THE FINANCING OF HOUSING AND URBAN DEVELOPMENT IN THAILLAND

A COUNTRY MONOGRAPH*

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Introduction

Thailand today has a total population of 36.8 million, out of which 5.4 million live in urban areas. An important feature of the population distribution is that the Metropolitan City Municipality Area (MCMA) alone accounts for 3.1 million or 57 per cent of the total urban population of the country. The population of the MCMA is now more than 30 times larger than that of the next largest urban area i.e, Chiengmai.

So far the pressure of urban growth has been concentrated mostly in this area. During the 25 year post-war period, from 1947 to 1971, the metropolitan population has increased by 300 per cent from 781,660 people to 3,075,300 people, and the total urbanized area of the city has grown by 244 per cent, from 53.4 km². to 183.7 km². (TABLE 1)

	TABLE 1	
Year	Population	Urbanized Areas
	(people)	(km.2)
1947	781,660	53.4
1971	3,075,300	183.7

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The important characteristics of this urban growth in the MCMA are the following:

- 1. The annual population growth rate of 5.1 per cent compared to the country's overall population growth rate at 3.1 per cent.
- 2. The average per capita income of B 6,000 (U.S.\$ 300) compared to the average per capita income in Thailand of B[3,000 (U.S.\$ 150)

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During the last decade the building construction industry developed very fast that the urbanized area increased 62 km.2 from 121.7 km.2 to 183.7 km.2 The total area of road surface increased from 13.9 km.2 to 17.3 km.2 The volume of garbage produced each day increased from 6,000 m.3 to 9,000 m.,3 and the total power consumption went up from 298,035,420 kwh. to 2,195, 807,212 kwh.

In this rapid urbanization, the Royal Thai Government took steps for preparation of a comprehensive metropolitan plan. Considerable progress has been made in this direction through the combined efforts of various government agencies.

There is now a general recognition of the need for ensuring urban development to follow the Master Plan and of the fact that during the next two decades a large demand for housing will have to be met. As yet no basic policy has been established in Thailand for financing of housing and urban development. But the importance attached by the Royal Thai Government to this problem is reflected in the fact that The Current National Economic and Social Development Plan provides for housing projects B 827 million or 0.85 per cent of the total Economic and Social Development Budget.

Roles of Government Organizations and Public Institutions

- a) A number of government organizations and public institutions play a role in housing and urban development in Thailand, which are listed below.
 - 1. The National Economic Development Board
 - 2. Ministry of Interior
 - 2.1 Department of Town and Country Planning.
 - 2.2 Housing Bureau, Department of Public Welfare.
 - 2.3 Metropolitan City Municipality.
 - 2.4 Department of Land.
 - 3. The Crown Property Bureau.
 - 4. The Applied Scientific Research Corporation of Thailand.

The nature and scope of the activities of these organizations are stated below, in brief.

The National Economic Development Board (NEDB)

The NEDB acts as a central coordination agency for the plans and projects of the Ministries, Bureaus, Government Departments and State Enterprises. It studies matter regarding financial means and other resources and recommends to the government as to how the financial requirements of various projects should be met and the priorities should be arrange according to the objectives of the Kingdom's National Economic and Social Development Plan.

The Department of Town and Country Planning (DTCP)

The DTCP performs an advisory role in preparing general guidelines for urban development for all municipalities of Thailand. It also supplies information for planning and conducting surveys on current and future land-use patterns.

The Housing Bureau (HB)

The HB which is a Division of the Department of Public Welfare of the Ministry of Interior, designs and ministers Public Welfare Housing Program while Housing Division provides social work, architectural and engineering services. It has implemented a number of housing projects at different locations of Metropolitan Bangkok most of which are rental but some are hire-purchase schemes also. Although details of future policies and activities are not yet available, the Bureau is likely to implement the large program of housing projects which may include high-rise flats, sites and services, and detached housing with also long-range financing.

The Metroppolitan City Municipality (MCM)

The MCM which has been formed by amaigamation of Bangkok and Thonburi Municipalities, engages in urban planning work, road and drainage construction and maintenance, slum clearance and urban renewal projects. It controls construction projects and issues building permits and also provides plans and specifications for standard design low-cost housing as a service to those who cannot afford the services of architects. Its Planning Division has prepared the Master Plan for the Metropolitan Planning Area, and it is responsible for planning, programming and budgeting for the project plans. Another Division of the Metropolitan City Municipality, the Office of Slum Clearance is engaged in housing construction, land subdivison and urban renewal schemes.

