,141
8	Yilo Krobo Municipal	Somanya	102,496	3.31	1,010
9	Lower Manya krobo Municipal	Odumase Krobo	105,604	3.41	1,040
10	Asuogyaman	Atimpoku	114,915	3.71	1,132
11	Upper Manya Krobo	Asesewa	83,856	2.71	826
12	Fanteakwa	Begoro	127,349	4.11	1,254
13	East Akim Municipal	Kibi	198,775	6.41	1,958
14	Kwaebibirem	Kade	133,553	4.31	1,315
15	Akyemansa	Ofoase	114,917	3.71	1,132
16	Birim North	New-Abirem	93,178	3.01	918
17	Atiwa	Kwabeng	130,450	4.21	1,285
18	Kwahu West Municipal	Nkawkaw	111,813	3.61	1,101
19	Kwahu South	Mpreaso	80,755	2.61	795
20	Kwahu East	Abetifi	90,065	2.91	887
21	Kwahu Afram Plains North	Donkorkrom	121,119	3.91	1,193
22	Upper West Akim	Adeiso	102,495	3.31	1,010
23	Akuapim South	Nsawam	43,480	1.40	428
24	Ayensuano	Coaltar	90,064	2.91	887
25	Denkyembour	Akwatia	93,180	3.01	918
26	Kwahu Afram Plains South	Tease	136,658	4.41	1,346
	Total		3,099,641		30,531

By the end of the plan period, a house in Ghana, should be described as a dwelling unit with a permanent nature, that protects against extreme climate conditions. It must have sufficient living space, and access to safe water in sufficient amounts, and adequate sanitation and a security of tenure.

### 2.9.5 Establishing Green Belts and City Boundaries

The green belt concept is a land-use planning model that seeks to retain areas surrounding towns, cities or large built up areas, in an undeveloped state. These areas are usually left to grow wild, or set apart as agricultural lands surrounding urban areas, to serve as a border around the area. Development beyond these boundaries is forbidden.

The establishing of green belts help to:

- a. Check unrestricted sprawl of large built up areas,
- b. Prevent neighbouring towns from merging,
- c. Safeguard the countryside from encroachment,
- d. Preserve the setting and special character of historic towns,

e. Assist urban regeneration by encouraging the recycling of abandoned and other urban land.

Green belts also provide such benefits as:

- Walking, camping and biking areas close to the cities and towns.
- Contiguous habitat network for wild plants and animals.
- c. Cleaner air and water, and
- Promoting compact developments, which ensure the judicious use of land within the bordered cities and the economical provision of infrastructure.

It is expected that Ghanaian cities will establish green belts as boundaries in order to preserve the uniqueness of cities as well as prevent urban sprawl. These boundaries, will also be established for towns and villages, and must be described in a legislative instrument. A property within a city's boundary can then be effectively subjected to taxation and other regulations, as well as provided with the needed services. As at 2014, the total green belt area in England was about 1,638,710 hectares.

Figure 2.10: Green Belts and City Boundary Concept



Source: Google Images

### **2.10** Guidelines for Programme Implementation

#### Ownership-driven

By owner-driven programme implementation, there are conscious efforts to promote active participation and a sense of ownership among all stakeholders along the programme lifecycle. Negotiations with people and stakeholders adversely affected by the programme would be addressed through dialogue. This is essential for projects' success and longevity. Where there are clashes of interests, the greater good of the populace will be promoted.

#### Harmonised Approach

It is necessary to synchronise relevant programmes and projects to minimise cost, maximise benefits, avoid duplication and improve overall efficiency and accelerate achievement of stated national goals. Synergic links with other sectors will be built. Where conflicting objectives emerge, these should be harmoniously addressed. Goal compatibility analyses will be carried out where necessary.

#### Flexible to Local Realities

It is important that plans for implementation resonate with local needs and aspirations as well as environmental conditions. Thus, the "one- size-fits all" approach popular with government projects will give way for individualised and fine- tuned solutions to meet local peculiarities as far as practicable.

#### Building for Green and Greater Resilience

Housing and commensurate infrastructure built according to green principles would culminate into sustainable cities at least from the infrastructure perspective. This is a key rule of thumb for actualising content of this plan. Principally building materials, construction technology and building recycling should conform to current legalisation of standards, codes, environmental requirements as well as yet to be developed regulations. Wherever necessary or required by law, environmental and social impact assessments of proposed projects will be carried out.

### Scalability and Significant Contribution to Overall Growth and Socio-Economic Development

It is envisaged the programmes proposed in this plan should have positive trickling down effects on wider socio-economic growth prospects.

