

THE PLANNED LOCATION OF GOVERNMENT-SPONSORED
HOUSING PROJECTS: THE CASE OF ACCRA-TEMA-
AKOSOMBO REGION; GHANA

by

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ABSTRACT

Provision of adequate housing in the urban areas of Ghana constitutes a major problem. In the Accra-Tema-Akosombo Region of Ghana, the housing shortage is becoming more acute as a result of continuing population growth, which is due to natural increase; and to massive drift of population to the region because of the implementation of the Volta River project, and the industrialization of the region.

It is the policy of the Ghana Government to provide houses to meet the needs of the inhabitants of the Accra-Tema-Akosombo Region. The problem here is the determination of appropriate locations for the housing projects scheduled for the region, to aid in solving the housing problem, and to promote the balanced social and economic development of the region.

Location of housing projects is critical in solving the housing shortage because location of housing projects influences: the size of project; the cost and quality of utility services; the cost of community services generally; and the cost of transportation. The location factors must be considered in the light of all other factors, such as

place of work, with which housing location is interrelated.

The search for a rational approach to the selection of location for housing projects leads to the study hypothesis:

That the planned location of government-sponsored housing projects, as a solution to the housing problem in the Accra-Tema-Akosombo Region of Ghana, should be based on a comprehensive regional planning approach.

The investigation of the comprehensive regional planning approach to the location of housing projects in the Accra-Tema-Akosombo Region is based on the assumptions that: the Ghana Government will continue to sponsor the provision of housing for all the inhabitants of the region; there will be no drastic changes or complete abandonment of the region's development programme; and that the housing needs of the urban dwellers are not to be considered as more urgent than those of the rural dwellers in the region. The study reveals that all the assumptions are valid.

The Ghana Government's national policy of industrialization and urbanization as stated in the Seven-Year Development Plan (1963-1970) is reviewed together with the regional development programme and plan for the Accra-Tema-Akosombo Region. These reviews shed

light on both the national and the regional socio-economic development policies and programmes, of which housing is a part.

Since very little has been written about the comprehensive regional planning approach to the location of housing projects, the concept underlying location of housing projects in the Durgapur Region of India is reviewed in order to throw light on the value of this concept.

The conclusions drawn from the case study indicate that the process of selection of locations for housing projects is based on a comprehensive regional planning approach. The "Durgapur approach" provides the basis for relating the comprehensive regional planning approach to the location of housing projects in the Accra-Tema-Akosombo Region of Ghana. Criteria based on this approach are formulated for location of housing projects in the A.T.A. Region.

A review of the three levels of planning, namely local, regional, and national, reveal that the comprehensive regional planning approach to the location of housing projects, in the Accra-Tema-Akosombo Region, is the most suitable approach. Despite the stated limitations, it is concluded that the regional approach would contribute

to the rational selection of locations for housing projects
in the regions of developing countries.

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INTRODUCTION

Housing is one of the most important necessities of mankind. It provides shelter for the basic social unit which is the family. Almost every person's social status in a society is affected by the kind of house in which he lives. Through housing, the individual or a family is linked to the community. Housing is not an isolated building or set of buildings but a component of a larger neighbourhood, and part of the community pattern. Decent houses for families with children are of great importance to the welfare of a nation, because the influence of housing conditions, for good or for bad, is greatest during the impressionable years of childhood.

Housing plays a major role in stimulating employment, both directly and indirectly, and activates other industries. The location of housing influences the site of industry as often as the placement of industry influences housing location. The existence of an adequate housing supply often ties workers to their existing environment. Housing has a capital and a saving aspect, a generative aspect, and a social or attitudinal aspect that endows it with political and social, as well as economic importance.

A PRELIMINARY STATEMENT OF THE PROBLEM

A housing shortage as a problem of human welfare faces both the developed and the developing nations of the world, though it is of different character and urgency in each country. In Ghana the problem of housing shortage is becoming critical, especially in the fast developing urban areas. This is more so in the Accra-Tema-Akosombo Region, where two-thirds of Ghana's economic development is scheduled to be implemented.

The total housing problem is no longer involved solely with the poor housing conditions of workers of small means. It has acquired many meanings: housing shortages, blight, insecure home ownership, planlessness of community patterns and other disorders. It concerns rural as well as urban families, and affects people of all incomes. The housing problem includes town planning, public morale, post independence reconstruction, urban solvency, employment, social security and national welfare. The underlying causes of the housing shortage which have created overcrowding in urban areas in the Accra-Tema-Akosombo Region are:

1. Increasing birth rates and falling death rates resulting in larger family size. More babies mean overcrowding in the already cramped dwellings.
2. Larger family size means more family expenditure, which adversely affects the rate of family savings. Unless

these low-income families save, they cannot invest in private houses or hope to pay higher rents for better housing.

3. Another causal factor of the housing shortage is the great change in demand for better houses and housing facilities in general. Traditionally, the compound type of dwelling served the needs of the extended family. The rate of urbanization has created tremendous impacts in the mode of living and the solidarity of the extended family. The splitting of either the matriarchal or patriarchal extended family unit has created the need for more housing units for the same number of people. The housing needs of the people have become much more complex and these have altered their views about the form and function of the houses which they desire to buy or rent.
4. The migration of large numbers of rural people from agriculture to industry located in urban areas. Some migrants came from urban areas outside this region, while others came from places outside Ghana.
5. The low-income of most of the workers in the region precluded them from providing their own houses by private house builders. The disparity between the low income of most of the workers and the amount of money required to finance a house has generally widened.

Government-sponsored housing, at present, is the only way of housing these migrants and other inhabitants of both the urban and rural areas of the region. The Government of Ghana has already planned for the construction of houses for the people in the urban areas in the region. However, the housing shortage cannot be solved simply by concentration on construction of houses. The problem goes beyond provision of more houses, because the housing shortage is only one aspect of the economic and social problems which have been occasioned by rapid industrialization and urbanization of the region. Furthermore, the building of more houses will have economic and financial repercussions which will be felt in the region as well as in the country as a whole.

The core of the problem, since the policy of the Ghana Government is to provide more houses for the inhabitants of the region, is the determination of appropriate locations for the housing projects. The appropriate location of housing would tend among other things to emphasize the social and cultural values of each community and its possibilities as a creative and co-operative entity rather than its subordination to the interest of a specific centre of population.

The main purpose of this thesis is the formulation of basic criteria, based on a comprehensive regional planning approach, that could be used to determine appropriate

locations for government-sponsored housing projects in the Accra-Tema-Akosombo Region of Ghana. It is considered that the basic criteria, with some modifications in terms of development programme, could be used to select locations for housing projects, not necessarily government sponsored, in other regions of Ghana.

THE SIGNIFICANCE AND SCOPE OF THE STUDY

The importance of this study, is to provide a better understanding of the role, importance and impact of the location of housing on other aspects of land uses, and the implementation of the Accra-Tema-Akosombo development programme; and also to reveal the importance of proper location of housing as a means of solving the housing shortage.

Finally, although not so obvious a factor, but one of great importance, is the location of the housing.¹

Lack of planning for location of housing in accordance with planned distribution of industrial and economic activities on a regional basis has contributed to the housing problem in the Accra-Tema-Akosombo Region. Lag in urbanizing the rural villages has led to the migration of people from villages to urban centres. Not all the people, who leave the rural areas for the urban areas,

¹Robert Legget F., What Do We Mean By "Housing?" (Queen's Quarterly, 1960-1961), Vol. 67, p. 631.

are in search of employment. Some people leave rural areas because of inadequate social services and cultural facilities. No progress can be achieved in housing development unless there is a regional programme.

There is also a lack of regional conceptions, lack of understanding of the changing regional patterns. We have cases where many houses are built by private people or by government just in the wrong areas . . . and thus a certain part of the housing production . . . is wasted. Provision of more housing at inappropriate places are definitely not intended to solve the housing problem for the people who are most in need of better housing.²

The provision of houses must not be considered in terms of brick and mortar alone, but the regional relationships of the location and potentialities which the regional conditions afford to permanent human settlements must be considered.

Poorly located housing projects make impossible, the optimum use of available utilities including transportation, power and communications, community facilities and educational institutions.³

Location of housing could be based on a national, regional, or local approach. The regional approach is the stand taken in this thesis. There are various objectives influencing the location of housing. Location of housing can be used as a means to mobilize more easily the human resources of a country or a region for a particular activity,

²Doxiadis, C.A., Ekistics, The Key to Housing In Developing Areas. (Building Research and Documentation, 1959), p. 266.

³Ibid.

or to train people gradually for higher skills, or to offer employment. Location of housing projects is considered, in this thesis, as dependent on the economic development of the region, but with much more emphasis on it as a means to solve overcrowding in the region. The discussion of the location of housing projects is, therefore, limited geographically to the Accra-Tema-Akosombo Region of Ghana and in scope, as a means of solving overcrowding in the region.

ASSUMPTIONS

Dealing with the location of government-sponsored housing projects in the Accra-Tema-Akosombo Region, it is assumed that:

1. The Ghana Government will continue to sponsor the provision of housing for all the inhabitants of the region;
2. There will be no drastic changes or complete abandonment of the region's development programme;
3. The programme will be implemented as scheduled;
4. Various types of dwellings will be provided for all people at the same location irrespective of income, colour, socio-political status, creed or ethnic characteristics;
5. The main objective for the provision of more houses is to fit the number of housing units to the region's

- population, to satisfy the needs of families, and to raise the standard of living of the people;
6. The housing needs of the urban dwellers are not to be considered as more urgent than those of the rural dwellers in the region.

DEFINITION OF TERMS USED

The following terms and words are used throughout the thesis as defined below.

Comprehensive Regional Planning Approach. Comprehensive regional planning is an attempt to pursue consciously, logically and with rational means, the comprehensive development of a given geographic area in order to create the most suitable environment for human life, activity and cultural development. Regional planning has been described as:

. . . a comprehensive ordering of the natural resources of a Community, its material equipment and its population for the purpose of laying a sound physical basis for the good life Regional Planning involves the development of cities and country side, of industries and natural resources, as part of a regional whole.⁴

The purpose of utilizing a comprehensive regional planning approach is to provide guidance for a balanced, social, economic and physical development of a region.

⁴Benton Mackay and Lewis Mumford, Regional Planning, (Encyclopaedia Britannica 1959), Vol. 19, p. 71.

Location. Location refers to the unique complex of space relationships within which each site is fixed at a given point in time. These space relationships refer to all other people, and to things and activities both near and remote.

Accra-Tema-Akosombo Region. The delimitation of the Accra-Tema-Akosombo area, as a region, was based on the changes in the systems of spatial interaction, the location of economic activities and their interrelations, their resulting interdependence and implications for Accra, Tema and Akosombo which are the three major urban centres in the region. This planning region could be labelled as a "city region" defined by an intricate pattern of economic and social interdependencies and the locus of socio-economic developments. The initials A.T.A. shall be interpreted to read Accra-Tema-Akosombo.

Government-sponsored housing. Throughout this thesis, government-sponsored housing means single or multiple family housing units, built by the government or with government subsidy, either for rent or for home ownership.

Overcrowding. Overcrowding here means the lack of an adequate number of rooms for a household, that is doubling-up or sharing of accommodation, and also squatting and housing congestion resulting from the housing shortage.

The overcrowding of households is defined by the relation between households and housing units. When two or more households occupy a housing unit, they are overcrowded.

Housing. The ordinary meaning of housing is broadened to include all residential and community facilities and services required for the shelter, convenience, and health of the inhabitants of the project area. Houses include flats.

Housing shortage. Housing shortage is interpreted as meaning the disparity between the need and availability of houses, in terms of the number of households and the number of housing units. There is a housing shortage when the quantitative housing need of a given population, at a given point in time, exceeds the number of existing housing units.

Household. The number of households instead of the number of families is used to calculate the need for housing in the region. Household is interpreted as meaning people who are living together in the same house, or of one person living alone.

Accra Capital District. Accra Capital District was defined by the Ghana census office in 1960, as comprising Accra City Council, Tema Development Corporation, and Ga-Dangbe-Shai Local Council.

Infrastructure. This is an economic collective term meaning the basic development such as roads, electricity and

water supply upon which any successful macroeconomic development such as industry depends.

STATEMENT OF THE HYPOTHESIS

Housing shortages face all nations. The general housing shortage which resulted in overcrowding, slum and squalor, became a problem during the Industrial Revolution in Europe. This problem was experienced in North America during, and after the cessation of the Second World War. Developing countries, especially those in Africa and Asia, are now completely caught in the web of housing problems. More houses are needed to accommodate the present and the future population, and new houses to replace dilapidated ones. With the rapid development of the region under study, and the resulting population drift to this region, the housing shortage and overcrowding have reached an unprecedented scale. The Government of Ghana has established Corporations and other Agencies whose sole duties are the provision of houses. But there must be a rational approach to the location of housing projects in the region. The search for this rational approach leads to the hypothesis of this thesis:

THAT THE PLANNED LOCATION OF GOVERNMENT
SPONSORED HOUSING PROJECTS, AS A SOLUTION
TO THE HOUSING PROBLEM IN THE ACCRA-TEMA-

AKOSOMBO REGION OF GHANA, SHOULD BE BASED
ON A COMPREHENSIVE REGIONAL PLANNING
APPROACH.

ORGANIZATION OF THE REMAINDER OF THE THESIS

The geography of the Accra-Tema-Akosombo Region of Ghana, and the distribution of its population are discussed in Chapter I, in order to describe the region as it is today in terms of population distribution, employment and income, and the land use pattern. The economic development of the Accra-Tema-Akosombo Region is part of Ghana's development programme. The Ghana Government's policy and objectives as stated in the Seven-Year Plan of Ghana are reviewed in Chapter II, and this is followed by an examination of the plan for, and the economic development of the region. The housing shortage as a regional problem is described in Chapter III, according to the housing needs, supply and the demand for housing. The social, economic and psychological implication of the regional housing shortage are also reviewed.

The main objective of the thesis is the formulation of criteria for the location of housing projects, based on a comprehensive regional planning approach. In order to formulate these criteria, the Durgapur Region of India, which faces a similar housing shortage to that which

exists in the Accra-Tema-Akosombo Region of Ghana, was used as a case study.

The basic locational factors relevant to the location selection process are examined in Chapter V, under the following headings: the size of the housing project; physical criteria; economic and social criteria; transportation and public utilities criteria; community and services criteria; and administrative criteria. The evaluation of the comprehensive regional planning approach to the location of housing projects in general, and in the Accra-Tema-Akosombo Region of Ghana in particular, is described in Chapter VI. The validity of the hypothesis is also reviewed.

The study is based primarily on library research and documents received from the Town and Country Planning Division of the Ministry of Works and Housing, Accra, Ghana.

CHAPTER I

THE ACCRA-TEMA-AKOSOMBO REGION TODAY

Accra-Tema-Akosombo are three important urban centres located at the south-eastern part of Ghana which is on the Guinea coast of Africa. Accra is the national capital and administrative centre of Ghana, while Tema is an industrial city with a modern man-made sea port. These two cities are on the coast. Akosombo, which is an inland urban town, is about sixty miles from Accra. This is the town where a hydro electric power station is under construction. Akosombo is planned as a lake port and a fishing centre. These three urban centres form a triangle by their geographical locations. This triangle is now known as the Accra-Tema-Akosombo Region.

A description of the geography of the region, and analyses of the population distribution, and the existing regional land use will aid the appraisal of the housing problem facing this region.

I. THE REGION AND ITS GEOGRAPHY

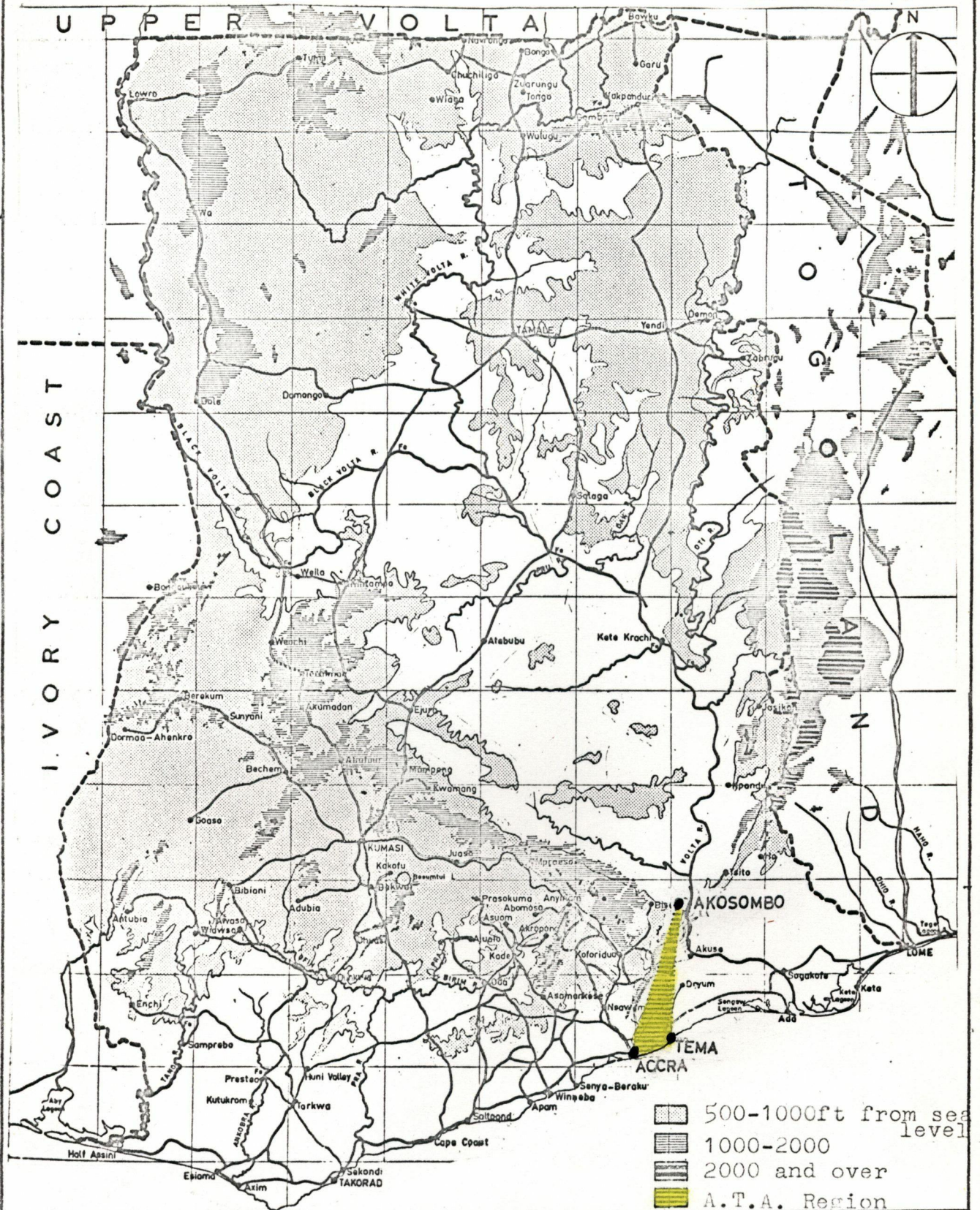
The Region

Accra-Tema-Akosombo is a planning region in south-eastern Ghana and takes the form of a triangle with Akosombo at the apex. The eastern side of the triangle is marked by the Volta Flood Plains. The greater portion of the eastern side of the triangle lies west of longitude 0° which passes through Tema where it is marked by a rock known as Meridian Rock. The Akwapim-Togo Ranges mark the western side of the triangle. The coast line from Accra to Tema is the southern boundary of the region. Map I, page 3, indicates the location of the Accra-Tema-Akosombo Region.

The basic pattern of population concentration with its underlying economic, social and cultural relationships in the three urban centres which form the triangle, contributed to the creation of this area as a planning region. The three urban towns have many problems and potentialities in common. Between these three towns lies a chain of rural centres, along the Accra-Dodowa-Kpong highway which is at the foot of the Akwapim-Togo Ranges. There are scattered villages to the eastern part of the region. For planning purposes, the triangular region has been subdivided into three areas:

- (1) The Accra-Tema Metropolitan Area
- (2) The central Dodowa area to Kpong

THE ACCRA-TEMA-AKOSOMBO REGION AND ITS RELATION TO THE COUNTRY.