The Department of Laud (DL)

The DL is primarily engaged in surveys and registration of land. It's major activity is concerned with transfer of titles of privately owned land. All public land in the Kingdom outside municipalities such as roads, canals, and grass land also come under the overall responsibility of this Department.

The Crown Property Bureau (CPB)

About 20-25% of the land of the Metropolitan City Municipality and the substantial amount of the properties in other parts of the country owned by the Royal Family are managed by the CPB. Some of these properties are usually improved with commercial buildings, shopping centers, modern hotels, an so on. It's activities also include land development and lease to the private owners.

The Applied Scientific Research Corporation of Thailand (ASRCT)

The ASRCT has established a material building research and development center for analysing long and short-term construction policies, building techniques, and economic programming and coordination, design and development of buildings, and building system and documentation. It has plans to carry out testing of building materials and equipments in the future. The ASRCT is also conducting research on standardized modulare construction techniques to reduce material wastes.

- b) The Government organizations that have direct or indirect responsibility in financing of housing and urban development are listed below:
 - 1. The Bureau of the Budget.
 - 2. Ministry of Finance.
 - 2.1 The Government Bank for Housing Promotion.
 - 2.2 The Government Savings Bank.
 - 2.3 The Bank of Thailand'
 - 3. The Ministry of Interior.
 - 3.1 The Metropolitan City Municipality.

Bureau of the Budget

The Bureau of the Budget is one of the policy-control device within the office of the Prime Minister. It prepares a preliminary national budget which includes allocation for housing and urban development.

The Government Bank for Housing Promotion

The business activities of this Bank are selling houses and land on an installment-payment basis; making loan for the purchase of land, houses, or for building or renovating houses, or for redeeming mortgage on houses and land; making loan on mortgage of property; and accepting fixed deposits of more than 2 years.

The Bank has set up a revolving fund for development and sale of urbanized land only, and it supplement its resources by drawing upon its deposits for land-purchase.

The Government Savings Bank

In addition to performing the function of a regular savings institution. The Government Savings Bank provides loans to the Housing Bureau for building public housing and to its employees and depositors to build houses. It has instituted a deposit plan which is more liberal than the fending terms of the commercial banks, but it is restricted to the Metropolitan area of Bangkok only.

The Bank of Thailand

The Bank of Thailand is the central bank, operating under the overall control of the Ministry of Finance. It functions as banker to the government and acts as fiscal agent of the government in international transactions. It is likely to play a major role under the Housing Guaranter Program to secure foreign exchange loans.

The Metropolitan City Municipality

The Metropolitan City Municipality has its own sources of revenue and prepares a yearly budget which includes allocation for urban development and maintenance, urban renewal and housing. It also receives loans and subsidies from the Central Government for these purposes.

c) Although each of the agencies and the institutions, responsible for housing and urban development and for financing of these programs, performs its own specific function in its own specialized field, the NEDB provides a common meeting ground for the representatives of various agencies and institutions who attend the NEDB meetings to discuss the formulation of Economic and Social Development Plan and the Master Plan of Metropolitan Bangkok.

Source of Funds for Financing Housing and Urban Development

Housing

The major sources of finance for housing are classified into three categories.

1. Public domestic sources

A summary list of public sources both direct and indirect financial is set out below.

- 1.1 Direct Financial
 - 1.1.1 The Bureau of the Budget.
 - 1.1.2 The Government Savings Bank.
 - 1.1.3 The Government Bank for Housing Promotion.
 - 1.1.4 The Lottery Bureau.
- 1.2 Indirect Financial
 - 1.2.1 The Bank of Thailand.
 - 1.2.2 The Housing Bureau under the Department of Public Welfare.
 - 1.2.3 The Metropolitan City Municipality
 - 1.2.4 The Welfare of the Government and Semi-Government Agencies

2. Private Domestic Sources

During the last twenty year period a number of land subdivision projects for residential purpose and the projects of housing construction together with plots of land has been carried out under predominantly private auspices and financed largely with privately owned and controlled funds. Almost of these projects are for middle and higher income groups.

Sources for financing private housing projects both direct and indirect are the following.

- 2.1 Direct Financial
 - 2.1.1 Private Builder and Developer Companies.