#### Value for Money and Investment

Formulation of alternative scenarios and courses of action would be undertaken and examined for value for money. This also implies the need to significantly maximise development benefits of projects either in unison with other projects or expansion of project scope to include multiple uses.

#### Equitable distribution of resources

Planned interventions should seek to ensure fairness in the distribution of national resources. In particular, the national spatial development framework is emphatic about the development of new growth centres and medium sized cities. It should guide resource allocation to ensure that there is spatial equity as well as guarantee that marginalised people are not left out.

#### Inclusivity and equity

It is important that the infrastructure provided be adequate and appropriate in order not to exclude a certain segment of society, especially PWDs and other marginalised groups. Infrastructure must be appropriate and functional for all ages and social standing.

#### **Private Sector Engagements**

While the role and commitment of government towards the plan implementation is critical, the role of the private sector cannot be underestimated. It behoves government to liaise effectively with the private sector over the plan period, creating an enabling environment to facilitate the production of well serviced and efficient housing that will meet the needs of every Ghanaian household in spite of their income levels.

Currently, there are some private sector investors that provide housing for high end income level households. Given the right environment and conditions, these can be tapped into to boost the performance of the housing sector over the period, in order to see through the vision of "housing for all by all", while also ensuring that human settlements developments are situated in well planned and well monitored contexts.

### **Box 11: The Petronia City Case**

Petronia City is a new state of the art master planned city development project by Wonda World Estates, in the heart of the Western Region. Being the first integrated city in the country, and home to Ghana's oil and gas & mining industries, the 2000 acre development, after its completion, will serve several mixed uses including residential, administrative, industrial, commercial and leisure. The project, which started in the year 2013, is expected to be rolled out in 3 phases over a 10 year period.

On completion, the Petronia City is expected to house approximately 30,000 residents.

Figure 2.11: Petronia City aerial concept



Source: Petronia City Development, Takoradi, 2015

Figure 2.12: Rental Properties in Mixed Use Areas in London, Ontario



### **Box 12: Housing Provision in Turkey**

### "...the housing sector is a tool to manipulate and to activate the national economy"

- Bölen and Devrim After being declared a Republic in 1923, Turkey began to transform quickly, embarking on rapid industrialisation, which brought about a mass migration of people from rural areas to the cities. While the demand for housing was rapidly increasing, this was actually considered a problem of the capital city Ankara, which was still under construction at that time. Immigrants, in order to meet their need for shelter, chose the type of housing which typically reflected their socio-cultural and economic status, and soon squalid settlements were springing up around the cities.

To get a grip on the situation, the government initiated the State Building Cooperative Institutions and established the Real Estate Credit Bank as well as Social Security Institutions. The Bank of Provinces was also formed to provide credit for housing and to offer finance for the construction of public structures in growing cities. These public buildings and housing projects, which were financed by the State Building Cooperative Institutions, were however tailored towards accommodating high-ranking government officials and military personnel.

Growing industrialisation occurred in tandem with spreading urbanisation, thereby exacerbating the issue of inadequate housing supply for immigrants, which in turn caused squatter settlements to grow. Uncontrolled urban development, while reducing the aesthetic appeal of the city, was also negatively affecting the quality of life for its inhabitants. The housing problem was therefore identified as a national issue and not just a challenge for the metropolitan areas.

The government therefore passed a Construction Act establishing the Ministry of Public Works and Settlements, with a mandate to design an urban planning framework to contain the rate of urban growth and spread, as well as formulate a new housing strategy. The private sector was then empowered legally to produce housing facilities while government took on a more regulatory role. This spurred an increase in the construction of multi-apartment buildings around the country, but they were so expensive that middle and low-income earners were priced out of the market. Squatter settlements therefore, continued to persist.

Recognising housing as a right and not a privilege, the Turkish government thus took on a more active role in the provision of housing, rather than being just a regulator. A section was created in the constitution dubbed "Right to Shelter", which mandated the government to support or possibly augment the construction of large-scale housing, taking cognisance of the special characteristics and environmental conditions of individual cities. A comprehensive Mass Housing Law was subsequently passed to encourage the construction of large scale housing, and the government went on to create a Mass Housing Fund (which required that 5% of the state budget be directed towards housing

development) to provide financial support. A Housing Development Administration (TOKI) was also created, with the Prime Ministry providing direct oversight. TOKI was mandated "to reduce uneven distribution of resources on housing provision; to balance allocation of housing investments; to meet the housing needs of low income groups; to develop alternatives for opening new residential areas with infrastructure following the cleaning up of squatter settlements; to provide financial support for housing construction; to pool public funds for urbanization and house production; to obtain new sources and mobilize them for housing purposes; to improve construction quality in urban settlements; to regulate urban rent and increase land supply; to improve transportation and other urban infrastructure facilities; and to enhance planned urbanization within the country".