MAP
I

Source: Adapted from Accra-Tema-Akosombo Regional Programme and Plan.
Doxiadis Associates.

- (3) The outlying area of Akosombo and the present bridge.¹

Its Geography

The Accra-Tema-Akosombo Region is an integral part of the Accra Plains. The Accra Plains, as a geographic region, is subdivided into Accra Coastal and Interior Plains which lie between the Akwapim-Togo Ranges on the north and the sea along the south, and occupy the whole of the south-east corner of Ghana, excluding the Volta delta which forms a separate geographic region.

Topography. The Accra-Tema-Akosombo Region is part of the gently undulating Accra Plains, where the land slopes gradually from five hundred feet at the foot of the Akwapim Ranges to the sea at the south. The undulation, especially at the coastal section, is caused by a chain of spoon-shaped valleys which are separated by low ridges. Most of the spoon-shaped valleys are swampy during the wet season and their mouths are frequently blocked along the sea by sandbars to form lagoons. Generally, the Interior Plains are flat and featureless. This physical sameness is broken at times by a number of steep-sided "inselbergs" which range from nine hundred feet to one thousand five hundred feet in height.

¹Doxiadis Associates, Accra-Tema-Akosombo Region Programme and Plan. (Accra: Government Printer, 1960), Vol. 2, p. 242.

Geology. Dahomeyan rocks underlie most parts of the region. A number of small hills, rich in quartzite, but free of iron are found towards Accra and Tema. The area around Accra is composed primarily of sandstones and shales, parts of which are faulted and subject to seismic activity. Map II, page 6, indicates the Accra Plains, the Volta Delta and the Akwapim-Togo Ranges.

Soils. There are six main soil groups in the region. There is a broad band of basic gneisses between Tema and Prampram. The eastern part of the region is dominated by black clay which is considered to have great agricultural potential. The greater part of the A.T.A. region is, however, taken up by pallid sands. Grey earths occupy the lowland areas. Alluvial clays underlie the Volta Flood Plains, coastal lagoons and large stream beds.

Climate. Ghana has a savannah type of climate which is characterized by wet and dry seasons between June and October; and November and May respectively. These two seasons prevail in the region. The sea exerts a maritime influence while the Sahara desert exerts a continental influence over the region. The climate in this region results from the effect of these two factors which act either independently or simultaneously according to the season. Temperatures range between 79° and 84°F throughout the year. Inland temperatures exceed the coastal ones. The lowest temperatures occur near the coast and the highest further inland.



Rainfall in the region follows the general characteristics of rainfall in Ghana, with little variations especially at the coast. There are two types of rainfall. One single rainy season which starts in March and ends in October, the other with two rainy seasons which reach their peaks in June and October each year. The dry seasons which occur between the wet seasons are of varying severity. The short but severe dry season occurs during July and August. The long spell of dry season is from November to February. The average annual rainfall in the region is between twenty-eight and thirty-three inches with the lowest rainfall occurring near Accra.

Winds are generally of low velocity blowing either from the coast or from the north, according to the direction of the prevailing winds. The Accra Plains have a relatively high humidity, about 100 per cent during the night and early morning, with an average of 60 per cent during the day time.

II. POPULATION DISTRIBUTION

Historically, the population distribution in the region has been determined by the following factors: rich agricultural lands; availability of water and communications; special economic and geographic advantages; and job opportunities in the industrial and the administrative centres.

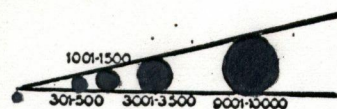
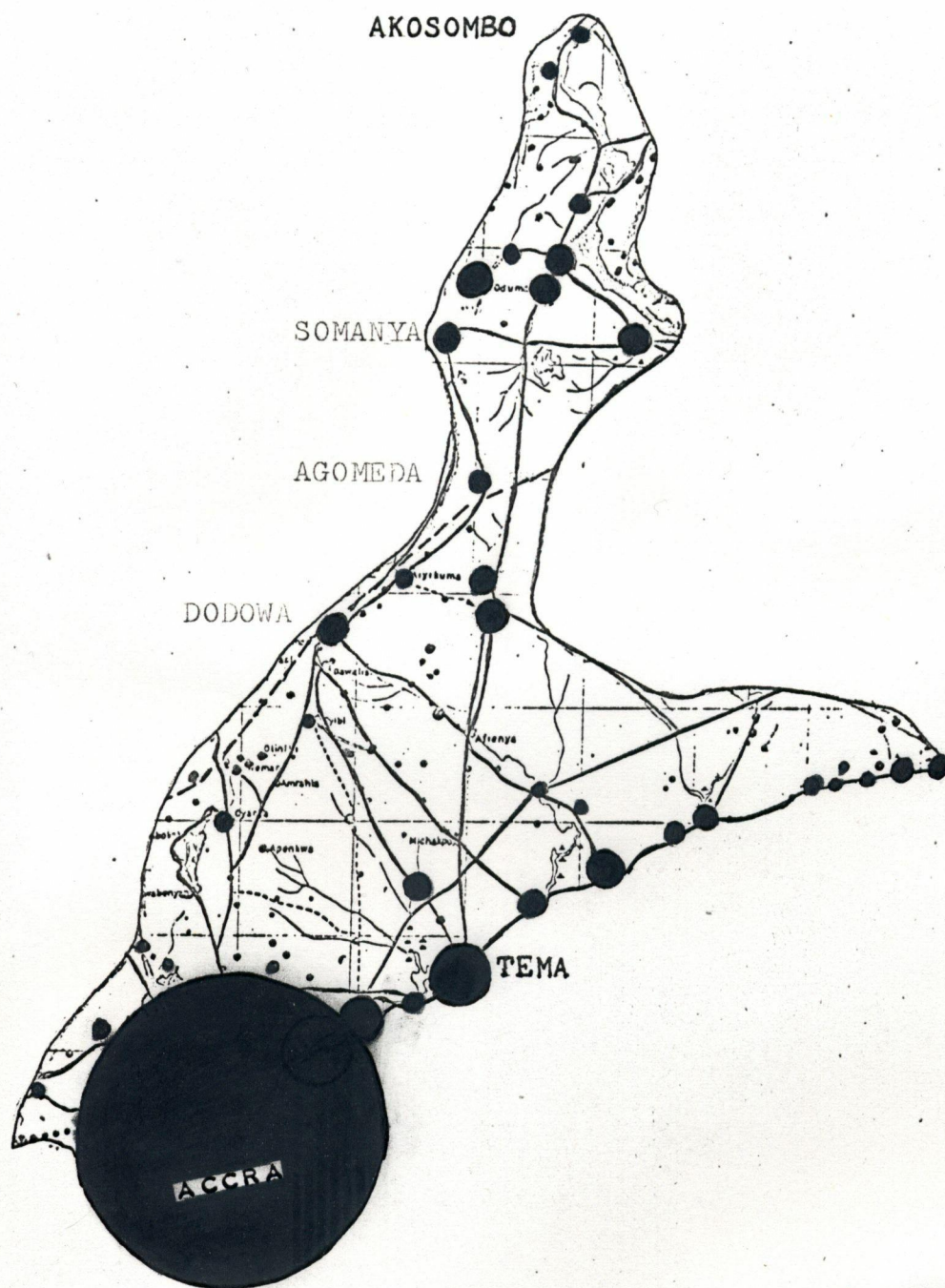
There are urban settlements along the Accra-Dodowa-Senchi highway as well as along the coast. Greater

concentrations of people occur in the Accra-Tema Metropolitan Area. By virtue of its function as the capital city and a major commercial centre, Accra has exerted more influence over the country in terms of population movements than any other major town. In 1957, the number of migrants to Accra increased at the rate of 3,000 persons a year. This figure, which has now almost doubled, excluded the number of migrants who stayed for only a short period. In addition to these urban settlements, the region has several smaller ones. Settlements are completely absent in the black clay areas. Map III, page 9, indicates population distribution in the Accra-Tema-Akosombo Region (1960).

The Accra Municipal Council area, which forms part of the Accra-Tema Metropolitan Area, has a population of 388,396 people (1960) of which 364,719 live in urban areas. The Tema Development Corporation area, which is also a part of the Metropolitan Area, has a population of 27,127 people (1960) of which 22,599 live in urban areas. The population densities for the Accra Municipal Council area, and the Tema Development Corporation area in 1960 were 4,464 and 431 persons per square mile respectively. These densities are not uniform throughout each respective area. The population of the region in 1960 was estimated at 514,000 people.

Dodowa is a town of some importance in the region. In 1960, it had a population of 3,689 inhabitants. Most of the inhabitants are engaged in small-scale farming, and trading

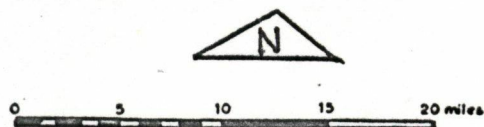
POPULATION DISTRIBUTION IN THE ACCRA-TEMA-AKOSOMBO REGION (1960).



MAP BASED ON 1960 CENSUS

MAP
III

Source: Adapted from Accra-Tema-Akosombo Regional Programme and Plan. Doxiadis Associates.



along the Accra highway. Somanya is an important town among the villages which are located along the road at the foot of Akwapim hills. The population of Somanya in 1960 was 9,258 inhabitants.

The population in the villages is decreasing because of the lack of steady and lucrative employment, coupled with more attractive job opportunities at the urban centres in the region. The region exhibits three distinctive areas: area of rapid population growth such as the Metropolitan Area, areas where the population is decreasing, for example, Agomeda and Kpong, and areas of static population which are outside the influence of the economic development of the region.

The ethnic groups which inhabit the region are, Gas in the south and Adangbe-Shai in the further north in the Dodowa district. The Krobos inhabit Sra-Somanya district which lies further north. The region is within the boundaries of the states of Ga, Dangbe-Shai, Vilo Krobo, Manya Krobo and Akwapim.

The centre of Ghana's industrial and commercial activities are destined to be in Accra-Tema Metropolitan Area. It is, therefore, reasonable to anticipate that the concentration of urban population will be greatest in Accra and Tema in the near future.

III. EMPLOYMENT AND INCOME

Employment

In 1959, a Report on Ghana's labour force and its distribution among the various sectors of economic activity was made by R.R. Oswald, a United Nations expert. He revised his figures when the 1960 Census data were published.

The available estimates put Ghana's labour force at 3,076,000 (1960). Seventy per cent of the labour force, like any developing country, was engaged in agriculture. Industry employed only 5 per cent of the labour force. The number of people engaged in trade was 502,400. This number which was relatively high was made up by, women (334,500), children (59,300) and adult men (108,600). Most of the women engaged in trade, were self employed. At the end of 1958, there were two hundred and two thousand persons employed in business with five or more wage earners. This number of wage earners was distributed almost equally between private enterprise (145,200) and the Civil Service (146,800). The majority of the wage earners were males.

The number of employed people in Accra Municipal Council area in 1948, was 83,100 of whom 18,700 were women. Traders made up 89 per cent of the employed women. Since 1948, the population of Accra and its immediate villages has grown very rapidly. The most recent data on employment are for 1958 which indicated that:

According to the data provided by the various enterprises, the number of workers in Accra was 71,000 in December 1958. If note is taken of the fact that the 1953 inquiry into family budgets carried in that city showed that the workers represented 51 percent of the total number of employed people, the total number of employed people (workers and self-employed) may be estimated at 140,000 persons for the year 1958. This figure, though it may not be considered absolutely accurate, does nevertheless present a picture of the present situation in the city of Accra from the point of view of employment.²

It was further estimated that seventy thousand of the one hundred and forty thousand workers were self-employed. The fifty-six thousand people that inhabit the three hundred thousand acres of land north of the towns of Accra and Tema are not, strictly speaking, farmers. They are engaged in farming and livestock breeding to a very small extent.

Fishing takes place along the coastal areas of the region as well as in the coastal lagoons. Important centres of the fishing industry are Labadi, Teshie, Tema and Accra. There are a number of fishing villages located east of Accra. The fishermen engage in small-scale farming in addition to fishing. The Akosombo dam will create a vast lake which will provide great prospects for the development of fishing, particularly at Akosombo which is the port of the lake. Tema has facilities at its seaport for fishing purposes; and it is the main fishing port in Ghana.

²Doxiadis Associates, Accra-Tema-Akosombo Regional Programme and Plan. (Accra: Government Printer, 1960), Vol. 1, p. 69.

The labour force for the urban areas in the Accra-Tema-Akosombo Region has been broken down as indicated in Table I.

TABLE 1

ANALYSIS OF LABOUR FORCE FOR THE URBAN AREAS
IN THE ACCRA TEMA AKOSOMBO REGION 1960

Locality	Sex	Labour Force	Employed	Unemployed
Accra M.C.	M	114,759	100,554	14,235
	F	59,154	49,970	9,184
Tema	M	6,390	5,700	690
	F	1,790	1,642	148
Dodowa	M	723	651	72
	F	771	739	32
Somanya	M	2,189	2,063	126
	F	2,532	2,467	65
Odumase	M	963	891	72
	F	950	895	55
Senchi	M	525	472	53
	F	248	236	12
Kpong	M	979	878	101
	F	658	588	70
Total		192,631	167,716	24,915

Source: Ghana 1960 Population Census Vol. II.

Income

Ghana has the highest per capita income of all African countries except the Union of South Africa, according to 1958 official statistics. This national per capita income was

seventy pounds sixteen shillings in 1958. This was based on an estimated population of 4,836,000. The 1960 population census indicated that the population of Ghana has risen to 6,690,000. It was, therefore, reasonable to assume a change in the level of the national per capita income. However, this did not happen.

. . . it is certain that there will be no reduction in the estimated per capita income as a result of the increased population because the calculation of the national income is based to a large extent (70%) on the size of the population.³

There are wide local differences of per capita income throughout the country. The per capita income for Accra-Tema-Akosombo Region is lower than the national per capita income, but the per capita income for Accra Capital District, and the agricultural areas lying north and west thereof appears to be higher than the average national level.

Lack of sufficient and reliable statistical data for the Accra-Tema-Akosombo region, especially the complete lack of data for smaller towns and villages, makes accurate appraisal of the per capita income difficult.

An important source of information on per capita income for Accra was the results of the inquiry, held in the city of Accra in February 1953, into the family budgets of certain categories of wage earners. This inquiry dealt with families who received an income ranging from five to fifteen pounds during the month of February, 1953.

³Ibid., p. 154.

The survey covered about two-thirds of the total income of the families investigated. The remaining one-third were self-employed members of the families investigated. The result of the inquiry was deemed quite a reliable indicator of the level of per capita income of the entire population of Accra. The 1953 inquiry showed that the average per capita income of the families investigated was forty-six pounds eight shillings for the year 1953. The average monthly income was ten pounds eleven shillings for employed wage-earners and seven pounds twelve shillings for self-employed persons of the families which were investigated. The self-employed members of the families were mostly women who were petty traders and thus earned lower incomes.

So it might be said that the per capita income resulting from the inquiry into family budgets should not be lower than the per capita income of the total population of Accra. In effect it is very likely to be today from 10% to 15% when due regard is paid to the economic progress registered since 1953.⁴

Fifty pounds was therefore deemed reasonable, by the Doxiadis Associates, to be the per capita income for Accra for the year 1960. In 1960, twenty million pounds was estimated to be the total income for Accra Municipal Council area. The average per capita income for families in the other parts of the region would not be less than thirty-seven pounds⁵ in 1963, taking into consideration the economic

⁴Ibid., p. 156.

⁵Ibid., p. 154.

activities that have gone into the region since 1956.

The completion of the Volta Scheme, and the consequent availability, for the first time, of cheap electricity, in Accra-Tema-Akosombo Region, where two-thirds of Ghana's anticipated increase in industrial production and employment will be concentrated, will no doubt create conditions for rapid industrialization of the region. This will inevitably result in a higher per capita income and standard of living for the inhabitants of Accra-Tema-Akosombo Region.

IV. EXISTING LAND USES

The existing uses of land in the region, especially outside the urban areas, have been influenced to a very great degree by the geography and soil conditions of the various areas. The main human activities which have helped to shape the land use patterns, outside the urban areas, are agriculture, stock raising, and fishing. Agriculture is mainly by shifting cultivation, though a very limited fixed farming is practised near Accra. The farms are, on the average, about two acres and are very often grouped around small villages which are either scattered on the plains or strung along the highways because of transportation facilities. The drier coastal section is free from tsetse and, therefore, suitable for livestock breeding.

Ghana Ministry of Food and Agriculture, soil and Land Use Services Division, has surveyed and prepared a map

showing the use of land in the Accra Plains. This map includes the region under consideration with the exception of the area around Akosombo. The major land uses along the coast from Accra to Tema are settlements with gardens, grazed and ungrazed grassland, and farming based on crop rotation. The greater portion of the land between Labadi and Tema is for grazing with patches of *Dichrostachys* scrub. The forest area in the Accra Plains is outside the boundaries of the region under consideration. The central area of the region is taken up by farming based on crop rotation. Though the main fresh water swampy area is outside the region, the central area has a five mile fresh water swampy area. The northern section of the region is dominated by two major different kinds of land uses, namely, rocky hills with ungrazed grassland, and forest reserves with cocoa plantations on the higher parts of the land. There are pockets of land having ungrazed grassland and patches of fresh water swamps at the north-east part of the region. It could be deduced from the land use map that the greater portion of the region is used for agriculture. Development and Master Plans have been prepared for both Accra and Tema because of their importance in Ghana's industrial and social reconstruction.

The Existing Master Plan for Accra. In 1958, the Town and Country Planning Division of the Ghana Ministry of Housing conducted a planning survey in Accra and submitted a report in 1958 entitled, "Accra, A Plan for the Town." The plan

recommended locations for commerce, and industries; and the redevelopment of Accra central business district. The Town Planning Department recommended the extension and organization of the city into independent communities, and the redistribution of the Accra population. The plan was prepared for an estimated population of 337,000 people (1978). The 1960 population census, however, showed that Accra has already exceeded that figure by over 51,000 people. This plan has, however, been superseded by the "Master Plan for the Metropolitan Area."

The Existing Master Plan for Tema. This modern industrial city, started as a planned city. The plan was based on Ghana Government's decision to create Tema as an industrial as well as a first class artificial harbour. Land developments in Tema are being carried out in accordance with the approved Master Plan. The built up part of Tema comprises the Community No. I with approximately 13,800 (1960) inhabitants, part of Community No. II with six hundred people, as well as the fishing village at New Tema with 7,662 (1960) inhabitants.

There are four main zones in Tema. (1) The residential zone of two communities. Each community has its own primary, middle and secondary schools, and its own police station. (2) The industrial zone. The first part of this area has been occupied by an assembly plant, Gazie's portmanteau factory, cotton industry, Lever Soap factory and

oil refinery. (3) The port zone consists of two parts, the main harbour and the fishing harbour. (4) The zone of the town centre of the two communities is virtually completed.

The Circulation System in the Accra-Tema-Akosombo Region. The existence of the sea to the south, the Volta River to the north and east, the Akwapim Hills to the west, and the location of towns and villages have influenced the general circulation system in the region. Another important factor which has contributed to the present road network in the region, especially in Accra, was the piecemeal implementation of the master plans for Accra and Tema.

There are roads running parallel to each other from the Akwapim Hills, and terminating at important towns along the coast. One of the important highways in the region is the international coastal highway which links Togoland and Ivory Coast with Ghana. This highway, apart from its international use, acts also as a collector and distributor of traffic travelling in the perpendicular arteries which run from north to south of the region. The highways from Accra to Akosombo and from Tema to Akosombo are two important perpendicular highways, from the south, serving the region. The settlements along the two perpendicular highways are connected to the settlements located between the highways, and the settlements at the coast by a network of roads running almost vertical to the two major highways. The major highways in the region are

paved. The internal roads of inland settlements are primarily for through traffic. These roads are generally classified as "feeder roads." Most of these "feeder roads" and the intra town roads are not paved.

With the exception of some parts of Accra and Tema, there is no separation of traffic in the towns and villages in the region. All types of traffic, including pedestrians, have the same right of way. Zebra crossings have been introduced in some parts of Accra. Accra has the greatest traffic problems in the region under study.