2.2 Indirec: Financial

- 2.2.1 The Commercial Banks.
- 2.2.2 The Investment and Development Finance Companies.
- 2.2.3 The Insurance Companies.

3. International Sources

Only recently, the international funds have begun to play a modest but important role in financing of housing and related programs. The Soi On Nuj Housing Project is the first-private homeowner scheme with long term investment for mortgage financing and guaranteed by the AID Office of Housing with mortgage insured and administered by the Bangkok Bank.

Urban Development

The major sources of finance for urban development in Thailand usually come from the Central and Local Government Budgets and some from foreign loans also.

Brief Description of Schemes or Mechanisms for the Financing of Housing and Urban Development

Given below are brief details of some of the projects of the Housing Bureau, that have been completed, some that are in progress and others that have been planned.

Housing Bureau's programs include the construction of five-storey walk-u flats, two-storey row housing, two-storey duplex units, small and medium sized detached housing, rural land allocation, and (just begun) urban sites and services.

Financing comes from the national budget from a revolving fund and from commercial banks (at 9% yearly interest). The Housing Bureau designs and administers the programs while other divisions of the Department of Public Welfare provide social work and architectural and engineering services. Most projects are rental; some are hire-purchase schemes. Forty percent of the Housing Bureau's operating expenses are covered by rent collection, which the Bureau does itself. The remaining sixty percent comes from the national budget.

This is subsidized low-rent housing. Since 1963, 3440 units have been built at "Din Dang". Each unit is said to cost 50,000 Baht excluding land. Annual budget allowance for "Din Dang" is 15,000,000 Baht; 12,000,000 Baht from the national government and 3,000,000 Baht from a revolving fund. About 300 units are built per year. This is far below the demand, as there are already 50,000 applications to the Department of Public Welfare low income housing. Rent for these units is 100-120 Baht per month, which is just enough for maintenance and services. Selection of occupants is made by drawing lots. Eligibility requires Thai nationality, income range of 500-2500 Baht, and Bangkok residency of 6 months. Residents of slum clearance locations have 1st priority. Victims of rent inflation due to repeal of rent controls also have priority.

There is no particular priority given to squatter settlements. There are 80 units per building. Forty-three buildings have been completed to date. Each unit is basically one room, 11.5m ×3.5 m, with an entrance gallery and a rear balcony. Electricity, water, Asian toilet, and garbage chute are provided. The ground floor of the structure is open. There are four stories of flats above. Stairwells are located at each end. Construction is of concrete frame and floor slab, with light-weight block infill. They are well mainfained. Garbage is collected daily by the Municipality There is a janitor to each building. However, there are no commercial or community services in the project. Schools are nearby. "Side walk shops" have sprung up adjacent to the project.

The Department of Public Welfare has plans to build 10,000 additional "Din Dang" type units at other locations. The Department cites high density potential, lower land costs, less maintenance, and 50,000 applications as reasons for emphasizing this type of low-rent housing. However, social work studies by Thammasat University has shown that "Din Dang" housing is preferred by only 1% of Bangkok's squatter residents. This indicates that a better solution should be found for low-income housing

Another major activity of the Housing Bureau is its "Hire-Purchase" program. "Hire-Purchase" is a method by which property may be sold through rental payments. A contract is established whereby the buyer purchases a property by making an agreed-upon series of payments to the owner. The owner retains title till the full number of payments is completed, but the buyer has complete use of the property. Therefore, in effect, the property is "Hired". At the time of payment in full the buyer becomes owner. This is a common method of house purchase in Thailand. Purchases through mortgage financing and cash payment are also made.

The Housing Bureau is conducting a large project of "Hire-Purchase" housing at Klong Chan on the north-eastern outskirts of Bangkok. Begun in 1966, the project initially served as temporary housing for the participants 1966 Asian Games. 190 two-storey wood row house units were used by the Asian Games and are now rental units at 150 Baht month.

Over 500 duplex units have been completed at Klong Chan and sold by "hire-purchase" at 50,000 Baht/unit. There is no down payment, monthly payments are 500 Baht for 15 years. Selection requirements are: Thai nationality, income range of 1500–3000 Baht month, non-government employment, proof of not otherwise owning land. Each duplex structure is two stories, enclosing approximately 100 m.² of floor area, on a lot of 100 wah.² (50m² and 50 wah.² per housing unit). Cost of land and development is 600 Baht/wah.² (30,000 Baht/unit). Construction cost is approximately 1000 Baht/m.² (50,000 Baht unit). Subsidy must, therefore, be of the order of 30,000 Baht/unit.