TOKI's establishment accelerated mass housing provision and fostered a well-planned urban setting. It adopted a strategy of providing credit for social housing projects, while it also participated mainly in the provision of social and affordable housing, mainly targeting the low and middle-income earners, who had been priced out in the prevailing housing market.

Within the past ten years however, the housing sector in Turkey has experienced major restructuring. The administrative powers of the Ministry of Public Works and Settlements as well as the monetary funds of the Real Estate Bank have been transferred to TOKI, thus expanding its financial capacity. The Mass Housing Law has also been updated to assist in formalizing companies related to or participating in the housing sector and to grant credit for the construction of individual and mass housing units. TOKI's mandate has been upgraded, giving it the authority to "prepare and alter all types of plans in areas earmarked as mass housing settlement regions; seize buildings on or inside the land areas, whether owned by real or legal entities within the confines of the execution of its mandate under the law; and to identify squatter areas either for elimination or for development and rehabilitation". The responsibilities of the Urban Land Office have also been transferred to fit under the umbrella of TOKI, thus making this entity the single authority in charge of the entire housing sector in Turkey and the most significant organisation in defining human settlement policies, funding, or land provision.

Currently, Turkey is one of the countries in the world with the most well developed housing and construction industries. The sector supplies nearly 800,000 housing units annually, with the private sector producing a bulk of this output. The urban population is over 60 million (>72.3% of the entire population) and is expected to reach 71 million by the end of 2023. The housing sector is therefore taking the requisite steps in order to meet the anticipated demand.

Also, given its mandate, TOKI is not only responsible for the transformation of slums and shanty areas with high risk of natural disasters as well as areas (in cities) which have lost their economic lifespan, but it is also responsible to ensure that new ones are not formed. As it stands, the total number of buildings in Turkey is approximately 20 million, with 40% of this figure classified as shanty. With the implementation of the affordable and social housing policies, TOKI is targeting to produce 1,000,000 new, quality and affordable housing units by the end 2023, and is also expected to pull down and reconstruct approximately 6.7million housing units all over the country.

Sources: Bölen, F. (2004), Devrim, I. A. (2016) and other sources

### 2.11 Existing Policies and Institutional Arrangements

Several policy frameworks and institutional arrangements exist that influence and regulate the activities in the housing sector. The following are relevant principal policies and laws that directly affect the sector.

The National Housing Policy (2015) provides the broad framework for addressing the variety of challenges in the housing sector and offers guidance to programmes and initiatives within the sector. The issues identified in the policy are segmented into those affecting the supply of housing on the one hand, and issues affecting the affordability of the delivered housing on the other hand. The focus is to provide adequate housing that is accessible and affordable to satisfy the needs of all people. Access is defined according to economic and physical factors. The broad policy goals of the policy are detailed in four principal themes, and through eight objectives bring forward fifty initiatives that will lead to successful housing outcomes for all.

The Ghana Infrastructure Investment Fund (GIF) (Act 887, 2014) is a fund set up with the principal aim of obtaining financial resources from the public sector and other non-state sources towards the infrastructure needs of the country that are captured within a strategic plan. It is expected to act independently of the government in its outlook with an appropriate assessment of the risks, making room for partnerships in the execution of its mandate. The fund is an important tool for the implementation of the respective projects outlined in the GIP including housing development.

National Climate Change Policy (2013) prioritises five broad thematic areas. Of these, the ones closely linked to housing are energy efficiency, building design, building materials and water and sanitation. Other related issues are addressed under the "disaster preparedness and response" thematic area.

The policy acknowledges the inadequacy of capacity in design of climate sensitive infrastructure. Specifically, some policy actions to be pursued are revision of the design standards, building codes and spatial planning to include climate change parameters and minimisation of the impacts of climate change on access to water and sanitation. The pursuance of climate change actions in the policy also presents new opportunities for integration of renewable energy and energy efficiency into buildings; and reduce, reuse and recycling of building materials and

climate sensitive construction. Efforts in this regard can be collectively grouped as "climate proofing" infrastructure.