The major faults of the circulation system in Accra are: inadequate roads for the volume of traffic for the city centre; the condition of the roads; an incomplete network of ring roads; too many intersections; inadequate traffic capacity generally; inadequate sidewalks for pedestrians; and inadequate parking and loading facilities. Tema has a good circulation system. All the completed roads are paved.

A railroad links Accra with Tema, and Accra and Tema with Kumasi. There is a rail link from Accra Railway station to the harbour. This main railway station is poorly located, thus acting as a barrier to the provision of good road communications to the north-west of the central area. Rail siding facilities are provided for the oil storage area between Hansen Road and Korle Lagoon, and the Public Works Departments, but there are no rail siding facilities for the industrial estates. There are railroad facilities at Tema

harbour. Another railroad connects Tema with the quarry at Shai Hills. The central and northern portions of the region are void of any railroad facilities.

In sum, the problem concerning the transportation network of the region, which is raised by the foundation of Tema consists of the following elements:

- a. Channelling to the country and particularly to Accra of 80%-90% of the imports, except for a small percentage intended for local consumption.
- b. Diversion from the rest of the country of approximately 10% of the exports (except aluminium) and later on of the bauxite necessary for the smelter.
- c. Servicing of passengers travelling in ships to and from Ghana.
- d. Meeting local requirements relating to the movements of passengers and goods inside the region.⁶

V. SUMMARY

The adequacy of housing in a region indicates the level of economic and social achievements of its people. Housing reflects the effects of the physical environment in which the people reside, their living habits and cultural background.

The geography and the existing land use pattern of the region will, to a greater degree, determine and influence the location of new residential, commercial and industrial developments in this region. The region as it is now, with special reference to the factors which have created the

⁶Ibid., Vol. 2, p. 266.

housing problems in the region as a whole, was reviewed. These factors are the present population movements in the region, and the existence of employment opportunities in the three urban centres. The rapid increase of the urban population which has aggravated the housing shortage in the urban areas can be explained partly by Government's decision to concentrate industries and therefore job opportunities in Accra and Tema.

A review of employment and income revealed that the majority of the people in the region are incapable of building their own houses or renting decent houses. The central government has to aid the provision of low-rental housing for the people.

The region is administered by three bodies, namely: Accra City Council, Tema Development Corporation, and the Local Council for Ga-Dangbe-Shai. These various local administrative agencies are concerned with the local and limited aspect of the housing problems facing the region as a whole.

CHAPTER II

THE DEVELOPMENT PROGRAMME FOR THE ACCRA-TEMA-AKOSOMBO REGION

The Accra-Tema-Akosombo Region of Ghana is undergoing significant social, economic and cultural changes because of the developments being undertaken in the region. Industrial and commercial developments rank highest of all developments which have already established or are in the process of being established.

The development of the region is based on the national development policy and objectives. The aim here is to throw light on the national policies and objectives underlying the overall development programme of the region under study. It is quite a formidable task to identify and interpret the overall policies and objectives of the Ghana Government regarding the development of Ghana as a whole. Therefore, the identification and the discussion of the national developmental policies and objectives are limited to the economic, industrial and housing aspects which are considered to be most significant to the present study.

I. INTRODUCTION

The Accra-Tema-Akosombo Regional Programme and Plan was prepared by the Doxiadis Associates in 1960 prior to the preparation and the launching of Ghana's Seven-Year Plan in March, 1964. The formulation of the national policy and objectives which underlie Ghana's Seven Year Development Plan, took into consideration the existing development plans of the various regions of the country including Accra-Tema-Akosombo Region. The main objectives of Ghana's Seven-Year Plan are:

. . . firstly to speed up the rate of growth of our national economy. Secondly, it is to enable us to embark upon the socialist transformation of our economy through the rapid development of the State and co-operative sectors. Thirdly, it is our aim, by this Plan, to eradicate completely the colonial structure of our economy.¹

It is considered that the successful execution of the Plan will bring Ghana to the threshold of a modern state based on a highly organized and efficient agricultural and industrial programme. The discussion of the general policy and objective of Ghana Government is based on Ghana's Seven Year Development Plan.

Economic Development. It is the Government's policy that the economy of the country must be developed rapidly and efficiently so that it will, within the shortest time

¹Speech, by Dr. Kwame Nkrumah, President of the Republic of Ghana, to the National Assembly on 11th March, 1964 when launching the Seven-Year Development Plan.

possible, assure a high rate of productivity and a high standard of living for each citizen based on gainful employment. During the transition to a Socialist form of society, the economy of Ghana will remain mixed, that is, both private and public but public want and private affluence will not be allowed to co-exist in Ghana. Both the public and private enterprise will have a legitimate, recognizable and very important contribution to make towards economic growth of the country. Productive investments of the state will be concentrated on the most strategic sectors of industry and agriculture, thus giving the State control over essential supplies and the vital springs of economic activity, while at the same time, laying the foundation for the further growth of the economy.

The four principal objectives for Ghana's economic development are:

1. The economy must be developed so as to be able to assure every Ghanaian who is willing to work, employment at a high level of productivity and a rising standard of living.
2. The colonial structure of production based on export of primary commodities which largely accounts for the present low level of income must be completely altered.
3. The new structure of production that takes its place must be so designed as to enable Ghana to play her full part in a Pan-African or at least West African, economic community.
4. Government's participation in the economy must be on such a scale as to enable her to implement

her socialist policies with respect to the distribution and utilization of the national income.²

Ghana's labour force will increase as a result of the population growth. The unemployed people will naturally move to those towns and cities and occupational sectors where employment opportunities exist, therefore, if the pattern of investment were left to develop by itself, the end result of labour distribution would be considerably different from the desired goal for the long run productivity and dynamism of the economy. The Ghana Government will therefore

. . . resist the demands for those types of investment that are traditional and popular but unproductive, and deliberately favour productive investments, which are new and difficult, and behind which there will never be any organized social pressures.³

The following are the three central tasks for the economic development of Ghana, as embodied in the Plan. All other parts of the plan were designed to assist in the fulfilment of these three tasks.

1. The commodity and employment deficiencies will be tackled together through the programmes of industrialization and agricultural modernization. The Plan aims to bring the structure of production in Ghana more into line with the structure of demand. In satisfying the needs of Ghanaians for goods and services, it will capture for Ghanaian workers more of the jobs that are now done by workers in other countries.

²The Planning Commission, Seven-Year Plan for National Reconstruction and Development. (The Government Printing Department, Accra: 1964), p. 5.

³Ibid., p. 20.

2. Increased domestic employment and personal incomes will provide a basis for higher Government revenues to support more and better social services and to eliminate the internal financial deficit.
3. Greater domestic production of the commodities demanded by Ghanaians and by an increase in the values of our exports by the processing of raw materials and the sale of manufactured goods will help to eliminate the balance of payments deficit.⁴

The Government of Ghana has realized the importance of creating and maintaining certain conditions which will be favourable to successful implementation of the country's economic and industrialization objectives. The Government, therefore, considers that agricultural and industrial projects must be carefully chosen and planned to assure maximum economic operation. The State considers that the general level of wages must not be allowed to rise above the increase in productivity in order to assure the maximum investment and employment opportunities for all potential workers and keep the price of Ghanaian products competitive. This policy concerning wage increase has direct repercussion on people's ability to buy or rent a house during the plan period.

Industry. At present, industry makes a relatively small contribution to the national income of Ghana. The 1959 industrial survey of Ghana, revealed that there were only 433 industrial establishments which employed six or

⁴Ibid., p. 29.

more workers. In 1960, 61.8 per cent of the entire working population of Ghana was employed in the agricultural sector. This partly explains the low level of economic development in Ghana. The greatest part of manufacturing activity in Ghana still takes place in small-scale establishments employing mostly family labour and using very little capital or capital goods. In 1962, according to an industrial survey of Ghana, these small-scale industrial enterprises employed 53 per cent of Ghana's industrial labour force. It is, therefore, the policy of the Government, first to promote large-scale industrial enterprise in order to correct the imbalance between small-scale and large-scale industrial enterprises. Second, continued support for small-scale industries which are needed, and third, to encourage Ghanaian businessmen to play their part in the economic growth of the country.

It is the policy of the Government of Ghana to distribute new industries throughout the country so that all sections of the population may benefit from industrialization. This fair distribution of industries does not, however, mean that industries will be haphazardly established across the country. The Government attaches great importance to industries based on domestic raw materials, thus processing the raw materials in Ghana, in order to create employment, supply the domestic needs and export the surplus to earn foreign exchange.

The Government has decided to allocate between 1963 and 1970, the period of the Seven-Year Development Plan, an

amount of 67.5 million pounds to agriculture in order to provide such industrial raw materials as cotton and other fibres, sugar cane, rubber, livestock, rice, tobacco, coffee and fish. It is the Government's policy also that where the pull of the raw materials is greatest, Government will embark on a considerable amount of development work before the factory is sited. Roads and bridges, housing and social amenities, water, power and telephone connections will be provided. In pursuing these targets in industrial development, Ghana has the advantage that the natural resources and the agricultural potential of the country are capable of supporting the degree of industrialization envisaged in Plan.

Infrastructure. The Government of Ghana has realized the important role of a good infrastructure in the promotion of rapid economic development of Ghana. The bulk of the government's investment between 1958-1963, was made in the field of economic infrastructure and social services. Out of a total development expenditure of 136 million pounds made during the first and second development Plans' period, 60 million pounds was devoted to the provision of an infrastructure. High priority was, therefore, not given to infrastructure during the 1963-1970 development period. This, however, does not mean that the Government is not concerned with it any longer; a fair amount of expenditure will still be necessary in this field, so that the implementation of new

agricultural and industrial projects outlined in the Plan are not handicapped.

The principal objective of the Government in road development is to continue with the network of trunk roads for the country and to extend and improve the feeder road system. Trunk roads and bridges are being planned and developed in such a way as to provide access to neighbouring countries It is the objective of the Government that the feeder road system be improved in order to connect all farming and rural industrial areas with trunk roads.⁵

The examination of the Ghana Government's objectives towards the construction of roads has revealed that roads will be available to serve housing projects, especially the housing projects which will be located in the region under study.

Housing Policy and Objectives (1963-70). The Government of Ghana considers the provision of adequate housing as to the physical properties of the housing and as to its location in relation to the place of work as an important element in the production of labour. The

Government's housing policy under the Seven Year Plan aims at ensuring that in those locations where new economic activities are expected to develop, and thus bring together large numbers of people, adequate housing will be available to meet the requirements of the people.

Great emphasis is placed on providing houses in the urban areas where the population is expected to increase during the Plan period. The Government further recognizes

⁵Ibid., p. 125.

the importance of preserving the community pattern in the development of urban areas of the country. It is hoped that eventually the economy of Ghana will permit adequate housing for each family in the country, and the government recognizes access to adequate housing as one of the fundamental privileges of the people of Ghana. However, "until the economy is able to assure the implementation of this right, a more limited housing policy should be designed aimed at relieving the housing problem at the points where it is most acute."⁶ Since 1948, there has been population movement from the rural areas to the urban centres. This inflow of population into urban centres has resulted in the creation of a number of satellite towns and villages, which have no adequate sanitation, around the larger cities like Accra, Kumasi and Takoradi. This inflow of population to urban areas has increased over-crowding of slums within the larger cities. The Government's policy toward this problem is the development of these satellite towns and villages as initial reception centres for migrant labour in the large cities. The Government will provide roads, water supply and drainage to these towns and villages. It is hoped that when such facilities are constructed, the immigrant worker will be able to build for himself a house to suit his needs.

⁶Ibid., p. 193.

In order to provide houses to meet the needs of Ghana's growing population, and to cope with the rapid urbanization, the Seven Year Plan set a target of about 60,000 new housing units to be constructed with both public and private money between 1963-1970. Accra-Tema, Kumasi, and Sekondi-Takoradi will have 25,000 houses between 1963-70. The development estimates for 1965 propose for the public sector, a programme to build 2,400 new houses in Tema; and a resumption of house building by the Ghana Housing Corporation in Accra and other urban areas to provide 3,190 houses in 1965. Other towns and municipalities in Ghana will share 35,000 houses during 1963-70.

The Home Building Agencies

Ghana Government's housing policy in the past has been mostly implemented through the Ghana Housing Corporation, the First Ghana Building Society and the Roof Loans Scheme of the Ministry of Communication and Works.

Ghana Housing Corporation. This Corporation was established under the Gold Coast Housing Corporation Ordinance No. 31 of 1955 and subsequently amended by the Gold Coast Housing Corporation (Amendment) Ordinance No. 30 of 1957. The Corporation is the main Government sponsored body charged with the responsibility of increasing the availability of houses in Ghana. In addition to the

construction and maintenance of houses, the Corporation also undertakes the construction of roads to the new estates. The Ghana Housing Corporation constructed two thousand housing units in urban areas of the country, and has taken over the administration of nearly 14,000 houses previously built by the Ghana Government. It has, therefore, 16,000 (1963) properties under its control and management. It is considered that the Housing Corporation can henceforth finance a sizeable volume of housebuilding from its own resources.

First Ghana Building Society. The First Ghana Building Society was established in June, 1956 with the object of encouraging personal savings and from the fund built up by savers, to make loans to assist Ghanaians to build or buy their own homes. In its first six years (1956-1962), the Society has grown steadily. Its membership, savers and borrowers, exceeds 10,000. The total funds of the society are about one million pounds. There are three types of accounts into which savings may be paid; and the interest on savings is between four and five per cent, depending upon the type of account. Members who obtain home loans from the society are charged interest at a rate which will produce sufficient income to cover the interest paid to savers and the working expenses of the Society. The Society has already granted housing loans to six hundred persons. Individual Ghanaians have between 1961-1962 saved nearly 500,000 pounds.

The Government's Roof Loans Scheme. This is a scheme whereby roofing materials are provided by the Ghana Government to individual home builders. The scheme is administered by the Ministry of Communication and Works. To qualify, borrowers had to be members of a village housing society which will agree to guarantee the loan, and the house has to be finished except for materials financed by the government. Each village society requires the approval of the regional Rural Housing Assistant who works with the Department of Social Welfare and Community Development. The Assistant tells the applicants where they can get the materials. The building materials are sent to the villagers who live far away from urban centres. The Assistant collects repayments and proceeds against defaulters. The houses must be erected according to the specifications of the Ministry of Housing. This scheme has helped to build over eleven thousand houses of improved quality in the villages of Ghana. Membership in the village societies totalled 25,000 in 1960 and loans aggregated nearly one and a half million pounds.

The Government intends to develop the Accra-Tema-Development Corporation, Ghana Housing Corporation and the First Ghana Building Society to a status where banks, insurance companies, and pension funds are able to lend to them.

The main problems hindering the successful implementation of the housing objectives in Ghana are:

(1) How to arrange financing of a sufficiently long term nature to enable both the country and the people to afford housing; (2) How to bring building costs down so that new houses are within the reach of the masses; and (3) There is no administrative body to co-ordinate the activities of the existing housing agencies and secondly, there is no agency responsible for the provision of low-rent public housing.

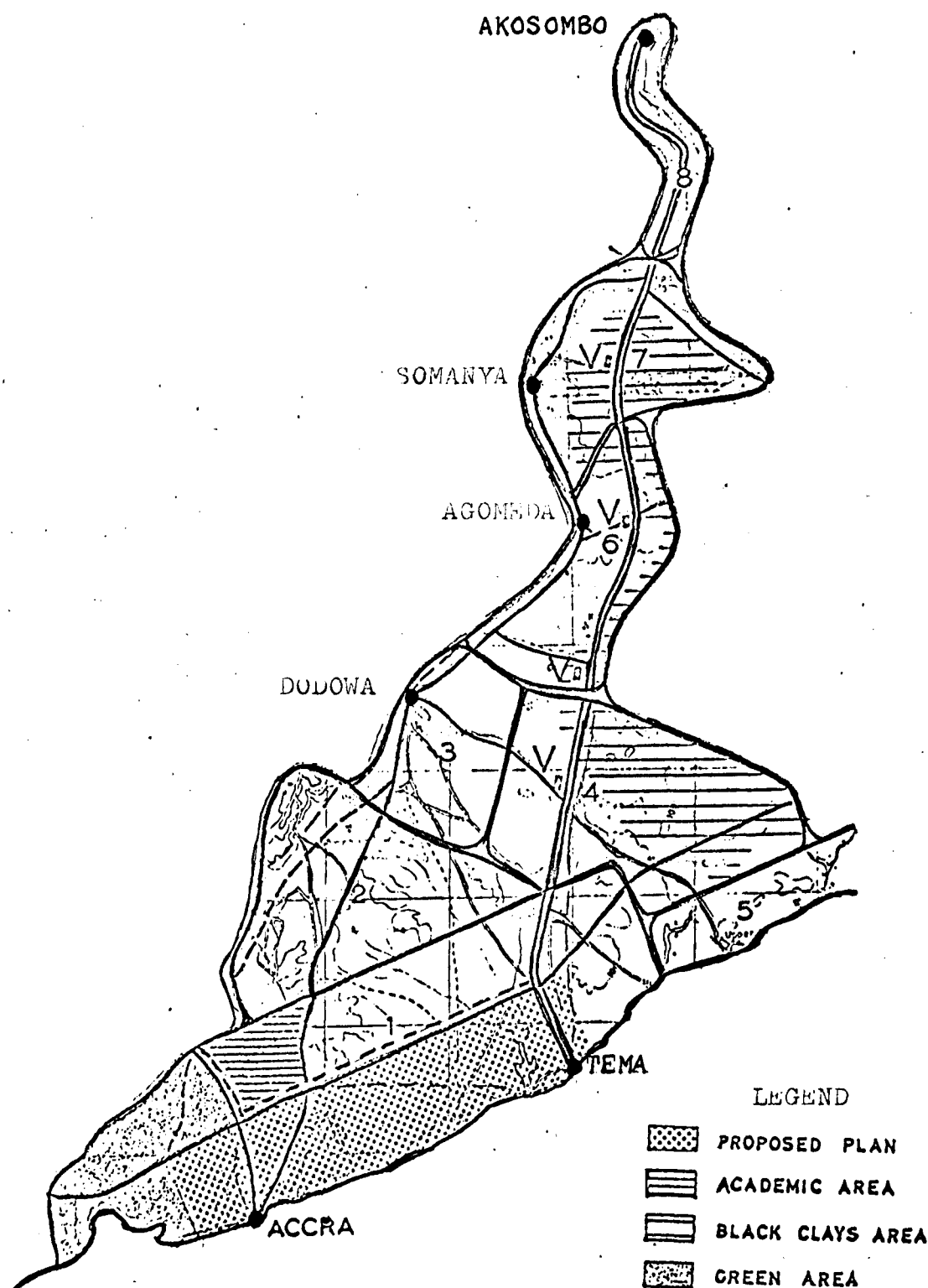
In Ghana, the Minister responsible for Town and Country planning has the ultimate responsibility for national, regional and local physical planning policy, the preparation and maintenance of a national plan and its implementation through the co-ordination of regional and local planning schemes. Regional plans must reflect government economic and social policy and must conform with the national physical plan.

II. ACCRA-TEMA-AKOSOMBO REGIONAL PLAN

The "Accra-Tema-Akosombo Regional Programme and Plan" was prepared by a planning consulting firm, the Doxiadis Associates, in August, 1960 for the government of Ghana. The plan is a comprehensive one, dealing with all aspects of the region, but only those aspects of the plan that are pertinent to the housing problem of the region, are examined here.⁷ Map IV, page 36, indicates the regional plan.

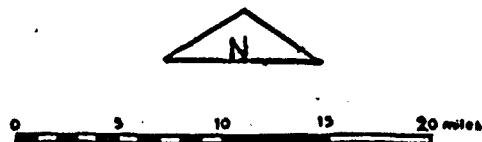
⁷Most of the discussion in this chapter is based on Doxiadis Associates Accra-Tema-Akosombo Regional Programme and Plan, 1960, Vol. 2.