At another site Klong Chan, 363 medium size detached units have been built for "hire-purchase" at a sciling price, including land, of 105,000 Baht. There is a 15% downpayment and 1200 Baht is paid per mohth for 15 years. Selection is the same as for duplex houses, but income levels are somewhat higher. The house is two stories with enclosed floor area of approximately

65m.² Construction cost is 65,000 Baht 1000 Baht per m.² Developed land cost is 40,000 Baht for 80 wah.² or 500 Baht/wah.²

Under construction for "hire-purchase" at Klong Chan are 204 small detached houses. They will sell for 90,000 Baht, including and, with a monthly payment of 850 Baht for 15 years. This is a very good plan Enclosed floor area of about 46 m.2 Lot size is 50 wah.2 Construction cost should be about 50,000 Baht; developed land about 40,000 Baht. The house can easily be expanded at a future date. Much work could be done by self-help reducing construction cost. This design represents the optimum minimal house plan would be generally acceptable to residents. It can be paid for (with long-term financing) by lower middle income families with gross family income of 3,000 Baht/month. The Housing Bureau has about 230 rai of land left at Klong Chan which could accommodate 1,200 small detached units. Land Development and construction could begin almost immediately.

In addition to Din Dang and Klong Chan, the Housing Bureau has done projects at Huay Kwang and Tung-Maha-Mek. At Huay Kwang, there are 450 completed two-storey duplex units and 1250 two-storey row house units. All construction is of wood. The project is subsidized low income rental, with rents for row housing at 50 Baht/month, and for duplexs at 90 Baht/month. The Housing Bureau has stopped using this type of project because wooden rental units require too much maintenance. At Tung-Maha-Mek, 56 detached wood houses and 413 detached concrete frame houses were built ten years ago for sale to lower middle income families. There was no down payment. Montyly payment was 400 Baht for wooden houses and 850 Baht for concrete frame for 15 years.

Measures for Increasing the Flow of Funds into the Housing Sector

Thailand has an acute shortage of finance for housing and urban development. The housing supply is far lagging behind the existing need. In recognition of the need for solving this problem the government organizations as well as the private institutions have been trying to increase the flow of funds into the housing sector.

Described below are some of the measures undertaken:

The Government Sector

During the Second Five-Year National Economic and Social Development Plan the Government had provided budget and loans of B 337 million for housing construction for the lower and middle income families in the Metropolitan Bangkok area and 2 million in other cities in the country.

Two years ago the Government Savings Bank instituted a deposit plan for housing. According to the plan, the minimum period for saving is three years. The borrower must mortgage his land and house as a security for the loan. The bank charges low interest rate at 7 per cent per annum on the loan and the maximum term of loan is 15 years.

Private Sector

Ten years ago there were no stock exchanges, investment companies, stock brokers, mutual funds or development banks in Thailand. There were the existing commercial and savings banks and provident and pension funds. The very limited amount of funds made available for housing by commercial and saving banks were and still are made for upper income housing.

Arranging non-bank financing for medium to long-term loans is presently possible, but only to a very limited extent in Bangkok. Several newly formed investment and development finance companies are engaging in this form of financing, but at exceedingly high rates.

Primarily, these companies arrange for the issuance of debentures for periods up to five years at interest rates ranging from 12-15%. They also issue common or capital stock. These issues are generally guaranteed by a bank, and recently some banks have become owners of businesses.

This relatively new phenomenon of selling local debentures and stock issues achieves the effect of channelling Thai savings into medium and long-term financing as well as into ownership of local firms. This activity offers some offset to the banks lack of providing such financing.

The roots of home ownership lie deeply in the traditions of Thailand Few Thai families will willingly rent if they can obtain home ownership. However, with the increase in population and shortages in housing, home ownership become increasingly more difficult to realize, especially by middle or low middle income families.

The outstanding private homeowner scheme making home ownership available with low down payment and long term financing has been the Soi On Nuj Housing Project for which the long-term investment for mortgage financing is guaranteed by A.I.D with mortgages insured and administered by the Bangkok Bank.