National Building Regulations, (1996) LI 1630, guides the construction, alteration, extension of buildings and installation of fittings and other associated works. It provides specifications of materials, building methods, space requirements, elevations, siting of buildings among others, which proposed developments must meet before development permits are issued. The District Planning Authorities are solely responsible for reviewing and granting such permits in their respective areas of jurisdiction. The regulations are currently under review to address contemporary building issues including new materials, green modes of construction, green energy, and cultural heritage conservation among others.

1992 Constitution and Local Governance Act of 2016 anchor all decentralised planning issues in the country. Chapter 20 of the Constitution is dedicated to local governance and administration, which makes district assemblies the highest political authority with planning, executive and legislative functions at the subnational level. The Local Governance Act, Act 963 (2016), is a further legislative enactment elaborating the operational framework of the local government administration with respect to its management and administration structures, governance processes, powers and limitations, among others. The Act outlines the functions and roles of the respective units of the decentralised system, which comprises regional administrations, district authorities, and sub-district entities. It also details the finances of the Assemblies as well. Lastly, the departmental structures by which the district assemblies are to be administered is set out in the subsidiary enactment, Commencement of the Departments of the District Assembly, LI 1961 (2009) which details the minimum number, and roles of the departments according to the type of district.

## **2.11.1** Policy and Institutional Linkages to Proposed Framework

The institutional arrangements regulating housing development are neither strategic nor coherent. On the other hand the local governments, by the remit of the Local Government Law, Act 936<sup>39</sup> and the Building Regulations LI 1830, are vested with regulatory powers through forward planning and permitting to determine where housing is located. This implies an envisaged capacity to determine present and future housing needs. On the other hand, local governments do not have explicit powers to compel or direct house building, and, in the operational vacuum, neither do they exercise any initiative to promote house building for the present or future needs, limiting themselves to only assigning sites for land uses.

As local governments are bereft of information and the planning capacity on current and future housing needs for their respective administrations, they are limited in steering the activities of the private sector and other interests involved in housing delivery. This also affects effective mobility in the cities and towns. The opportunity of housing development and occupation becoming integral to local economic development through the housing supply and value chain is lost through this inertia in directing house building. Thus, by their inertia in house building, local governments deny the towns and cities of reliable supply of housing. Additionally, the quality issues are not addressed as effectively as they should be.

Institutional reforms are required to make local governments more responsive to local housing needs and proactive in preparing for future needs. The establishment of the Housing Departments as part of the district assembly structures proposed under Section 78 (3) and the Fourth Schedule of Act 936, has to be implemented promptly.

The public housing agencies, the State Housing Company (SHC) in particular, operates at the national level and their activities are determined by their (inadequate) budgets. Tema Development Corporation (TDC) is limited by law to working only in Tema (notwithstanding the housing needs and opportunities elsewhere in the country). The investments by SSNIT are increasingly dictated by their ability to earn respectable returns on their funds to continue the support to the pension.

The combination of the infrequent central government housing activities, the skewed private sector initiatives and the uncoordinated household self-help initiatives leads to the lagging supply which can be resolved by formally decentralising and mainstreaming the house building activities into the local government routine functions. In the light of the challenges within the sector, it

is proposed that a National Housing Authority be established to oversee growth and promote housing development.

Table 2.17: Institutional Arrangements in Housing

Level	State	Private	Cooperative/Communal/Non-State		
Function					
Land Management	Lands Commission, Judiciary, LAP, IRS	Individual Freehold (limited)	Land secretariat of chiefs, family & Clan Heads and Elders; Traditional Councils		
Planning	Town and Country Planning Department, TDC, SHC, LUPMP	Private developers, Consultants	Partnerships of chiefs/ family heads; surveyors &/planners		
Servicing	Department of Urban Roads; Ghana Water Company; Electricity Company of Ghana; TDC; MLGRD Urban Infrastructure Projects; MMDAs Annual plan of infrastructure extension	Board Staff Association, VALCO Staff Housin	Djor Cooperative, etc); Employee Groups– IRS, Ghana Standards ng Cooperative; Circle Neoplan Drivers' Association; Professional n, Ghana Registered Nurses; Faith-based groups: Church of blies of God		
Finance	Ministry of Finance and Economic Planning; World Bank, UN Habitat, AFD, etc. (Loans and Grants)	PS Global; Elite Kingdom; ILDC	Savings Groups		
Development Control	MMDAs' Works Department, Police, NADMO, Judiciary	Ghana Home Loans; Fidelity Bank; Ecobank; Other Commercial Banks (Construction loans and mortgage)			
Housing Construction & Maintenance	SHC, TDC, PWD, SSNIT, AESL	GREDA, International developers, Contractors, Consultants	Individuals, Prospective Tenants, Water and Sanitation for Africa		
Housing Tenure	Rent Control Department, Courts	Foreclosure	Rent-Free status (extended family support)		
Finance – Local	Bank of Ghana, SSNIT, Public Servants Housing Loans Board	<ul> <li>Ghana Home Loans</li> <li>Fidelity Bank</li> <li>"Nigerian" Banks</li> <li>Microfinance Banks, GHAMFIN</li> <li>Tier 3 Pension Funds</li> <li>Life Insurance Funds</li> <li>HFC (reducing mortgage operations)</li> </ul>	Susu Scheme, Credit Unions, Teachers Fund, Nursed Housing Fund, GHAFUP Housing and Land Savings Scheme, Pooled funds by formal / informal vocation-based and other cooperatives		
Building Materials	Ghana Standard Board, Mines	<ul> <li>Local cement and steel retailers – Kwasi Oppong, etc.</li> <li>Importers – Tiles, glass &amp; Plumbing fittings</li> <li>Chinese Warehousing / retailing</li> <li>Paints, Pipes &amp; Plastics (part import - part local manufacturing)</li> <li>Aluminium sector (local manufacturers)</li> <li>Cement - GHACEM + Dangote Rebagging + BRRI Pozolana cement</li> </ul>	Sandcrete and landcrete block production; Brick & roof tiles production (small to medium scale industry – Winneba, Brong Ahafo, etc); Sand and stone contractors; mining (informal)		