ACCRA-TEMA-AKOSOMBO REGIONAL PLAN



MAP
IV

Source: Adapted from Accra-Tema-Akosombo Regional Programme and Plan. Dóxiadis Associates













The regional plan delimited three distinct geographic areas in the region. These areas are: (1) The southern group with Accra as the centre; (2) The central group with Dodowa as its centre; and (3) The northern group with more than one centre, namely Somanya, Odumasi, Kpong and Akuse. The various settlements towards the eastern part of the region are less important because of lack of adequate water for farming, the unsuitability of the land for market agriculture and lack of good roads. The Ghana Government's development proposals which relate to the immediate future of this region's economy are (1) The construction of the Akosombo dam which will be completed by 1966; (2) The construction of the large port of Tema, which is almost completed; (3) The industrial development of Tema; and (4) The construction of the Tema-Akosombo national highway. The likely consequences of the above will be the following developments: (1) The development of the Metropolitan area; (2) The development of industrial transport and other forms of activity in the Akosombo-Senchi Area; (3) The development of various activities of transport, business, handicrafts etc. along the Tema-Akosombo national highway; and (4) The improvement of the settlements lying between the old road of Dodowa and the new Tema-Akosombo highway. The above overall developments will probably focus in two basic nuclei areas. The first one is the Metropolitan Area and the second one is in the Akosombo dam area. There are three basic problem

areas of the region as a whole. These areas are, in order of complexity, the Accra-Tema Metropolitan Area; the dam area, and the big communication network of the region. The planning problems of the Metropolitan Area are due to the concentration of many and varied functions in this area. These functions are residential, industrial, a business-administrative centre, harbour zones and the internal transportation network. The Akosombo dam site is also a lake-port. Thus, the dam area is at the point of convergence of national highways of which the Tema-Senchi-Akosombo highway will be of importance in the region. Doxiadis Associates, the planning consultants for the region, agreed that the future of the area lying between the Accra-Tema Metropolitan Area and Volta Lake Area must be an urban centre with agriculture and stock-breeding as auxiliary activities. According to the Regional Plan, the villages in this area will be converted into handicraft and trading centres. At present this area has nothing to attract population there. The handicrafts will be encouraged to locate along the Tema-Senchi-Akosombo highway. The central area of the region was recommended by the planning consultants to be used for the development of stock-breeding and agriculture. A detailed plan was prepared for the Accra-Tema Metropolitan Area, while broad planning principles, as described above, were laid for the remaining areas of the region. Map V, page 39, indicates the various land uses in the region.

ACCRA-TEMA-AKOSOMBO REGIONAL LAND USE

LEGEND

-  Residence
-  Farming
-  Green Area
-  Academic Area
-  To be Studied
-  Industry and Port
-  Fishing
-  Grazing
-  Quarries
-  Communications, Commercial, Light Industry, Handicraft

AKOSOMBO

SOMANYA

AGOMEDA

DODOWA

TEMA

ACCRA

Boundary of Metropolitan Area

MAP
V

Source: Adapted from Accra-Tema-Akosombo Regional Programme and Plan. Doxiadis Associates.



0 5 10 15 20 miles

The Master Plan for the Metropolitan Area. The Accra-Tema Metropolitan Area occupies the southern section of the Accra-Tema-Akosombo Region, and lies along the coast. It lies between Sakumo Lagoon and Kpone. The width of the Metropolitan Area is about eight miles, and the length is about thirty miles. It, therefore, covers an area of approximately 240 square miles.

The Master Plan prepared by the Consultants has one major objective, that is to solve present day and future problems and the organization of the entire space of the Metropolitan Area in such a way as to provide the general framework for the solution of the present-day problems and at the same time ensure the normal development of the area in the future. There was a Master Plan prepared for the City of Accra in 1958. This Plan was incorporated in the 1960 Metropolitan Plan. The structure of the Metropolitan Area is based on three centres which will develop perpendicular to the coast. These centres are: the centre of Accra; that of Tema; and after several years, the intermediate centre.

The road network for the Accra-Tema Metropolitan Area is organized on a general grid. The road pattern in the Metropolitan Area is linked to the wider Volta region and the country as a whole. Three highways which are of great importance to the region are the highway from Accra to Kumasi, the highway from Tema to the Volta, and the Accra-

Tema section of the east west international highway. The proposed Ada-Takoradi freeway will be connected with three major existing roads of Accra, i.e. the Independence Avenue, the Kwame Nkrumah Avenue and the Weija Road. It was suggested that the present railway line in the Metropolitan Area should be adjusted in such a way as to come into line with the general idea of the composition of the main roads. The Doxiadis Associates suggested a route parallel to the central highway, which, with perpendicular sidings would help serve the transportation needs of the Metropolitan Area. The Consultants suggested that the overall communication network between the main points of the Region should be visualised as electrically-powered, provided the Volta River Project electricity reserve allows such installation.

The Accra-Tema-Akosombo Regional Plan was described generally and broadly in the previous section of this chapter. The remaining sections of the Chapter examine the economic development of the region as well as the regional community formation in the region. These two aspects of the general development of the region are very significant to the location of housing projects in the region.

III. ECONOMIC DEVELOPMENT

The economic development of the region, broadly, comprises the Volta River Project, the establishment of both primary and secondary industries, and commercial activities.

The Volta River Project. The Volta River development is the biggest single step that has been taken in the economic and industrial development of Ghana. In February, 1959, the Kaiser Re-assessment Report was submitted to the Ghana Government. The Report recommended Akosombo gorge where the Volta cuts through the Akwapim-Togo Range, as an excellent site for a dam and hydro-electric station, with the possibility of ancillary hydro-electric projects at Kpong and Bui in the future. In order to save capital investment the Report also recommended that an aluminium smelter should be built at Tema. These proposals were basically acceptable to the Ghana Government and planning proceeded along those lines. In May, 1961, the main contract for approximately 16,000,000 pounds was awarded to an Italian Consortium Impregilo.

This Volta Project has created many problems in its wake, which particularly affect the region under study. It was realized, at the beginning of the implementation of the Project, that arrangements would have to be made to house the thousands of workers who will flock to the site. The Government of Ghana, looking ahead, considered it advantageous to plan for a modern township with permanent facilities to accommodate the workers. At that time, Akosombo had only two houses (1960). The consultants, who were brought in to produce a Master Plan for this township, envisaged the evolution of a settled community at the dam site which might ultimately contain anything between thirty and forty thousand people.

The formation of the Volta Lake makes it necessary to resettle some eighty thousand people who live close to the Volta area which will be flooded. The resettlement programme involves the rebuilding of approximately six hundred villages into fifty-two new communities. The Government of Ghana has, as a matter of policy, decided that no one to be affected by the formation of the lake should be worse off as a result of the resettlement. It was, therefore, decided that the population from the flooded area should be resettled in well sited and well planned new settlements, and that they should be provided with a minimum type of housing so designed as to provide the nucleus of a larger house. This "core house" consists of concrete foundations, aluminium roofing for a three-roomed house but with only one room completed for each family. The family can, by its own labour, complete the house. This core house will be inconvenient to those with large families, especially before they complete the whole structure, and to those who may not be capable of completing the structure at all. The planned settlement includes farming lands, and improved system of farming. This agricultural policy is aimed at increasing the purchasing power of the resettled farmers. Two towns, Somanya and Senchi of the Accra-Tema-Akosombo Region, are included in the Resettlement Scheme.

Industrial Development. It is difficult to determine the degree of industrial development to be achieved within ten to twenty years because of lack of basic information. Doxiadis Associates in 1960, stated that the industrial projects by the Industrial Development Corporation and the private enterprises, and the 600 factories envisaged in the Second Development Plan (1959-64) show that the extent of the industrial development of the country would be great. According to the Seven-Year Development Plan (1963-70) the State will construct seventy-nine factories costing about one hundred million pounds. The number of the factories to be established in the private sector during the plan period is not yet known but as much as four hundred million pounds of new investment is expected to be made in this sector. It is estimated that about two-thirds of these development projects will locate in the Accra-Tema-Akosombo Region, and especially between Accra and Tema.

Tema is a rapidly expanding manufacturing centre. Its industries range from a petroleum refinery and a steel rolling plant to factories for soap, chocolate, paint, chemical and aluminium products. Valco, the United States States Consortium composed of Kaiser Aluminium and Reynolds Metals, is building its 175 million dollar aluminium smelter in Tema. The establishment of the large oil refinery in Tema provides the opportunity for the development of a plastics industry based on petroleum by-products. The steel plant

for the production of steel from scrap metal is expected to produce at the rate of 30,000 tons per annum by 1964.

Tables II and III, pages 45 and 46 respectively, indicate the industries already established and under consideration in Tema respectively.

TABLE II

INDUSTRIES ALREADY ESTABLISHED IN TEMA

Name	Product and Use	Acreage
U.A.C. of Ghana Ltd.	Assembly of Vehicles	10.84
Gaisie (W.A.) Ltd.	Suitcases and Mattresses	
May and Baker Ltd.	Warehouse for Drugs	1.55
I.C.I. (Export) Ltd.	Insecticides	4.1
Ghana Aluminium Products Ltd.	Aluminium Roofing Sheets	2.0
Ghana Pioneer Aluminium Factory Ltd.	Aluminium Utensils etc.	2.48
Sanco Consolidated Corp.	Metal Works	2.04
Mekoadze Fisheries	Cold Storage and Ice production	
Tema Stone Quarry Ltd.	Concrete works	2.78
Parkinson Howard Ltd.	Work shop	4.09
Presby. Printing Press	Printing Warehouse	3.97
Ghana Textile Manufacturing Co. Ltd.	Textile Manufacture	4.83

Swiss African Tr. Co.	Storage	1.40
A. Lang Ltd.	Builders Yard	3.10
Ghana Plant Hire Ltd.	Hiring of Plant	
Ghana Paint Corp.	Manufacture Paints	2.50
Comet Construction Co.	Furniture Manufacture	7.80
Ghana Boat Yards Corp.	Manufacture of boats	

Source: Twumasi, Industrial Location in Developing Countries. Accra. Thesis.

TABLE III

INDUSTRIES UNDER CONSIDERATION OR CONSTRUCTION
IN TEMA AT MID-1962

Name	Product and Use	Acreage
Gaisie (W.A.) Ltd.	Mattress Factory	2.49
Grand Tobacco Corp. Ltd.	Manufacture of Cigarettes	0.90
I.D.C. Industrial Estate	Textile Factory	84.29
Government Printing Dept.	Printing Press	1.14
Addotey Annang and Co.	Storage	13.80
Government Transport Dept.	Transport Depot	11.60
Central Medical Stores	Stores	6.90
Ghaip	Oil Refinery	321.75
Kwame Nkruma Steelworks Corporation	Steel Industry	100.00

Aluminium Cutlery

Coco Processing Plant

Food Complex

Tobacco Factory

Source: Ghana Seven-Year Development Plan

No new industries were allocated for establishment in Accra according to the Ghana Seven-Year Development Plan. The existing industries will be expanded to cope with home demand. Table IV, page 47, indicates industries which have already located in Accra.

TABLE IV

INDUSTRIES ALREADY ESTABLISHED IN ACCRA

Name of Industry
Sawmills
Furniture
Bricks and Tiles
Nails
Tyre Remoulding
Soap
Brewery

Soft Drinks

Fruit and Fish Canning

Edible Oil Refinery

Cigar and Cigarette manufacture

Source: Boateng, A Geography of Ghana.

A report issued by the Chief Town Planning Officer in Ghana in 1960 stated that it is not the intention of the Government of Ghana to promote industry in the area of the Tema-Kpong road. This area is presently practically uninhabited because of lack of water. It is, however, the Government's intention to irrigate the area for agricultural purposes. The report went further and sounded a note of caution that special attention is required in the Shai hills area, because the area is considered as an area of scenic beauty.

The Doxiadis Associates in their report, Accra-Tema-Akosombo Regional Programme and Plan, stated that the greater part of the "new" industries would be concentrated in the Accra-Tema Metropolitan Area because of special advantages this area has. In the first place, Tema has a deep-sea port and so most of the industries which will process imported raw materials will be located close to the port. Secondly, the large population of Accra and Tema would serve as a source of labour for the industries and

also as a market for the industrial products. Thirdly, the greater part of industrial investments under execution or study by the Industrial Development Corporation are at present concentrated in the Metropolitan Area. Finally, the climatic conditions in Accra-Tema are more favourable than that of either Kumasi or Takoradi. The transportation network planned for the Metropolitan Area will make the area more accessible to the various urban centres of Ghana. It was estimated by the Doxiadis Associates that at least two-thirds of the increase in the nation's industrial employment would take place between Accra and Tema. This means increase in industrial employment of about 15,000 in five years' time, 40,000 in ten years' time and perhaps 140,000 in twenty years' time.

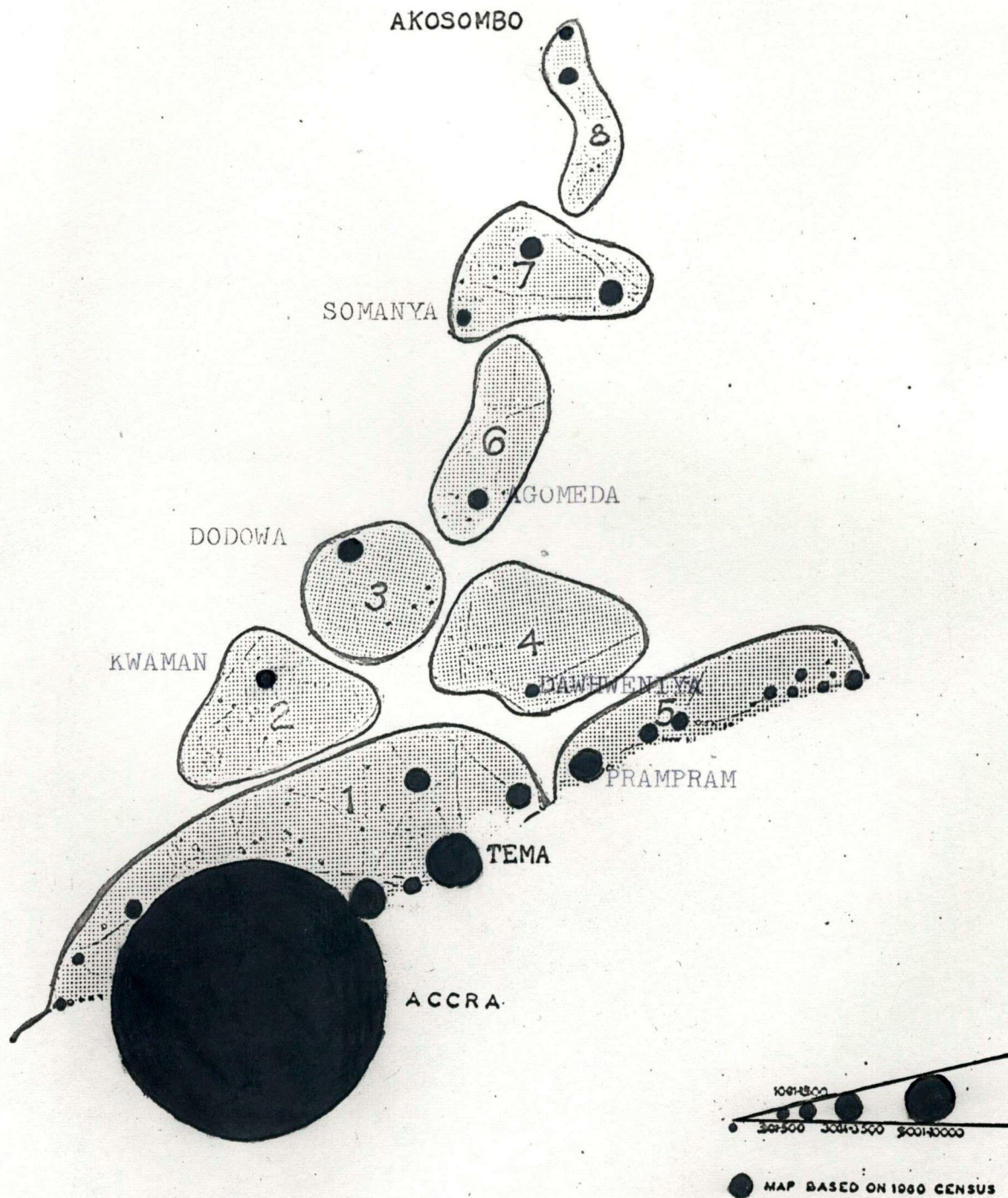
Concerning the distribution of industries in the Metropolitan Area, the consultants stated that it would be unsound to argue that Accra must remain solely an administrative centre, and that all industries must be concentrated in Tema because first, Accra has an industry which can form the foundation of future industrial development; second, there are also unemployed and under-employed labour forces in Accra, that could be utilized productively by new or expanded industries. This will make it unnecessary to move population from Accra to Tema. Therefore, industrial development in Accra is both possible and necessary.

IV. REGIONAL COMMUNITY FORMATION

The Accra-Tema-Akosombo Region is divided into eight community areas with the Accra-Tema Metropolitan Area as the main centre of the region. Map VI, page 51, indicates these eight community areas. The communities in the region were classified in a hierarchical order by function. Community No. 1 refers to Accra-Tema Metropolitan Area. This community constitutes Class A. Communities No. 2-6 with the villages of Kwaman, Dodowa, Dawhweniya, Prampram and Agomeda as their respective centres, constitute Class B. Community No. 7 with Somanya as its centre forms Class C. The area between Akosombo and Kpong constitutes Community number 8. The framework of this complex of communities is the Tema-Senchi highway.

The structure of the Metropolitan Area was based on three major centres which will develop perpendicularly to the coast: the centre of Accra; that of Tema; and the intermediate centre. In this way three important community centres will be formed. Each of these communities will have a width of about seven miles, which means that the maximum distance from the centre of each community will be about three and a half miles. Each of the three communities of the Metropolitan Area has special features of its own. Accra is the seat of administration, has a university and some industries, whilst Tema is a port and an industrial centre. These two cities at the extreme ends of the

ACCRA-TEMA-AKOSOMBO REGIONAL COMMUNITY GROUPING



MAP
VI

Source: Adapted from Accra-Tema-Akosombo Regional Programme and Plan. Doxiadis Associates



Metropolitan Area are linked together by the international highway which is parallel to the coast. Various places of work will develop along this important highway. The possible developments which will locate along this highway are light industry, warehouses, showrooms etc., which are highway oriented. The Metropolitan Area has been planned for a population of 471,460 people. The residential area extends from Accra to Tema and occupies the greater portion of the Metropolitan Area.

The development of the Metropolitan Area is planned, first of all as a continuation of the present Accra and Tema development from the sea to the main national Takoradi-Ada road, and afterwards within the intermediate area. The residential areas of the Metropolitan area are organized within three major areas which are: Accra area, the Central Area and Tema area. These three separate parts of the Metropolitan Area constitute community class IV, each of which will consist of a number of communities class V. The residential communities of all classes will be organized around their central parts which will comprise public and community buildings, shopping centres, markets, places of worship etc., all of which are necessary for the proper functioning of each community.

V. SUMMARY

Ghana Government's policy and objectives concerning the industrialization of Ghana are stated in the Ghana Seven-Year Development Plan (1963-70). It is the Government's policy to industrialize the country and mechanize agriculture within the next seven years. Industries will be located throughout the country but owing to special advantages that Accra-Tema-Akosombo Region has, it will have the highest concentration of industry. The economic development of the region under study is following the Government's general policy of industrialization.

The Doxiadis Associates have prepared a regional programme and plan for Accra-Tema-Akosombo Region, showing the various land uses proposed for the region. Industries will be located at Accra and Tema, and light industry and highway oriented commercial activities to be located on the section of Takoradi-Ada highway which passes through the Metropolitan Area. Doxiadis Associates divided the A.T.A. region into eight communities. No reasons were given to explain why the region was so divided. The only reason given concerned the division of the Metropolitan Area into three sub-communities. The planning consultants, gave broad ideas about the land use of the region as a whole, and then made a detailed study of and issued a detailed Plan for the Metropolitan Area.

The examination of the housing agencies in Ghana gave the impression that there is no organized building industry capable of supplying the number of housing units required to cope with the degree of urbanization and population growth in the country and particularly in the A.T.A. Region. There is one housing agency, namely, the Ghana Housing Corporation which is charged with the responsibility of providing housing throughout the country. The greatest drawback to the provision of more houses in Ghana, and especially in the region under study, is lack of funds to finance the construction of houses and to arrange for long term payment of the cost of housing by the people. There is need for an agency to co-ordinate the activities of the three agencies in the field of housing.

CHAPTER III

THE HOUSING SHORTAGE IN THE ACCRA-TEMA-AKOSOMBO REGION

Rapid population growth underlies the housing shortage which has become a major problem in the Accra-Tema-Akosombo Region. The influx of people into this region is the direct result of the economic development undertaken in this area. Despite the increased attention which has been given to housing, the situation has not improved in many urban areas of the region. The housing problem is no longer a local one, but both national and regional. It is clear that mere provision of shelter for the people who are crowded in urban areas will not lead to a permanent solution. A comprehensive regional approach to the problem of housing shortage, can check the current population movement towards overgrown and overcrowded urban areas, and provide for a more balanced economic and social life within the region. The housing shortage as a regional problem has been aggravated by lack of co-ordination between the location of industries and housing. Housing must be considered not only as a problem which must be solved locally, but as a national and a regional problem because there are evidences that new construction for low-income groups has encouraged a larger flow of migrants and

thus diminished the slum population not at all.¹ The problem of the housing shortage could be analysed at the national level but the detailed planning and solution should be regionally oriented and implemented, because national figures conceal regional variations but the "local variations do not vary greatly from the impression given by the regional figures."² The provision of housing should not be concentrated in the urban areas alone, this would mean a failure to safeguard the interest and welfare of the smaller communities in the region. Furthermore, the neglect of the rural areas will promote and accelerate the population movement from the rural to the urban areas.

Housing is part of Ghana's economic development which has been regionally planned. Therefore, housing too should be regionally planned. To solve the housing shortage properly, "we must plan on a regional basis."³

It appears likely that the present conditions of overcrowding, discomfort and inefficiency will be perpetuated on an ever larger scale, unless there is more systematic regional development, unless land use is planned for areas much broader than the present cities, and unless the residential

¹U.N. Report on the World Social Situation. (New York: 1957), p. 133.

²Stanley Alderson, Housing (Penguin Special, 1962), p. 13.

³Eric Beecroft, Implications for Housing and Planning Programmes (An Address given at the University of Toronto Round-Table, On the Impact of Human Well-Being of a Rapidly Evolving Industrialization: University of Toronto Quarterly, Jan. 1957).

areas of the cities are co-ordinated with their economic functions and with the expansion of water and transportation systems, schools, hospitals and many other urban services and facilities.⁴

The causes and the rate of population growth in the region are examined in this Chapter, and the housing needs of the region based on the population growth and forecast are determined in order to indicate the housing deficit. The social, psychological and economic implications of the housing deficit are also examined. It is considered that a clear knowledge of the magnitude and the ramifications of the housing problem would lend support to the notion that the solution to the housing problem should be based on a comprehensive regional planning approach.

I. POPULATION GROWTH IN THE REGION

Ghana experienced a population growth of 63 per cent between 1948 and 1960. This growth was due to $2\frac{1}{2}$ per cent annual natural increase and one-half per cent annual net immigration. The urban areas, with their employment, education and other social facilities, have increased their population significantly, and in most cases at the expense of the rural areas. A report issued by the Economic Commission for Africa in 1964 stated that most of the towns in Ghana doubled their population. Accra nearly tripled its

⁴U.N. Report on The World Social Situation (New York: 1957), p. 133.

population between 1948 and 1960.⁵ It has been forecast that most of the towns will have one and a half times their present population by 1970. This general trend of population growth is akin to that of the Accra-Tema-Akosombo Region. The 1960 Population Census data for the region indicated population increase for every town. The data were collected before the population movement which began in 1962. The main causes of the rapid population growth are first, migration into the A.T.A. region, especially the employment centres and second, the natural growth which has been increased by more births and less death, that is, the birth rate exceeding the death rate because of the availability of good health services, since 1957. The population growth in the region could be described as "population implosion." People have been pouring into the region much faster than the emerging industries can absorb them. This has increased the number of unemployed people residing in the urban areas. In 1960, the labour force for Accra Capital District was 182,093 but 24,257 were unemployed.

The population data from the Ghana 1960 Population census were interpreted with great caution because:

1. The census was conducted before the massive population drift to the region began in 1962.

⁵Economic Commission for Africa, The Role of Physical Planning and Urbanization Policies in Development of Ghana (October 15-22, 1964), p. 2.

2. There were no population data (1948 census) for some villages. The calculation of the population increase for these villages was, therefore, unreliable. The data for Accra Capital District were adequate and very reliable. The data for other parts of the region, excluding Accra Capital District, were derived from calculating the required data for each town or village based on the information in the 1960 Ghana Population Census. The population growth was examined under (1) Accra city; (2) Accra Capital District, and (3) Other areas of the region.

(1) Accra City. The population of Accra has increased since 1948. In 1948, about 4 per cent of the total population of Ghana lived in Accra. The population of Accra has increased at a greater rate than the national increase.

POPULATION GROWTH

	<u>1931</u>	<u>1948</u>	<u>1957</u>	<u>1960</u>
Ghana	163,500	4,118,450	4,800,000	6,726,815
Accra	60,700	133,771	208,300	337,828

Source: 1960 Ghana Population Census

Growth of population by natural increase equaled seventeen persons per thousand for Ghana, and 12.5 for Accra. Gross migration into Accra was at the rate of about eight thousand persons a year (1958) of whom approximately three thousand settled in the city. The Accra population increased

by 204,057 people, which indicated an average annual increase of 12.1 per cent between 1948 and 1960. Migration was the major factor which brought about this population increase. Most of the migrants were adults seeking employment or better conditions for a fuller life which rural communities failed to offer. Ghana social organization hinders elderly people from leaving their villages and towns. On the other hand, most of the migrants will return to their former villages and towns when they grow old. There were 207,130 males and 181,266 females residing within the Accra City Council area in 1960.

(2) The Accra Capital District. The Accra Capital District which included the City of Accra, had a population of 491,817 (1960) of which 261,547 were males and 230,270 were females. Of the total population for this area, 298,209 were over fifteen years of age. The 1948 Census data for this area were not available, therefore, it was impossible to calculate the population increase between 1948 and 1960 for the Accra Capital District. On 20th March, 1965 the population of Accra Capital District is expected to be between 650,400 and 708,100.⁶ By 1980, the present population of 491,817 is expected to be between 1,495,000 and 2,102,000 which represented the minimum and maximum projections respectively. The medium projection, which is

⁶Ghana Census Office Forecast. This was sent to the author on request.

1,775,000 people (1980), is used throughout the thesis. This population figure indicates an increase of 1,283,183 people between 1960 and 1980. These population projections, which were calculated by the Ghana Census Office, were based on a natural population increase rate of 2.2 per cent per annum, and net immigration rate of 4.4 per cent per annum. The net immigration rate was based on an estimated net immigration for Accra for the period between 1958 and 1960. These rates were assumed to be constant throughout 1960-1980. Using the same figures and assumptions, the population for the region was estimated at 1,855,200 in 1980. Migration to the Accra-Tema-Akosombo Region was mostly by people coming from outside the region. The number of people who moved to Accra M.C. and Tema from other parts of A.T.A. Region, that is, intra-regional migration, was 14,072 in 1960. Those who migrated into the region from other regions of Ghana, in the same year, numbered 131,568. The total number of people born outside the region, including those who have come from other parts of Africa and from other countries outside Africa, was 215,039 in 1960. This figure represented about 50 per cent of the population of the A.T.A. Region, which was 514,000 in 1960. The great influx of people from other parts of Africa was facilitated by the almost unrestricted entry into Ghana.

The 1960 population census data indicated that 23 per cent and 13 per cent of all the people in Ghana had migrated

from one locality to another and from one region to another respectively. Of the migrants, 50 per cent were between the ages of 15 and 45. The economic, educational and social developments which have taken place since 1948 have made the people more mobile. The main streams of migration within Ghana have been from the less developed to the more developed areas, thus creating housing and socio-economic problems in the urban areas.

(3) Other areas of the region. The estimation of the population for the "other areas of the region," which are mainly the areas other than the Accra Capital District, was based on data from the 1960 Population Census. The total population of this area was estimated at 22,102 people (1960). In 1948, the population for the same area was 14,321, which indicated a population increase of 7,781 between 1948 and 1960. The population forecast for this area in 1980 is 80,200 which means that the present population will be almost quadrupled by 1980. The population of Akosombo was 58 (1960) but Akosombo by 1963 had a population of some "three thousand workers and their families,"⁷ who lived and worked in two communities which form the nuclei of the Akosombo township. This indicates the problem of estimating and forecasting population from a census publication dated 1960, the year after which the

⁷Volta River Authority, The Volta River. (Accra: 1963), p. 17.

population movement into the region began. The 1960 Census data indicated an increase of population in each town and village, but since the implementation of the Volta Project and the opening of the Tema harbour, the people in the region have re-distributed themselves, resulting in rural areas losing some of their population to the urban areas.

The rapid population growth in the region has direct impact on land. It has increased the value of land, created mixed uses of land, and squatter of various types. The social service and community facilities which were provided have become inadequate, because more people than originally planned for, are using them.

It is recognized in the Seven Year Plan that the rapid inflow of rural people into the cities has given rise to increased overcrowding of the already obsolete central housing areas as well as to sub-standard squatter and village development outside the urban boundaries. In most of these areas there are inadequate services or no services at all.⁸

Therefore, not only housing shortage and overcrowding must be attributed to the sudden increase of people, but also the inadequacy of urban services which have already been provided and, the absence of urban services in some residential areas located outside Accra City.

The population inflow has necessitated the formulation of policy by the Ghana Government in relation to the

⁸Economic Commission for Africa, The Role of Physical Planning and Urbanization Policies in Development of Ghana, (October 15-22), p. 5.

population problem.

In view of the above problems it is the policy of the Ghana Government, during this Seven Year Plan period to distribute new investment projects - industry, agriculture, and infrastructure throughout the country, taking into consideration equal developments of all the regions. These new projects will seek to create employment opportunities for all the people and also provide social facilities and amenities in both urban and rural areas and thus reduce the constant migration into the towns. It is expected that through the broad distribution of industries coupled with equal allocation of such amenities as education, transport, health, electricity and water supply, the nation's population will be less fluid and that migration into the towns will be reduced.⁹

The unprecedented population growth in the Accra-Tema-Akosombo Region, with its concomitant social, economic, moral and unemployment problems, has exposed the importance of focusing on the housing problem, not merely as a problem of walls and roofs but as a problem of people requiring a comprehensive regional approach.

II. HOUSING NEEDS

Demographic and socio-economic factors determine the housing needs of a people. The housing needs of a given population are determined primarily, not by its growth but by its differentiation into family and household units. Functions of housing lead to fundamental distinction between the need for shelter and the need for privacy. Shelter gives protection against and safety from the dangers of the

⁹Ibid., p. 4.

outside world and also provides for bodily comforts. Privacy, as one of the comforts of mind, belongs to the more subtle of human needs, which housing is called upon to serve. The housing problem which is the result of the housing shortage is, therefore, lack of shelter and privacy. People are not content with a roof over their heads, they demand a separate roof of their own. Each family or household should have a separate house.

To estimate the housing needs of a population means to find out the number and the type of dwellings required. The type of houses needed depends upon socio-economic factors and government housing policy. Houses are built for people to live in, and housing needs vary according to the number, age, sex and marital conditions of the people, and also their social status. The housing needs of newly married couples with children to come, differ from those of middle-aged childless couples or of couples with six children. The size of a house should suit the need of the household for which it is provided. Traditionally, houses in Ghana, were of the compound type of "horizontal apartment" which was the outcome of the traditional extended family system. This type of house reflected the relatively simpler mode of living of the rural citizens, and could not be promoted in the new urban environment. It is very significant to observe the manner in which people organize the space they have at their disposal. In Ghana, the traditional extended

family is gradually being replaced by the nuclear family, especially in the urban areas of the country. Housing should reflect the changing culture and the social system of Ghana, in order to provide ample opportunity for the "new family" to be together and to grow into a new healthy social unit. The wide range of socio-economic differences among the inhabitants of the region has influenced their housing needs.

There are three basic income groups in the region, namely the low-income, middle-income and high-income groups. Bearing in mind, the above broad categories of income groups, one family house was considered capable to meet the needs of a household. This one family house could be detached or semi-detached.

The achievement of "one house per household" will automatically bring also an improvement of the rooms-per-household figures.¹⁰

One house for a household will best serve the low-income group and the new nuclear family, because it provides the necessary privacy, thereby offering opportunity for parents and their children to enjoy each other's company and to strengthen the bonds between them. The migrant workers of the urban areas in the A.T.A. Region came from various parts of Ghana, therefore, they wanted to guard their way of life as much as they could. The one family house,

¹⁰United Nations Technical Assistance Programme, Housing in Ghana, (New York: 1957), p. 23.

depending on the number of rooms in the house, was considered to be suitable for the various income groups. This decision, however, did not preclude the consideration of other types of dwellings for the people in the region, according to their income. Blocks of apartments of varying heights could be constructed to house the middle and high income groups. There are many disadvantages, but "higher income groups are in general much more suited to living in apartment houses."¹¹

The breakdown of the housing needs in terms of various types of one-family house and apartment houses of various types were not examined in this study. The urban housing problem in Ghana increases with the passage of time. There were sixty thousand houses needed urgently in 1964, in all towns with more than five thousand inhabitants to cater for the increase in population. To achieve the above target, between eight and nine thousand houses must be constructed annually. The population of the rural areas is expected to increase by 1.2 million by 1970. This increase will demand the construction of one hundred and seventy thousand more housing units.

Having broadly and briefly analysed the housing needs of Ghana, the consideration of the housing needs of the region under study follows. It is considered that despite housing shortage and overcrowding in the region, the

¹¹Doxiadis Associates, Tema, (Accra), p. 23.

inhabitants of the region appreciate, desire and prefer houses which have all the necessities of life to substandard housing which could be cheaply and quickly built, because it simply means their perpetual stay in slum areas. Secondly, temporary houses have become permanent features of the urban scene.

Accra. In 1948, Accra had about 9,700 houses which were occupied by 22,260 families. This gave an average occupancy of 2.71 families or 13.6 persons per house.¹² A survey which was conducted in 1953, indicated that this figure has not diminished. This survey indicated further that more than ten people, which often comprised more than one family, occupied one inadequately ventilated room. The 1952 and 1953 check surveys disclosed that the proportion of households occupying one room was equivalent to about 55 per cent and 75 per cent respectively and the overall increase of population as against houses completed in the past five years suggested that the situation was worsening. In 1960, Accra population was 337,828, but the available houses, not considering the quality of the houses, were 18,239. Though the number of houses has nearly doubled since 1948, the population too has more than doubled. Therefore, the number of persons per house was 18.4 in 1960 which indicated 30 per

¹²United Nations, op. cit., p. 47.

cent increase in house crowding. The present housing requirements of the Accra-Tema Metropolitan Area are actually confined to Accra because Tema is a new city under development. Ussher Town with a population of 29,000 (1960) requires 4,900 new houses. Another category groups the houses of the third rate housing districts where amelioration becomes necessary.

Such districts are those of Nima, Labadi and certain districts of the Central Area (of Accra). These districts are less densely populated than the slum districts . . . but they have no roads, community buildings, open and green spaces. In these districts there live about 67,000 people. To improve their living conditions a number of houses have to be cleared to lower the existing density and to provide the space required for the construction of roads, buildings, squares etc., while the remaining houses have to be furnished with the necessary facilities and public amenities. It is estimated that 25 per cent of the residents will need new houses as a result of the thinning of the population which have to be affected, which means that 3,100 new houses will be required while living conditions must be improved in another 8,000 houses.¹³

In the Accra Capital District area, 53.6 per cent of the people lived in a house of about nine people, 26.3 per cent of the people in the District shared a house with nineteen other people and 20.1 per cent of the people shared a house with over twenty other people.¹⁴

¹³Doxiadis Associates, Accra-Tema-Akosombo Regional Programme and Plan. (Accra: Government Printer, 1960), Vol. I, p. 177.

¹⁴Source: A Report Issued by United Nations Regional Planning Mission to Ghana in 1962.

The 1960 Ghana population census revealed that Accra Municipal Council area has 388,396 people and 22,663 houses, which meant that 17.1 persons occupied a house. In Tema Development Corporation area, there were, in 1960, 27,127 people to share 3,970 houses; that is 6.8 persons per house. In the "other areas" of the region, there were 22,102 people who have to be content with 2,171 houses, that is 10.1 persons per house. There were 437,628 (1960) houses in the Accra-Tema-Akosombo Region for a population of about 514,000 people. Without statistical data concerning the quality of housing in the region, it is difficult to estimate the number of houses which must be either demolished or rehabilitated. Only general considerations were attempted. It has been assumed that 3 per cent of the houses must be replaced annually. Slum areas are found in the rural as well as in the urban areas. Houses in the rural areas are mostly substandard; without plumbing, kitchen, piped water and toilet facilities, coupled with low structural soundness. In the urban areas slums occur mostly in the old established residential areas which were built according to the traditional method. Slums in the rural areas could be eliminated essentially by rehabilitation, while redevelopment is the cure for the urban slums. Table V, page 71, indicates the number of families and non-family households estimated for 1980.

TABLE V

ESTIMATED POPULATION NUMBER OF FAMILIES AND
NUMBER OF NON FAMILY HOUSEHOLDS IN ACCRA-
TEMA-AKOSOMBO REGION (1980)

	a.	b.	c.	d.
Year	Total Population	Population in Families	Number of Families	Number of Non-family Households
1960	514,000	447,180	74,530	16,705
1980	1,855,200	1,614,024	269,004	60,294

a. Source: Ghana Population Census, 1960

b. Estimated at 87 per cent of the total population

c. Estimated at 6 persons per family

d. Estimated at 25 per cent of the non-family
population

Total estimated households	91,235	(1960)
Houses available	37,804	(1960)
Houses to be replaced by 1980 ¹⁵	22,683	
Houses available in 1980	15,121	

The objective was one house for a household. The number of rooms in a house, for each household, should be based on the principle of one room to a person, depending on the age and sex composition of the household. This principle of one

¹⁵ Assuming an average life of 33 years for the houses in the Region, at least 3 per cent of the houses must be replaced annually.

room per person, excludes other necessary "rooms" in a house, for example washroom, kitchen and living rooms. It must be pointed out that not every household would need a separate house.

Total estimated household	329,298	(1980)
Estimated houses needed	329,298	(1980)
1960 houses available for occupancy in 1980	15,121	
Total additional houses needed	314,177	

Since households and housing units were by definition equal to one another the estimated households in essence represented the number of housing units which would be occupied. A change in the number of households would reflect on the number of housing units required. It was not considered that new houses would not be constructed until 1980. The above figure only indicated the 1960 situation projected to 1980. Rural and urban housing problems must be solved separately but simultaneously because, in urban areas more houses must be provided; in the villages it must be mainly improved houses, but new houses will be provided to house increased population. The estimation for the number of houses needed by 1980 was based on a normal situation, however, there are several important social factors not capable of statistical interpretation, all of which would tend to increase the number of houses

needed in the region.

III. HOUSING SUPPLY AND DEMAND

Supply. The number of housing units available for occupancy in 1960 was estimated at 37,804 of which 3 per cent must be replaced annually. The average life of a house in the region was estimated at thirty-three years, though the range was between twenty years as the lowest and eighty or more years as the highest. The greater proportion of the old houses has an average life of about thirty years. The Ghana Government, according to the Seven-Year Plan earmarked forty-three million pounds for housing, to be financed equally by public and private builders. There was a proposal to construct between eight and nine thousand houses annually in the urban areas of Ghana; "about half of the number will be built in Accra-Tema Metropolitan Area."¹⁶ About 40 per cent of the cheaper housing which will be built has been earmarked for the low-income group; and about 60 per cent will go to the upper and middle income groups.