<sup>39</sup> Until the enactment of this Act in 2016, there were no departments responsible for housing as the Act 462 in operation had no such provisions. With the new Act several districts are yet to fully establish such departments.

### 2.11.2 Outline of Stakeholder Roles and Responsibilities

There are several institutions involved in the housing and services sector whose operations are, however, incoherent with duplications across institutional mandates<sup>40</sup>.

The Physical Planning Department undertakes spatial planning functions at the district level, with Local Governments having no direct role in housing delivery. At the national level, however, institutional arrangements are too fragmented to coordinate and monitor national multi-sectoral resource allocations.

Table 2.18: Major Stakeholders and Roles in Housing Development

No.	INSTITUTION/AGENCY/DEPARTMENT/ORGANISATION	ROLES AND RESPONSIBILITIES
1.	National Development Planning Commission	Policy formulation and advisory services, coordination, monitoring and evaluation
2.	Ministries – Ministry of Water Resources, Works and Housing, Ministry of Finance and Economic Planning, Ministry of Local Governance and Rural Development, Ministry of Environment, Science and Technology	Policy, Monitoring and Evaluation
3.	District Planning Authorities, Lands Commission, Rent Control Department, Ghana Standards Board, Environmental Protection Agency, the Architects Registration Council, Bank of Ghana	Regulation and supervision, monitoring and evaluation
4.	Banks, Mortgage Companies, Susu Associations, GHAMFIN, and Insurance Brokers	Home financing, mortgages, insurance and foreclosures
5.	Civil and Non-Governmental Organisations – People's Dialogue, Habitat for Humanity, Homeless International etc.	Policy advocacy
6.	Traditional Authorities and Customary Land Secretariats	Facilitation of land delivery for spatial projects
7.	Research, education and training	BRRI, KNUST, ILGS, ISSER, NVTIs, CSRI
8.	Local Governments and relevant decentralised departments including TCPD, DPCU, Architectural and Engineering Services Ltd, Department of Parks and Gardens, Public Works Department etc.	Planning, design and supervision of project implementation, monitoring and evaluation
9.	Professional and Trade Associations – GIP, GIS, GhIE, ARC etc.	Regulation and quality control of practitioners
10.	GREDA, SHC, TDC and other private developers	Property development, site and servicing, monitoring
11.	Slum Dwellers International UN-Habitat, JICA, African Development Bank, UNICEF, UNDP, DFID etc.	International development partners in co- financing schemes, technical support, research and surveys etc.
12.	Public Service Providers – Department of Feeder Roads, Department of Urban Roads, Ghana Highways Authority, Ghana Water Company Ltd, Community Water and Sanitation Ltd, Electricity Company of Ghana etc.	Public Infrastructure, advisory and servicing
13.	Fire Service, NADMO, Red Cross, Ghana Police Service and the Armed Forces	Disaster management and security
14.	GHACEM, Dangote Cement, Tropical Cables, Aluminium roofing sheets companies etc.	Materials and logistics
15.	MeQasa, Lamudi, Jumia and other online portals	Marketing, advertisement and property information management

Source: Authors' Construct (2017)

40 MWRWH (2015)