In 1957, Accra added to its housing stock, eight hundred and fifty-one houses built by private enterprise, three hundred and nine by the Ghana Housing Corporation and six by the (then) Public Works Department. These housing

¹⁶Economic Commission for Africa, The Role of Physical Planning and Urbanization Policies in Development of Ghana, (October 15-22, 1964), p. 19.

units fell short of the total number of housing units needed for the people in 1960. Since 1960, the Ghana Housing Corporation and private house builders have been active in building more houses in Accra. In Tema, a new community, namely Tema Community No. 11 is under construction.

Private house builders, Ghana Housing Corporation and the First Ghana Building Society were engaged in providing more and decent housing in the region. There was, however, no agency in 1964 which was "responsible for the provision of low-rent public housing."¹⁷ Houses for rent were provided by Government and private house builders but houses for home ownership were built by government alone, except those who built their own houses either by contract or by their own hands. No attempt was made to calculate the annual supply of houses from 1960-1964, because of lack of statistical data. However, at the national level, the combined production of all housing agencies was between one and two thousand houses. A new housing scheme has been planned for Ghana.

Mr. F.E. Tachie Menson, Chairman of the Ghana Housing Corporation, yesterday launched the Corporation's Group Housing Scheme in Accra. Under the Scheme, workers earning between 500 and 1500 pounds a year, would be encouraged to own houses. The purchaser will be required to deposit one-third of the total cost of the house and pay the balance over a period of ten years. There are five types of house.¹⁸

¹⁷Ibid.

¹⁸Daily Graphic, Friday, August 21, 1964, p. 1.

Demand. The demand for housing in the region has been altered by population growth and a rise in income, which has enabled between 10 to 15 per cent of the people to buy their own houses. Another important factor was the changing age composition of the population in the region due to migration of adult and young men and women, which has increased the demand for rental housing. Assuming that most of the migrants would prefer to return to their towns and villages at old age, and hence no dire need to build or buy a house in the A.T.A. Region, there would be an increase in demand for rental housing by 1980. The anticipated rise in income between 1970 and 1980, and in the age of the people due to immigration of adults, would result in an increase in demand for single family housing.

The ability of the individual or the family to pay for the cost of a house constitutes the demand for housing. This "ability to pay" factor influences the quantity and the quality of houses that must be provided. The base of the ability to pay is the economic character of the region. The types of industry and kinds of occupation which existed determine the level of income of the population of which the household is the most important unit. It was necessary to categorize the adult population, who need housing according to their financial means or ability to pay. The people were broadly classified into four groups.

1. Those who can afford to build their own houses, depending upon availability of suitable site, capital to finance the construction, long-term mortgage loans and an established building industry. The people in this category earned not less than eight hundred pounds annually, and they constituted 10 per cent of the employed people.

2. Those who could afford to build their own houses but could not pay for a house under a hire-purchase contract. This group of people could pay an economic rent and even buy or build their own houses if payment could be spread between twenty-five and thirty years. People in this category earned not less than 200 pounds annually, and constituted 15 per cent of the employed people.

3. Those who earned not enough to pay for a house but who could, especially in the rural areas, build their own houses with their hands. These people, however, need building materials, and Ghana's Roof Loan Scheme was of great help to them. They earned not more than two hundred pounds a year, and constituted 35 per cent of the working population.

4. Those who required subsidies. A household must earn not less than two hundred pounds per annum, to be capable of paying an economic rent. Households earning below two hundred pounds annually need subsidies of some kind in order to live in a decent modern house. This fourth group constituted 30 per cent of the working population.

The primary cause of the continued existence and use of unsatisfactory houses is that the occupying families or households cannot afford better accommodation, and furthermore, there are no suitable accommodations for those who can afford better housing.

IV. SOCIO-ECONOMIC ASPECTS OF THE HOUSING SHORTAGE IN THE REGION

The housing shortage has necessitated low-income persons to live in structures made of such materials as mud, old boards, housing units which are dilapidated and lack basic facilities such as piped water and sanitary services. It has been recognized that improved housing has more positive implications for economic development, because it indicates that progress could be achieved within the framework of the existing economic order. Adequate housing attaches the people to the existing social order, and makes them, instead of breeders of discontent, breeders of enterprise, management, technical and professional skills. Housing, in relation to social and economic development, is thus part of the transition from a traditional to a modern society. A sound building industry is needed for provision of better low-cost housing. The building industry by providing more houses to meet the housing shortage will assume the role as a breeder of skills and a developer of manpower and will offer opportunities for training and

employment which will serve as an important link in the transition from traditional forms of production to organization, precision and discipline of modern industry. Often construction is among the first industries to introduce workmen to comparatively well-paid jobs, and the chance to raise their level of living. In this respect, it strengthens both the economy and the society. Sub-standard housing areas in the region have a number of obvious disadvantages. They endanger health and the well-being of people. They violate building codes, cause the value of real property of the surrounding areas to drop. Slums promote the exodus of wealthier citizens from such areas. Poor housing has its worst effects on social conditions of their occupants.

The strain of living under such conditions, often aggravated by poverty, can lead to a fatalistic and dreary attitude towards life. This attitude is quite unable to cope with the conflicts and tensions which are inseparable from partly-shared and overcrowded accommodation.¹⁹

Broadly speaking, the results of the housing shortage, overcrowding and substandard housing, include unsatisfactory family life, delinquency, reduced productivity and, therefore, earning capacity, increased costs to the community for welfare and health services, and a general degeneration of community attitudes. Overcrowding has increased the incidence of contagious diseases, while dampness, absence of sun,

¹⁹Stanley H. Pickett, Pamphlet No. 1 - Urban Renewal (Community Planning Association of Canada, Ottawa: 1958).

disrepair, poor water, decay, lack of privacy and excessive rents are other factors contributing to deterioration of health, morale and safety. The precise effects of poor housing on family life and health cannot be measured with mathematical accuracy. Location and the type of housing greatly affect or entirely give shape to mental outlook, moral responsibility, health, attitude towards life, and the psychology of the inhabitants of the area. There are also demoralizing effects of living in poor housing, and losses in human and financial resources to the community. There existed a vicious circle of handicaps. Those people who are socially and financially the least capable of dealing with the hard realities and changing demands of a modern, increasing urban and industrial society, live under physical circumstances which give them the least opportunity to learn to deal with these problems. The more rapidly a society changes, the more these unfortunate families of low-income group fall behind, and the less is their chance to catch up.

Although housing conditions are not the only factor involved in the plight of the low-income group and migrants in the region, experience has shown that when a family or an individual is given the opportunity to live in a decent house, his social and community attitudes improve markedly. Employment patterns, in a community with good housing, tend to become more stable, incomes rise, and apathy changes into

a realization that effort and hard work could result in improved circumstances. Dependence on the community is frequently eliminated relatively shortly after the physical environment has been improved and the families involved changed from a public liability to an asset to society.

Good housing is one of the stimuli to effective work. A progressive region like the Accra-Tema-Akosombo Region could not afford to have a part of its working force struggling against the physical and moral frictions of daily living in poor housing.

V. SUMMARY

The housing problem in the A.T.A. region is mainly the result of population increase; the population has more than doubled between 1948 and 1960. The population estimated for the region in 1980 is 1,855,200. The number of houses needed to house this population is 329,298, on the assumption that there will be a house for a household. The supply of housing was found to depend on availability of funds, government housing policy and the demand for housing in the region. There are four classes of workers in the region in terms of their demand for housing. Only 30 per cent of the workers needed subsidies to enable them to live in a comfortable house. Recent housing statistics quoted the cost of a house with two bedrooms at 1,250 pounds. A single family house was found to be desired by most of the people in

the region, though apartment houses were also considered adequate for the higher-income group workers.

The provision of more and better housing, at appropriate locations, is considered as both social and economic development. The need for better housing is universal in the region. Active desire for better housing is itself an expression of social and political development. Achievement in better housing will have profound effects on the social organization and political attitudes which are carriers of economic development.

It was considered very important that each household should have its own roof, because each household organizes its space in relation to the planning of its time, budget and socio-economic status. No two households are identical in their way of life and needs. Both the rural and the urban dweller need better housing. The impact of the housing shortage has been experienced in both the rural and urban areas of the region, therefore, the solution to the housing problem in the urban areas alone would not lessen the situation in the region. Generally, the attack on housing problems in the region could be divided into three major types:

1. The production of new housing at appropriate locations.
2. The prevention of deterioration of dwellings and their environment, thereby forestalling

the formation of additional blighted and slum areas.

3. The rehabilitation of existing substandard housing if salvage is economically feasible.

These various attacks on the housing problem should be carried out simultaneously and in both the rural and urban places of the region. Though the special housing need for the "senior citizens" of the region does not constitute a special problem at present, there is no reason to believe that this tendency will continue. With the rate of migration, the gradual breaking up of the extended family, and the formation of the nuclear family, will in the near future, create senior citizens' housing problems, which will be of different aspects for the present housing problem. It is, therefore, necessary that a policy concerning the housing needs of the senior citizens be formulated now to guide the present solution to the housing shortage problem. Housing for the aged should not set them apart from the community but rather, make them a part of it; giving them an opportunity to contact friends, relatives and perhaps do baby sitting. Variety in housing accommodation should be provided for the aged, when their need arises. The senior citizens should be encouraged to live in a normal way in houses which suit their particular need, thus avoiding disruption of their living habits. The aged should be helped to avoid feeling isolated and neglected in a changed

society. A constant eye should be kept on the need for housing for the aged, so that housing is provided at the appropriate time. The speed of population growth and the high rate of urbanization have given added urgency for bold action for better housing to improve standards of living, the way of life, the physical, mental and social health of the people.

It has been stressed here that provision of houses alone does not solve the complex housing problem. There are many ramifications to the housing problem, namely health, the welfare of the people; the creation of the kind of social milieu which strengthens family life, enhances aspiration, reduces the causes of mental breakdown and child neglect, and anti-social behaviour. The solution to this complex housing problem in the A.T.A. region should be comprehensively planned on a regional basis.

CHAPTER IV

THE CONCEPT OF A COMPREHENSIVE REGIONAL PLANNING APPROACH TO THE LOCATION OF HOUSING PROJECTS

Little has been written concerning the concept of a comprehensive regional planning approach to the location of housing projects in both the developed and developing countries. Most planning authorities and housing agencies are invariably concerned with the microaspect of location of housing, and as such are concerned with the location of housing within their limited areal jurisdiction. In view of the scarcity of information, it is the purpose of this chapter, first to examine briefly the bases of the concept of a comprehensive regional planning approach to the location of large-scale housing projects, and second, how this concept has been applied in the Damodar Valley of India, so as to throw light on the value of this concept.

I. THE BASES OF THE CONCEPT OF A COMPREHENSIVE REGIONAL PLANNING APPROACH TO LOCATION OF HOUSING PROJECT

The concept of a comprehensive regional planning approach to the location of large-scale housing projects is based upon the following premises.

The need for housing is varied and complex. The problem of housing shortage extends beyond the boundaries

of any one particular locale. Houses are provided for people who generally make rational choices as to where they want to live and work. A rational choice of place of residence is based on multitudinous factors, but the most important ones are opportunities for continued employment, availability of educational facilities for children, and availability of recreational and other social and cultural facilities. The locations of these activities are now planned on a regional basis, for example, location of industries, parks, regional universities and transportation. But the locations of housing projects have largely been thought of as a matter of local importance. This difference of a planning approach to two complementary facets of economic and social developments, partly explains the cause of the housing shortage in urban areas.

What is lacking is a comprehensive regional planning approach to the location of large-scale housing projects to complement the comprehensive regional planning approach to the location of economic activities.

Finding the right location for the project is essential to a successful housing enterprise, and the establishment of a lasting settlement. Actual location must be distinguished from rational location, but rational location is a guide to the selection of actual location. Actual location for a housing project is the concern of a locality, but rational location should be determined by a

comprehensive regional planning approach; for the question of the best or rational location for a housing project is far more critical and important than the determination of the actual site. The location of a large-scale housing project should be studied in the broadest possible space, that is, the region, so that planning ahead can be done not only in physical terms but also in terms of long-range economic programmes. The ramifications of large-scale housing projects which are being undertaken in developing countries are varied, complex and extend far beyond the localities in which they are located. The functions needed to support housing projects are equally varied and complex. Therefore, a regional analysis of the rational locations for housing projects is valuable not only for determining the geographic and economic framework within which the housing projects have to function, but also for planning the facilities which are needed by the residents of the project areas. A comprehensive regional planning approach to locations of large-scale housing projects will reveal regional factors which should be taken into account in determining rational locations for housing projects.

II. APPLICATION OF THE CONCEPT IN INDIA

The Damodar Valley is situated in the States of Bihar and West Bengal in eastern India. The Damodar Valley Project is a multi-purpose river valley project which has special

significance in the development of India's national economy. The Damodar river rises in the Chota Nagpur plateau and traces a winding course of about 336 miles through Bihar and West Bengal. It finally joins the Hooghly river some thirty miles south of Calcutta. The two main tributaries of the Damodar river are the Konar and the Barakar. Apart from being a rivershed, the Damodar valley is also a highly mineralized zone in the country. Nature has endowed it and its adjacent areas with industrial and agricultural potentialities. The upper valley is rich with a high concentration of mineral deposits; the lower basin is one of the most fertile tracts in the country. Within the Damodar Valley Region itself, there are pockets of planning regions, that are experiencing more rapid development than the rest of the Damodar Valley Region. The Durgapur region is one of such pockets, and is used as a case study here.

The Durgapur Region

The demarcation of the Durgapur Region was based on the physical, cultural and economic characteristics of the area. The region includes the whole of the district of Burdwan and parts of Birbhum and Bankura. The approximate area of the region is 5,777 square miles. The Durgapur Region has reached a position of national importance in view of the decisions of the Central Government and the government of West Bengal, to locate a million-ton steel plant and a

coke oven plant there. In addition to these basic industries, the Damodar Valley Corporation is building a large thermal power station as part of its multi-purpose development of the river valley.

Industries are attracting other industries and population. All these developments, including housing, must be co-ordinated in order that each may function efficiently and enable the workers living in the region to enjoy the many amenities of the higher standard of living made possible by industrial progress. Further, the establishment of Durgapur as a major industrial centre, together with the location of large-scale housing projects, will no doubt have a great impact on the surrounding area, bringing about a new pattern of land use, population redistribution and a changing economic and social structure. The Damodar Valley Corporation decided that it is comprehensive planning of the Durgapur region that could achieve a balanced development of the region. This comprehensive regional planning approach was used to locate housing projects in the Durgapur region.

The Physical Features

The topography of the region varies from hilly, undulating country on the west to the gently sloping plains of the east. The drainage is from west to east, with a slight

southerly inclination.¹ The principal rivers in the region are the Damodar, the Ajoy, the Mo and the Dhalkishore. Laterites in various stages of decomposition form the central tract, and the eastern tract is composed of recent and older aluvium. There are fertile soils at the eastern side of the region. The predominant wind direction is south-east to north-west. The humidity varies from 51 to 77 per cent. The mean annual rainfall is about sixty inches. The topography of the region influenced the location of large-scale housing projects.

Land Use

The two major broad land uses are urban and rural. The rural land use of the region is predominantly arable farming and the only significant crop is Assam rice. The cultivable land in the region amounts to 82 per cent of the total area, but 13 per cent of it, which is classed as cultivable waste, will mostly be used as forests and pastures. Orchards and farm gardens occupy 4 per cent, and 3 per cent is left fallow. Of the land not available for cultivation, representing the remaining 18 per cent, half is covered by water surfaces and the other half by roads and housing. With regard to urban land use, there

¹Most of the materials in this chapter were based on "Regional Planning Problems in the Damodar Valley," Regional Planning: Housing, Building and Planning, No. 12 and 13, New York: United Nations, 1959.

are practically no urban areas in the region except Asansol and the surrounding towns in the Raniganj coal fields. The administrative and rural market towns are either declining or show a lack of urban characteristics and organizations. These factors guided the location of housing projects in the region.

Economic base

In the region, there is a tremendous pressure of population on the land. The entire agricultural economy of the Durgapur region depends on winter rice which accounts for 90 per cent of the total cropped areas. Cottage and small industries support about 17 per cent of the total population of 3,733,603 (1951). Large-scale industries provide employment for about 35,000 (1958) workers in the Asansol area. The iron and steel industry employs 59 per cent of the labour force and about 6 per cent is employed in workshops attached to coal mines. The other major industries that attract labourers are aluminium manufacturing at Nagar; refractories and ceramics at Raniganj, Durgapur, Samgram, Lal Khuti and Rupnarainpur; paper factory at Raniganj; and cotton textiles at Dhakeswari. The collieries in the Raniganj coal-field contributed 32.6 per cent of the total employment provided by the coal-mining industries in India. The employment in the coal-fields increased by 20.6 per cent between 1949 and 1956. The

standard of living is very low; the poorest paid worker is the farmer. The total annual income of an agricultural family of four is Rs 600 to Rs 700. An average family of industrial workers earns about Rs 700.²

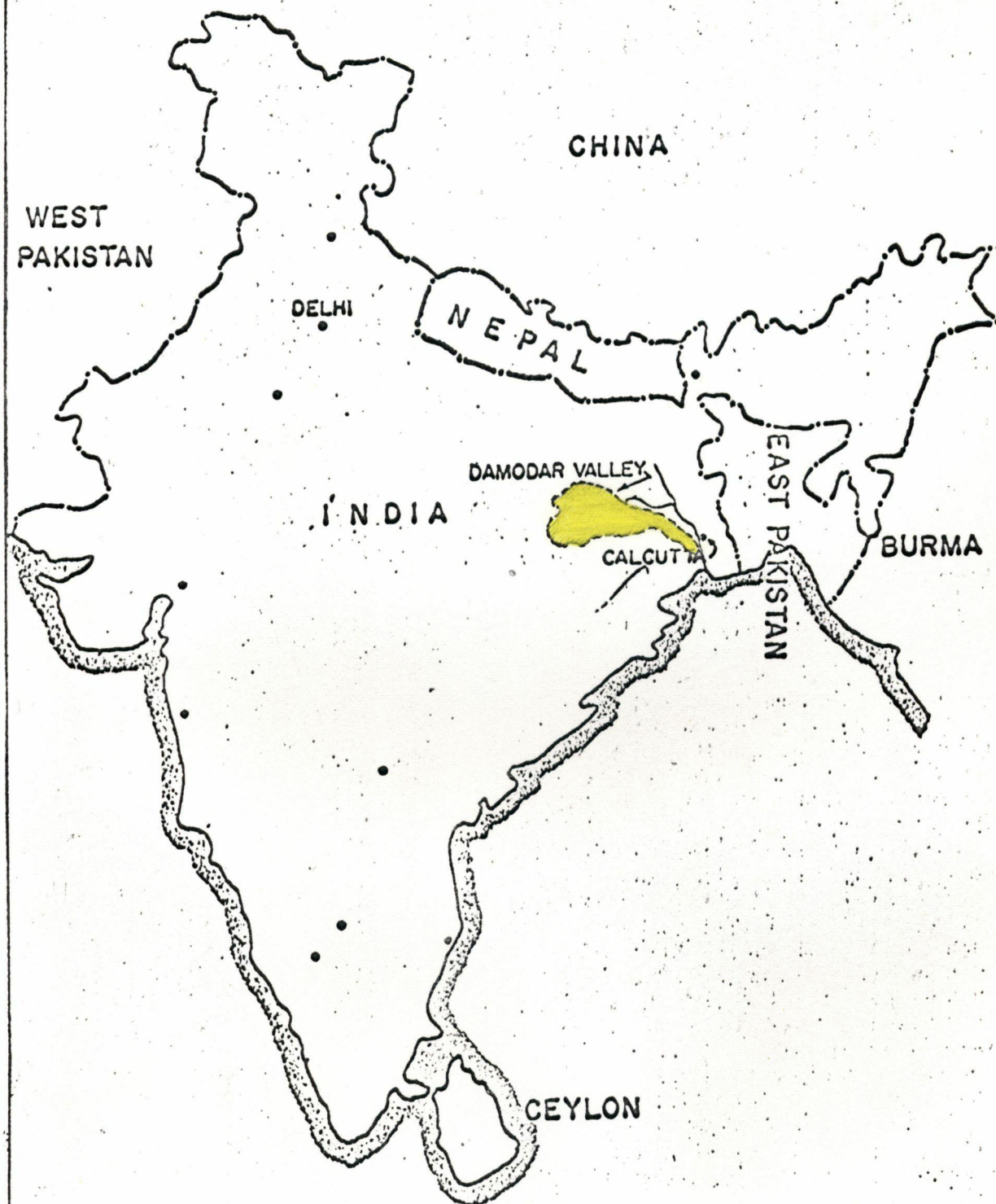
The People of the Region

The total population of the region is 3,733,603 (1951). The population of the rural area forms about 88 per cent of the total population of the region. There was population decline in the region until 1921 owing to Burdwan fever, but the population has increased by 46 per cent between 1921 and 1951. The Bankura area is permanently the emigrating area in the region, whereas Burdwan has attracted most of the in-migration. In the Birbhum area, population shifts are normal with stress on in-migration which has increased since 1951. The development at Durgapur will cause an increase in migration to the new industrial centres, and there will be local population shifts. The Bankura and Asansol area will lose some of their population to Durgapur. Map VII, page 92, indicates the Damodar Valley of India.

The age structure of the population in the Durgapur Region is characterized by a high percentage of young people. About 32 per cent of the population is below

²One Rupee is \$21. U.S.

THE DAMODAR VALLEY OF INDIA

MAP
VII

Source: A Case Study of the
Damodar Valley Corporation
and Its Projects. United
Nations Economic Commission
for Asia and the Far East.



SCALE: 1: 17,000,000 APPROX.

fifteen years of age. Young people between fifteen and twenty-four years of age constitute 15 per cent; and the middle aged, that is between twenty-four and fifty-five years of age constitute 34 per cent of the population. The family structure of the population is as follows:³

	<u>Per cent</u>
Small households of 3 members or less	42.6
Medium households of 4 to 6 members	37.9
Large households of 7 to 9 members	13.9
Very large households of 10 members or more	5.6

Because of the degree of development activities, the population in the region is expected to increase significantly. The population growth will be due to both natural population increase and in-migration.

Natural Resources

In terms of land resources, the region can be divided into two main categories; the undulating rocky area on the west and the sloping plains on the east. The rocky area by nature is infertile and barren, while the plain is fertile and intensively cultivated. In addition to these major land types, there are mining, forest and marshy areas. Water

³Source: V.N. Prasad, Regional Planning Problems in The Damodar Valley (Regional Planning No. 12 and 13), p. 210.

resources of the region are varied and considered adequate but less utilized. There are numerous streams but most of them are unexploited. The marshy areas towards the eastern part of the region are waiting to be reclaimed for agricultural use. Most of the forests in the region have been cut down by the cultivators and charcoal burners in the last few decades. The deforestation has resulted in soil erosion in many parts of the sloping land in the west, loss of fauna, and recreation amenities and decrease in rainfall.

The main types of natural recreation in the region are hiking, sightseeing, picnicking, big and small-game hunting, fishing, swimming and boating. The region is not rich in recreation resources. However, the sal and scrub forests on the western uplands can be developed into regional parks, big-game centres and a number of small-game sites. Spots for picnicking and camping and holiday resorts on a regional scale are plentiful.

The area immediately to the west is rich in minerals, contributing about 70 per cent of the mineral output of the country. Transport facilities and the comparatively short distance of haulage mean that most of the minerals are accessible to the industries around Durgapur. The chief mineral resources of the region are coal, fire-clay and building materials.

Industrial Development

The availability of all types of raw materials in close proximity to the Durgapur region favours the location of extractive and manufacturing industries in the region. The development of basic industries according to Prasad, will encourage the establishment of subsidiary industries and thus further necessitate the development of consumer goods, industries and service industries to supply the needs of the local and regional population. Industrial development in the Durgapur area is to be undertaken in relation to the existing Asansol and Dhanbad industrial centres. The construction of a steel plant at Durgapur will give rise to various ancillary industries such as foundries, steel smelting and rolling, shipbuilding and repairing; and various engineering works will use the iron and steel produced at Durgapur. The coke-oven plant will likewise provide the raw materials for subsidiary industries like tar distillation, and will generate gas that will be used for domestic and industrial purposes in Durgapur and far away places like Chittaranjan and Calcutta. The other major ancillary industries that are likely, according to the report, to be developed in Durgapur are a calcium carbide plant, general engineering industries like foundries and machine tools, manufacture of soda ash and caustic soda, and pharmaceutical industries.

There are various small-scale industries that can be developed in the Durgapur region. These include pottery and glass works, carpentry, cigarette making, blacksmithing, tanning and manufacture of leather goods, and rice and oil mills. Cotton and silk textiles, and sugar manufacturing are among the concentrated industries which can be developed in the region.

Transport and Services

The existing road network in the Durgapur region is inadequate and will prove more unsatisfactory in the near future. The total length of all types of roads in the region is 4,272.3 miles. With the development of Durgapur as an industrial and agricultural consumer centre, the traffic to and from the area will increase tremendously. It has been suggested that the market centres of Suri and Bandura should be connected with Durgapur by direct roads. A road along the Damodar river from Mejhia to Kahndogosh is also suggested.

Railway facilities. There is a narrow-gauge railway line from Burdwan to Katwa; and Ahmadpur to Katwa. Bankura has no direct railway connection with either Burdwan or Asansol. It has been suggested that Burdwan and Bankura should be linked by railway line and that the Asansol-Burdwan section must be electrified in order to cope with future demand of railway services in the region.

Water transportation. Water transportation is considered to be the cheapest form of transport in the region. A number of streams flow in the direction of expected traffic. The navigation canal of the Damodar Valley Corporation connecting the Damodar with the Hooghly facilitates the transport of bulk goods between Durgapur and Calcutta.

Air transport. In the Durgapur region, only Asansol has an airport, which is even of a minor importance. However, its expansion is being contemplated. There is a small airfield at Panagarh, ten miles from Durgapur which could be developed in the future.

Water supply. There are only seven municipalities in the region that have piped water supply. The daily supply of water varies from four to eight gallons per person. This is considered inadequate. The inhabitants of the isolated communities in the rural areas get their water from dug or tube wells. The towns of Burdwan, Asansol and others around Damodar will eventually get their water supply from the Damodar Valley Corporation's reservoirs.

Sewage. Five municipalities in the region have sewerage and drainage facilities. From a health and sanitation point of view, it has been found necessary that sewerage should be provided in all settlements with a population of a thousand or more. The type and nature of

disposal will differ in each settlement. Each household in the rural communities is expected to have a separate earth pit privy. In Durgapur the sewage effluent can be disposed of in the Damodar after proper treatment.

Electricity. Ten towns in the Durgapur region have electricity. It is expected that with the completion of the Damodar Valley multi-purpose project, it will be possible to supply electricity to the towns and all the important villages in the region.

Location of Housing Projects in the Durgapur Region

The housing policies of the Damodar Valley Corporation are:

(1) to provide housing for industrial and low-income workers in the region, which includes slum clearance, industrial housing, plantation and village housing; (2) to undertake both large and small-scale housing projects; (3) to relate the location and dispersal of industries to the location of housing projects; (4) to locate plantation and village housing projects where there are sufficient acreages of land for home sites, "upland plot" and paddy land; (5) to create conditions in which the entire programme of housing location in the region can be oriented to the services and facilities required by the prospective tenants; (6) to locate housing projects where there are excellent transportation facilities and services; and (7) to establish regional housing projects consisting of a number of houses grouped around a market or an industrial centre.

Three large-scale housing projects, capable of housing 268,000 people were envisaged to be located in the Durgapur Region. The selection of the locations for the three housing projects was based on a comprehensive regional planning approach, which included the survey and analysis of the existing social economic and geographic conditions of the region. The survey and analysis of the region aided in the formulation of criteria to select the appropriate locations for the three housing projects. The criteria which have been reviewed in this chapter were: physical features, land use, economic base, population distribution, natural resources, industrial development, transportation and services. The Damodar Valley Corporation selected three locations near the city of Durgapur by the application of these criteria. The housing project located nearest to the city of Durgapur will house 168,000 people; the other two housing projects, which were located at some distance from Durgapur, will house 50,000 people each. The last two housing projects were considered as "satellites" to the city of Durgapur.

The regional survey revealed that, first, a linear form of housing location will suit the geographic conditions of the area and reduce the distance of travel between residence and places of work, but it will result in a greater number of bottlenecks and greatly increase the cost of services. Second, location of housing projects to

result in satellite communities will require little commuting and perhaps will more satisfactorily solve the problems of agglomerations. However, the cost of development will be high, as the population will be housed sporadically rather than in one single city. The locations of the housing projects were based on a compromise of the linear and satellite forms.

III. SUMMARY

A comprehensive regional planning approach was followed in the study of the Damodar Valley in order to decide where housing, industry and other services are to be established. The Damodar Valley Region was examined first. This was followed by a detailed regional survey conducted in the Durgapur region which is one of the "separate" regions of the Damodar Valley Region. The Durgapur region is the region selected for the case study because of the close relationship between this region and the Accra-Tema-Akosombo Region of Ghana.

The study of Durgapur region dealt with the physical features of the region, land use, economic base, population characteristics, natural resources, industrial development, transportation and other services which comprise roads, railway facilities, water and air transportation, water supply, sewage and electricity. These are the criteria used to determine the location of housing projects in the region.

IV. CONCLUSION

The choice of Durgapur Region of India for the case study was based on the fact that the general characteristics of the Durgapur Region come close to those of the Accra-Tema-Akosombo Region of Ghana. A striking resemblance of the two regions is the topography. Both regions have hills on the west and plains on the east. Durgapur Region and Accra-Tema-Akosombo Region are part of a River Basin Region, which in the case of Durgapur is the Damodar Valley Basin. Accra-Tema-Akosombo Region is within the Volta Basin Region.

The Damodar Valley Corporation and the Volta River Authority are the statutory bodies charged with development responsibilities of the two regions respectively. The degree and the kind of industrial development planned for the two regions are quite similar. Both regions are experiencing rapid industrial development, rapid population growth and acute housing shortages.

There are two important differences between the two regions. The population for Durgapur Region in 1951 was 3,733,603 while the population of Accra-Tema-Akosombo Region in 1960 was estimated at 541,000. Secondly, the Durgapur Region covers a wider land surface than the Accra-Tema-Akosombo Region. These two differences, however, do not diminish the importance of the Durgapur Region as the area for the case study.

The concept of a comprehensive regional planning approach to the location of large-scale housing projects has not been adequately applied in either the developed or the developing countries. The Damodar Valley Corporation's approach to the location of large-scale housing projects on a regional scale comes close to the application of the concept. The geography of the Durgapur Region, social and economic base, natural resources, industrial development, water supply, sewage and electricity, and transportation were used as criteria to determine the appropriate locations for three large-scale housing projects in the region. Although there is no information available concerning the success of the concept applied in the selection of the locations for the housing projects, it can be said that such a comprehensive regional planning approach to the location of housing enabled the Damodar Valley Corporation to consider the housing shortage and its solution on a regional basis.

A regional approach to the location of housing projects is concerned with regional topography, roads, regional population distribution, economic, social and industrial developments, regional and national parks, and higher educational institutions. Regional and local approaches to the location of housing projects do not conflict, they complement. The difference is a difference of scale which is important.

CHAPTER V

CRITERIA FOR DETERMINING THE LOCATIONS OF GOVERNMENT-SPONSORED HOUSING PROJECTS IN THE ACCRA-TEMA AKOSOMBO REGION

Determining the location of housing projects, based on a comprehensive regional planning approach, requires an examination and analysis of many complex and interdependent factors, on a regional basis. In the past, the location of housing has been a relatively uncomplicated undertaking. Industrialization and urbanization of Ghana in general, and the A.T.A. Region in particular, have necessitated a regional approach for a rational choice of locations for housing projects.

Various factors which must be considered in determining locations for housing projects are identified and explained in this chapter. Though the factors are inter-related functionally, each factor is discussed separately for purposes of clarity and convenience. The purpose here is the formulation of criteria which could be used to select appropriate locations for housing projects, preferably, large-scale housing projects in the Accra-Tema-Akosombo Region of Ghana.

I. THE SIZE OF THE HOUSING PROJECT

Housing projects which are less than a hundred dwelling units are usually classified as small-scale housing projects. Large-scale housing projects range in size between one hundred and two thousand dwelling units.

The purpose of the housing project determines the size of that project. Housing projects have been undertaken for specific purposes, such as to house industrial and low income workers; and old, handicapped and displaced people. First, the purpose of the housing project influences its location. For example, a housing project for industrial workers only will tend to be located as close as possible to that centre of employment. And a multi-purpose housing project will need a different size and location. Second, the size of the housing project influences its location. A small-scale housing project could be integrated into an existing neighbourhood, while a large-scale housing project is a community and at times a complete settlement by itself.

Densities generally indicate the concentration of people and structures on any given area of land; and the amount of open spaces available to the inhabitants of the area. Density standards, therefore, influence the size of the area needed for housing. The differential value of land in the various parts of the region also influences the location of housing within the region. A large-scale housing project will cost more in terms of land, if located

in the urban area where the value of land is higher than if located outside the urban areas where land is cheap. The desirable size of any housing project depends upon its topographical position, on its purpose in the development programme of the region and on all the other factors that determine its growth.

II. PHYSICAL CRITERIA

The geography of the Accra-Tema-Akosombo Region is an important determinant of locations for housing projects. Dahomeyan rocks underlie most parts of the region. The Akwapim-Togo Range is a physical barrier to location of housing and transportation towards the western part of the region. Parts of the area around Accra are faulted and subject to seismic activity. Housing should not invade the rich agricultural areas of the region. The topography and geology of the region will partly determine appropriate locations for housing projects.

An appropriate location, for a housing project, should be suitable for physical development, it should have adequate soil-bearing capacity, drainage, including installation of utilities, for provision of houses, circulation system, and neighbourhood community facilities; and it should be free from unfavourable environmental factors.

Moderately sloping areas are preferable to either steep or very level land. It has been found that

improvement costs rise sharply on slopes over 10 per cent. Heavy grading creates settlement and erosion problems. For low-cost housing projects, where lot costs must be held to a minimum, gently rolling and well drained land is by far the best. Very flat land presents numerous problems in sewerage and storm drainage that may increase improvement costs considerably.

Soil and subsoil conditions must be suitable for excavation and site preparation, location of utility connections and for grading and planting. Subsoil condition should afford suitable bearing capacity for economic construction of houses and other buildings of the type contemplated. Bearing capacity will be adversely affected if the site contains muck, peat, poorly compacted fill, shifting sand or quicksand. For economical construction of houses, subsoil should contain no ledge, or other obstructions to efficient excavation for necessary utilities and foundations.

The water table at the site must be low enough not to interfere with sewerage. The area should be free from swamps or marshes and periodic flooding and dampness. The housing area should be free from danger of surface flooding by streams, lakes or tidal waters. Any land which has been subjected to either frequent or periodic flooding should be avoided. The topography of the area should permit adequate vehicular and pedestrian access to, and circulation within

the project area, and also permit adequate provision of neighbourhood recreation and suitable open spaces.

Bluffs and precipices, open pits and hazardous shorelines which are potential sources of bodily accidents should be avoided when locating a housing project. Areas where landslides, earth settlements above disused mine workings and earthquakes are known to occur should also be avoided.

A site with perfect physical features required for a housing development rarely exists. There are some undesirable physical features which could be either eliminated completely or be subjected to satisfactory control. There are others which are either difficult or too costly to control. Much depends on cost. Housing should not be located within the influence range of fire and explosion hazards from industrial sources. Housing should be located at a safe distance from airports. It is desirable both for safety and noise protection to avoid locating housing on sites adjacent to heavy traffic or railroads. Excessive noise is commonly produced by railroads, airports, traffic, heavy industries, boat whistles, and foghorns. The area immediately surrounding the location should be investigated for such potential sources of noise. Housing should avoid locations where excessive and uncontrollable noise regularly occurs, especially at night.

Common sources of objectionable smoke, dust and odour, including industry, railroad dumps, incinerators, vacant lots should be avoided. The seriousness of these nuisances depends on their intensity and frequency. Investigation to determine the potential sources of these nuisances and the direction of prevailing winds should aid the selection of appropriate locations for housing. Residents of the housing area should not be unduly exposed to sources of animal or insect carriers of disease. If complete control or elimination of the sources is not practicable, then housing should be located outside the range of any substantial breeding places for rodents and insects which might contribute to the spread of rodent-borne or fly-borne disease.

The settlement pattern of the region should be considered in connection with the housing location. Population is concentrated in the Accra-Tema Metropolitan Area. There are settlements along the highway which runs parallel to the Akwapim-Togo Range; and scattered settlements on the plains. An examination of the pattern of communities and the population distribution in the region will aid the selection of locations for housing.

III. ECONOMIC AND SOCIAL CRITERIA

Economic Criteria

It is often assumed that with the present state of technological advancement, housing could be located almost anywhere on land, but in developing countries where capital is scarce, cost of developing and constructing houses is very important. One of the major drawbacks of providing more houses, in Ghana generally, and in the Accra-Tema-Akosombo Region in particular, is lack of capital to finance the housing projects. The selection of locations for housing should be based on the fact that the location would not present unreasonable costs if developed. The topography of the area must lend itself easily to housing development.

Where capital for housing is very scarce, a small-scale housing project could be located near an existing settlement so that the residents could use the existing amenities and services. If an existing settlement were to be selected for the location of a housing project, then the availability of adequate facilities and services in the existing settlement would constitute an important economic consideration. At times the redevelopment or expansion of an existing settlement in order to accommodate more people may prove to be more costly than the development of a new site. There are other economic factors which must be

considered in addition to economy which accrues from the utilization of existing facilities by a new housing project.

Transportation, public utilities and communications are needed by residents of every housing project. But in Ghana, the supply of these essential services constitutes a financial burden on the Ghana Housing Corporation. The choice of a particular location will either reduce or increase the average cost of providing these services. Capital will still be needed to maintain these services. Therefore, the selection of an area for housing should take into account the capital and maintenance costs of the essential services. An excessive maintenance cost will render the project uneconomical.

The economic base of the area where a large-scale housing project is to be located should be known so that (1) it contributes to economic solvency of the area; (2) the new inhabitants are capable of finding employment; and (3) to determine whether the prospective occupants are financially capable of renting or buying the houses to be provided for them.

The cost of land may influence the selection of one location instead of another, though both of them may possess the same physical attributes. Utilizing the concept of economy of scale, it is at times less costly to establish a large-scale housing project instead of many small-scale housing projects scattered in the region. The economic

aspect of the location of housing projects favours the location of housing projects using a regional approach. This approach makes it possible to evaluate different locations in terms of their relative cost and benefits; thereby enabling a selection of the location which has the least cost and the greatest benefit to both the residents and the Housing Corporation.

More decent houses are needed in the Accra-Tema-Akosombo Region. But most of the people who need government-sponsored housing are in the low-income group. Therefore, houses should be provided as cheaply as possible but at the same time, of acceptable construction standards. It is, therefore, of paramount importance that the development cost of the area chosen for the housing project should be minimum when compared to any other area in the region.

The development cost and the cost which the residents have to bear are important economic determinants in the location of housing projects. A housing project, which is located in an isolated area, will increase the transportation and other costs of the residents. Again public utilities will cost more per capita to use them.

Social Criteria

Houses are for people. The selection of locations for housing projects can not be considered adequately without reference to the ultimate users of the facilities and the area.

Large-scale housing projects which end in settlements, constitute not only satellite nuclei of some large conurbations but also and primarily, centers belonging to the regional system of settlements. The location of housing should take into consideration both national and regional policy of population distribution consistent with the requirements of social and economic development of the country. Social efficiency of a large-scale housing project depends to a large extent on the fulfilment of the social and cultural needs and requirements of its population. This could be achieved either by locating the housing project in an area where such facilities could be provided or by locating it adjacent to a settlement where the residents could satisfy their social and cultural needs. The urbanization process involves a major change in traditional institutions and values of the people in the region. The process of settling-in the residents in a new housing area must recognize the institutions which they bring with them. The interaction between the residents of the new housing area and the inhabitants of the region is essential. Analytical demographic, social and socio-psychological analyses of the region from which the housing project will draw its tenants, would promote easier adaptation, minimal frustration, mental stress and other social costs in the course of settling-in. This becomes crucial if the majority of the residents would come from

rural areas to the urban area where the housing project is located. These social factors underscore the importance of the relationship between the location and its region. Social patterns must be considered in order to guide the provision of facilities based on either pedestrian or transport movement. Minimum consumer, educational and health services should be available and within reasonable distances from the homes of the residents. Types of houses influence construction costs, space requirements of the project and possible locations. People with different cultural, religious and social values and orientation prefer one type of house to another.

The location of housing should not be based on an existence of one-industry, because social life will be constrained and social intercourse concentrated on expression of irritation with management. There will not be enough job opportunities for the other members of the household. There will be little variety in the social fabric of such a settlement. Furthermore, experience has shown that an economy which depends on a single activity is very vulnerable to economic depression. Good and efficient transportation becomes very essential, when the location of housing is based on one industry, to enable the other members of the household to work outside the housing area.

The psychological impact of the aesthetics of the location plays an important role in fostering a spirit of

community belonging, citizenship pride, and regional integration. The location of housing projects should enable the residents to participate freely in social and cultural activities, both locally and regionally. Good location would enable the residents to attend functions both public and private at urban and rural centres in the country with ease and comfort. Houses are for people, and in a region where people are less mobile, the current population density in the region must guide the location of housing in the region.

IV. TRANSPORTATION AND PUBLIC UTILITIES CRITERIA

Transportation Criteria

Transportation is a function of land uses and buildings. The spatial relations between the four basic land uses: residential areas, industrial districts, central business areas and public open areas determine the need for regional transportation, while the location of transportation facilities in turn determines the pattern of spatial distribution of urban factions. The existing highway network and the proposed highways in the region should guide the selection of locations for housing.

The journey to work is a basic factor which must be considered in relation to the location of housing projects. The journey to work has arisen out of the separation of places of residence from places of employment, based on

the concept of separation of incompatible land uses. If the cost of the journey to work is excessive, according to an individual's evaluation, he may either change his job or his place of residence. Which one he changes will depend upon the relative availability of housing as compared with employment opportunities. There is a partial reversal of the trend towards increasing separation of places of living and employment. First, the need for more land for industry has led to their location in outlying districts, close to existing residential communities. Second, due to technological advance, industries are finding more and more ways to control and to alleviate the nuisance aspect of their operation which formerly made them undesirable neighbours. And third, there has been a trend in some new zoning by-laws towards permitting certain kinds of "light" industries to locate in more restricted zones if properly constructed and controlled as to size and type of operation.

Settlements or housing projects in the region depend upon each other for survival. The residents of the housing area must travel frequently to other settlements within the city and to other parts of the region.

In order to minimize the time to be spent in these movements, housing should be located at a site which has maximum accessibility to all activities in which members of the families of the residential area engage. The most important of these activities are shopping, work, school,

church and recreation. The regional and urban highway systems have their greatest importance to residential sites by connecting the residential sites with other areas in the region. It has been demonstrated that a hierarchy of commercial foci exists in the region. The most frequently occurring commercial centres are those in the lowest level of the hierarchy, and each higher level is represented by centres which, while fewer in number, are of greater functional complexity. There should be access to all levels of commercial foci including regional shopping centres and highway service centres.

Highway access and transportation facilities to places of employment, the central business districts, shopping centres, churches, recreation, airport and seaport are primarily considerations in location selections for housing projects. When travel time to centres of employment is less than 30 minutes, the site location is good. When such travel time is over 30 minutes but not more than 45, the location is fair. A location requiring over 45 minutes travel time is poor.¹

Public Utilities Criteria

The need for and possible supply of public utilities to the site should be considered when a site is being

¹Urban Land Institute, Community Builders Handbook, (Washington, D.C., 1960), p. 27.

selected for location of housing. The availability of public utilities to residents of a housing project area will be assured if the location is considered on a regional basis. In the Accra-Tema-Akosombo Region, the location of housing projects near available public utilities is very essential because of limited availability of public utilities in the region.

A healthful residential area can be developed only on a site with good water supply. In most cases new housing projects will have to provide their own water supply and disposal facilities. The cost of installing these facilities will influence the selection of a particular location. Water and sewerage systems are long term sanitary services. A public water supply with assured maintenance of an acceptable health standard is generally preferable to individual supplies on grounds of both safety and economy. Preference should be given to an area having access to a public system. Removal of human wastes from the dwelling by a piped sewer system is essential. It is important that a projected location should have facilities for effective removal of domestic waste.

Electricity is essential in every home. The housing area should be located near the electric supply if possible. Where there is no nearby electric supply, the regional development programme should be consulted to know

when an electric supply will be available in the area. The examination of the regional development programme will reveal whether the area will be supplied with electricity or not. The possibility of telephone service to the area, police protection and fire service must be considered in relation to the region's development programme. The availability of water, sanitary and storm sewers, electricity, gas, and public transportation are very important factors affecting location of housing projects. Not only should the lines for these services be at or near the site but they should also be of adequate capacity to carry the increased load of the new housing development.

V. COMMUNITY FACILITIES AND SERVICES CRITERIA

The selection of the locations for housing projects based on a regional approach must take into account the community facilities and social services existing such as schools, churches, parks, health centres and libraries. The location of a new housing project may necessitate the provision of new community and neighbourhood facilities. But the provision of these facilities should be related to existing public services which can serve the residents. The location should be based on the existing facilities in the region, including high school, colleges, vocational institutions and universities. The projects could be located with reference to either walking distance or

travelling time. A small-scale housing project which cannot provide its own facilities should be located with reference to walking distance to community facilities; and travelling time to district and regional facilities. The school and university authorities must be consulted to determine whether the existing schools and university can accommodate the anticipated student body without undue hardship. The decision of the school authorities will decide whether or not the project should be located where it was first selected.

District facilities include large food markets, hardware and household goods, bookstores, haberdashery and dry goods, offices, branch bank and branch post offices. Churches and branch headquarters of public and private welfare organizations may be found in the centre. In addition, some commercial recreation facilities, such as movies and indoor sports facilities, are available at the district level. These facilities should be made available to the residents of the project area either by its location or by convenient automobile routes and public transit facilities.

Outdoor recreational facilities are of two categories: active, which includes neighbourhood playgrounds, district playfields and regional facilities such as swimming pools, beaches and golf clubs; and passive, which includes neighbourhood parks, large urban parks, regional parks and

various special types of either district or regional parks.

The existence of these facilities and the existence of potential sites for these facilities in the region should guide the selection of locations for housing projects.

VI. ADMINISTRATIVE CRITERIA

The agency which bears the financial responsibilities for the construction and maintenance of the housing projects has the executive authority in deciding the locations for housing projects. In Ghana, the executive authority rests with the Central Government. Most of the Government's decisions on housing are executed by the Ghana Housing Corporation. Therefore, the views of both the Government and the Ghana Housing Corporation will influence the choice of locations for housing projects in the Accra-Tema-Akosombo Region.

Land in the region is owned by various chiefs, for example, the chiefs of Krobo, Akwapim, and Ga-Dangbe-Shai area. Though the Government of Ghana has a policy of owning the greater portion of the land in the region, yet the chiefs at present own the greater portion of the land. The decision and the willingness of the chiefs, either to sell or lease land for housing, will determine where housing could be located.

The Ghana Volta River Authority is charged with the prime responsibility of planning, executing and managing

the development of the Volta River. The Authority is also responsible for controlling the lake created by the dam, and for developing the lake for fishing, transport and communication, as well as for promoting the health and welfare of the people living in the lake area. Therefore, the Authority has an important say as to where housing projects should be located in the region. It is the policy of the Volta River Authority that the political administration of housing projects will be merged with the normal local government structure of the region. Each housing project should be located so that it falls within the jurisdiction of one local council. The structure of the local government in the region should be such that it can ensure satisfactory provision, maintenance and operation of all public facilities essential to the health and welfare of the residents.

The existing legal and administrative controls in force in the region must be examined to decide how they affect selection of locations for housing projects, because conformance with existing zoning controls and with the regional master plan is a basic legal requirement. Furthermore, a future change in the character of the adjacent areas of the location can completely destroy the desirability of the location for housing. This calls for adherence to the regional master plan in selecting a location for housing, and consultation with both local and regional planning officials.

The A.T.A. regional planning agency needs the authority to control the subdivision of land in accordance with the regional development programme; and the timing of the housing projects to coincide with the development of the areas where the housing projects are to be located. The regional planning agency must (1) establish the stages and sequence of economic, industrial and housing development; (2) programme, in terms of location and time schedule, of capital works of regional significance and location of housing; and (3) ensure that location of major industry, highways, regional parks, new urban areas and housing in the region are co-ordinated.

VII. SUMMARY

The principal criteria on which the location of housing in the Accra-Tema-Akosombo Region should be based are the major components of the concept of a comprehensive regional planning approach to the location of housing projects. The criteria reviewed in this chapter were: (1) the size of the housing projects; (2) physical; (3) economic; (4) social; (5) transportation; (6) public utilities; (7) community facilities and services, and (8) administrative.

The size of the housing project was discussed in relation to the purpose of the project, land values and density requirements. These factors were examined in

relation to their effect on the location of housing.

Physical criteria comprise, topography, soil and sub-soil conditions, the level of water table, flooding, and other physical phenomena such as earthquake zone and settlement patterns in the region. Good physical features reduce development cost, ensure good environment, and facilitate the provision of recreational facilities, and access to areas outside the housing area. Physical features requisite to good environment of housing areas were examined.

Economic criteria include the need for capital, construction costs, and costs of providing roads and public facilities, land acquisition cost, the financial cost which will befall the residents of the housing area, and the importance of sound economic base of the region and the locality. The selection of appropriate location in terms of physical and economic criteria will greatly reduce the cost of construction and maintenance.

Social criteria concerned the social efficiency of the location. Psychological impact of the aesthetic of location and socio-economic problems arising from the location of housing based upon one industry were described. The present population distribution in the region is crucial to the selection of housing locations. The need for social and cultural facilities and the need for interaction between the "new" residents and the other residents

of the region were considered as important factors.

Transportation and public utilities criteria involve accessibility to places of employment, recreation, schools and churches. The most important aspect of transportation is access to places of work and the travel time involved. Thirty minutes travel time from residence to place of work is considered good. Access to central business districts of the region, regional shopping centres, airports, sea-ports and highway service centres is essential.

The residents of the housing area will need public utilities such as electricity, water supply, storm and sanitary drainage and telephone. Appropriate location will make it possible to supply these services and cheaply too.

Community facilities and services criteria include the location of higher educational institutions including a University, large food markets, bookstores, libraries, post offices, banks, headquarters of important government and private organizations, commercial recreation, like movies, drive-in theatres, indoor sports, and outdoor recreation facilities. The district and regional facilities cannot be provided in the housing area, but good access to these centres will make them equally available to the residents.

Administrative criteria involves an executive decision of the location of housing, together with its

political administration within the region. A purely political decision may outweigh any other consideration concerning the housing location in the region. Financial and administrative responsibilities of the Ghana Housing Corporation, give it the right to make the final decision as to where a particular housing project must be located. Another important factor is the co-ordination of location of housing with the location of economic, industrial and social activities in the region to ensure balanced development of the region.

VIII. CONCLUSION

An examination of the concept underlying the locations for housing in the Durgapur Region of India reveals the importance of using the regional approach to select locations for housing. The concept of a comprehensive regional planning approach to the location of housing projects was utilized in the formulation of criteria for selecting locations for housing projects in the Accra-Tema-Akosombo Region.

In the past, the Accra-Tema-Akosombo Region was a relatively underdeveloped region. Various towns in the region, such as Somanya and Dodowa, had flourished and declined. At present the region has been earmarked for very significant economic, industrial and agricultural developments. The location of housing should be based on

the location of economic and industrial developments. The Accra-Tema-Akosombo Region is essentially a "city-centered" region. This region is characterized by a geographic concentration of people and by the functional relationships between Accra, Tema, Akosombo, and the various urban and rural centres. The region, therefore, has the basis for development which will result in an optimum relationship between community development, resources and economic development. A regional approach to the location of housing will aid the achievement of this goal.

In evaluating locations for possible sites for housing, there are two major groups of factors which must be taken into consideration. The first group of factors deals with spatial relationships of the housing area to the rest of the region, and the second set deals with the physical properties of the area itself.

Almost every large-scale housing project has resulted in the creation of a community. What kind of community will result from the selection of a particular location for housing should be answered first before the project begins.

The application of the criteria and the concept of a comprehensive regional planning approach to the location of housing projects will result in achieving a balanced or, more accurately, a dynamic equilibrium between the location of housing and the location of economic, recreational and industrial activities in the region, in response to growth and change.

CHAPTER VI

AN EVALUATION OF THE COMPREHENSIVE REGIONAL PLANNING APPROACH TO THE LOCATION OF GOVERNMENT-SPONSORED HOUSING PROJECTS IN THE ACCRA-TEMA-AKOSOMBO REGION OF GHANA

The purpose of this concluding chapter is to present a short summary of the previous chapters and to evaluate the comprehensive regional planning approach to the location of government-sponsored housing projects in the Accra-Tema-Akosombo Region of Ghana.

I. SUMMARY

The purpose of this study is the investigation of an approach and a formulation of criteria based on that approach for the location of housing projects in the Accra-Tema-Akosombo Region of Ghana. It is considered that the application of the approach to the location of housing projects in the Accra-Tema-Akosombo Region, and possibly any region of the developing countries, would aid in solving the housing shortage which faces the region. The reason for this study is that housing, unlike commercial and industrial activities, has not been planned on a regional basis. But housing is an integral part of the commercial and industrial development of any region. In developing countries, a

major industrial undertaking entails the provision of housing.

The housing shortage in the region is due to population increase and lack of co-ordination between the location of housing and industry. The in-migration is caused by the availability of job opportunities. It is the policy of the Ghana Government that the region should have the highest concentration of industry because of the special advantages that the Accra-Tema-Akosombo Region has over other regions in the country.

The study began by delimiting the study area which is the Accra-Tema-Akosombo Region of Ghana. This region is triangular in shape. This was followed by a description of the geography, population distribution and land use pattern of the region. Population was found to have concentrated in the three urban centres of the region, namely, Accra, Tema, and Akosombo. The small villages in the region are losing their population to the urban centres. An examination of the labour force indicated that about 60 per cent are engaged in agriculture. It follows that the predominant land use in the region is agriculture with industrial and economic land uses concentrated in the Accra-Tema-Metropolitan Area.

An examination of the operation and organization of the housing agencies in Ghana indicated that there is no organized building industry capable of supplying the number of housing units required to cope with the degree of

urbanization and population growth in the region. The need for better and more housing is universal; both the rural and the urban dwellers need better housing. It was considered that the target for provision of more dwelling units should be one house for each household. The study revealed that solving the housing problem in the urban areas alone would not lessen the housing shortage in the region. It was stressed in the previous chapters that the provision of houses would not solve the complex housing problem. The solution to the complex housing problem should be comprehensively planned on a regional basis.

The Durgapur Region of India was used as a case study. Since little has been written about the comprehensive regional approach to the location of housing projects, the location of housing projects in the Durgapur Region was examined to determine how the comprehensive regional planning approach was used in selecting locations for housing projects in the region. The study revealed that the selection of locations for large-scale housing projects which are capable of housing 268,000 people was based on a comprehensive regional planning approach. The criteria used to determine the appropriate locations for the large-scale housing projects were physical features, land use, economic base, population distribution, natural resources, industrial developments, transportation and services. However, there is no information about the

success or failure of the housing projects.

Criteria based on a regional planning approach to determine the appropriate location for housing projects in the Accra-Tema-Akosombo Region were established in Chapter V. The criteria are: the size of the housing projects, physical, economic, social, transportation, public utilities, community facilities and services, and administrative.

The application of the criteria and the comprehensive regional planning approach to the location of housing projects in Accra-Tema-Akosombo Region will result in achieving a balanced social and economic development of the region.

II. EVALUATION OF THE COMPREHENSIVE REGIONAL PLANNING APPROACH TO THE LOCATION OF HOUSING PROJECTS IN THE ACCRA-TEMA-AKOSOMBO REGION OF GHANA

The assumptions made in the introductory section of the thesis are reviewed before the evaluation of the comprehensive regional planning approach to the location of housing projects.

The study validated all the assumptions. The Government of Ghana is determined to sponsor the provision of housing in the Accra-Tema-Akosombo Region, during the Seven-Year Development Plan period. There is no possible abandonment of the development being undertaken in the region. A yearly report issued by a committee of the

National Planning Commission indicated that development is proceeding according to schedule. It was assumed in this thesis that the Ghana Government has accepted the Regional Plan and Programme prepared by Doxiadis Associates in 1960; and that development of the region is proceeding as planned. Nothing was found to contradict this assumption.

The determination of logical locations for large-scale housing projects can be at the local, regional or national level.

The determination of locations for housing projects at the national level was found to underestimate both local and regional factors which strongly influence the need for housing. Again, it tends to overlook the housing needs of the smaller towns and villages in the country. The national approach was, therefore, found to be too broad for the determination of appropriate locations for housing projects.

The other alternative is the local approach to the location of housing projects. This approach means that each settlement, whether city, town, or village, considers the provision and location of housing projects in its specific areal jurisdiction, irrespective of what the other settlement plans to do.

The local approach tends to over simplify the need for housing in the area, and it tends to have a limited scope both in terms of time and space to the solution of

housing problems. This approach fails to take into account extraneous factors influencing the need and, therefore, the location of large-scale housing projects. This criticism does not mean that the location of housing has nothing to do with local planning. The site design and the actual siting of the project is a local matter. What is being investigated here is the rational choice of locations for housing projects. The continued application of the local approach to the location of housing will promote population drift to these particular local areas, thus increasing the degree of housing shortage and its socio-economic effects of these areas. Furthermore, planning is not initiated at the local level in Ghana. All the housing agencies in Ghana operate only at the national and the regional levels. Lack of trained personnel and planners in Ghana, and financial and administrative problems do not support the local approach to the location of housing projects in order to achieve a balanced social and economic development of the region.

The local approach to the location of housing projects would tend to influence the Government of Ghana to place greater emphasis on provision of more houses in the cities and large centres, and to ignore the housing needs of the rural areas. Therefore, the smaller towns and villages would not benefit from this approach.

The local and national approaches to the location of housing projects are considered inappropriate for the location of housing projects as a means to solve the housing shortage in the Accra-Tema-Akosombo Region.

The third approach is the comprehensive regional planning approach. The application of this approach would make housing a part of the regional planning process, thus making it possible to achieve a balanced social and economic development of the region.

To achieve an integration of plans and actions, the scale of planning should be regional. The region, being a link between the national and the local communities, provides a suitable frame of reference for balanced integration of development projects of national significance, and those based on local initiative.

The application of the comprehensive regional planning approach will enable the selection of rational locations for housing projects not only in the Accra-Tema-Akosombo Region, but also for any region where there is an administration organization to carry on the planning process.

The comprehensive regional planning approach is, therefore, considered the most suitable one for the location of housing projects in the Accra-Tema-Akosombo Region.

III. CONCLUSION

In conclusion, it is considered that the concept of a comprehensive regional planning approach to the location of housing would aid the solution of the housing shortage in the Accra-Tema-Akosombo Region of Ghana.

The comprehensive regional planning approach makes it possible to consider housing as an integral part of a regional development programme, and also as a regional input with wide economic, social and spatial ramifications.

Housing should be considered as part of a regional settlement policy, thus bringing together the rural and urban housing needs.

Housing projects must not be considered as projects 'per se', but as part of a community structure.

Appropriate location of housing projects is an essential planning issue and ought to be considered within the spatial context of a regional development plan; otherwise, the result will be an economic waste and social disorganization.

Though the regional approach is considered the most appropriate, the approach must be integrated with the national development policy and programme; and with local land use and development plans.

The investigation in this thesis has demonstrated the validity of the hypothesis:

THAT THE PLANNED LOCATION OF GOVERNMENT-
SPONSORED HOUSING PROJECTS AS A SOLUTION
TO THE HOUSING PROBLEM IN THE ACCRA-TEMA-
AKOSOMBO REGION OF GHANA SHOULD BE BASED
ON A COMPREHENSIVE REGIONAL PLANNING APPROACH.

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