The Bank of Ayudhya began a housing scheme in 1965 under its plan for saving account loans for housing, education etc. For housing, the depositor deposits money each month for at least two years for which he receives 7% per annum interest. After an agreed to period, the depositor may receive a loan equal to double the amount of money deposited at 12% interest instead of the 14% paid on the banks other loans. The plan, however, requires monthly deposits of at least 300 Baht. The maximum loan is 120,000 Baht. Many depositors find it necessary to withdraw all or portion their deposits prior to completing the plan.

Examples of the newly formed investment and development finance companies engaged in home financing are BFIT (Bangkok First Investment and Trust Co., Ltd., formed by the Bangkok Bank and First National City Bank) and the Thai Investment and Securities Co. (TISCO).

BFIT, among other indicated services such as securities underwriting, investment management aid industrial services offers limited assistance in financing housing projects and apartment houses. Maximum term of mortgage is 10 years. The present vol > me is very small,

TISCO, a private investment organization connected with the Thai Farmers Bank among other services it offers, is also interested in making possible home ownership for middle and lower-middle income families but has written few loans to date.

Role of the Public or Government Sector and the Participation of Private Sector

At the present time, the extent of private sector participation in residential homebuilding by the construction materials industry, banking, housing cooperative societies, and builder-developers is still at a take off stage in Thailand. But residential home building can expand rapidly under investment resources which may be made available under the Housing Guarantee Program.

A growing residential home building industry can have the effect of reducing the RTG's need for providing adequate housing for middle income groups, and being able to focus its attention on the housing problems of the low-income groups.

Problems and Constraints in the Implementation of Housing and Urban Development Programs

During the past decade, the main national policies were to develop infra-structure, with particular emphasis on communication and irrigation systems. This was done with the aim of general agricultural and rural development. Development expenditure during the last two Plans was mainly on rural and agricultural programmes.

Even though rural development depends heavily upon urban areas, the investment expenditures of the government in the urban areas have not expanded correspondingly. The expansion of the various cities and towns has been unplanned and uncontrolled. The Bangkok metropolitan area, which is already a large city, has been expanding at a rate higher than those of other urban areas, and the rate of immigration to the Bangkok metropolitan area has been increasing.

Like any other city that grows without adequate planning or controls Metropolitan Bangkok is facing number of serious problems. There are inadequate and unsanitary housing conditions, problems of slums and squatter settlements, traffic congestion, insufficient public utility services, uneconomic use of land, rapid rise in land prices due to speculation, and also a number of administrative problems such as the need for crime prevention activities. Moreover, there are environmental problems such as air pollution, water pollution, inadequate sanitation, high intensity of urban living quarters with no planning of land use. These will adversely affect both directly and indirectly the economic and social development of the country.

The problems of the Bangkok metropolitan area, coupled with the importance of the area to the rest of the Kingdom, results in a heavy burden borne not only by Bangkok residents but also by those living outside the metropolitan area. The higher cost of living and doing business in Bangkok will in turn increase the cost of services rendered to those living outside the Bangkok Metropolitan area.

It is estimated that, at the end of 1971, there is a housing shortage of 100,000 units. If the present trend of public and private housing construction programmes were to continue, this shortage would increase to 170,000 units in 10 years time. It is also estimated that, out of this shortage, housing shortfall for the lowest income group, with a family monthly income of less than 1,500 baht will be about 60,000 units.

Slum and squatter settlements are to be found scattered all over the city. The largest is at Klong Tocy port area. There are about 4,300 families or 25,000 persons living in this slum area as squatters. In all of these slums and squatter areas there is a serious lack of public utilities such as electricity, water supply and educational facilities. This leads to a number of serious social problems.

The administration of the government housing programmes is also divided among a large number of government agencies. There is often lack of coordination and efficiency of operations is low. Government assistance to the private sector in the field of housing also needs to be expanded. In addition, studies need to be undertaken on the suitability of the various possible sources of funds for housing development.

However, the past performance of the government's public housing programme has been most inadequate compared with the demand for housing, particularly in the high density urban areas like Metropolitan Bangkok Thonburi. The rate of population increase has exceeded the rate of increase in the number of housing units built during the last ten years. During this period there were 150,000 units of housing built while the population increased by about 1.1 million persons. (TABLE 2)

TABLE 2 Population And Housing Increase In The Metropolitan City Municipality Area In Ten-Year Period Between 1962-1971

Year	Population (persons)	Housing (units)	Population Increase (persons)	Housing Increase (units)
1962	1,983,398	250,934	Base Year	Base Year
1963	2,106,981	260,290	123,583	9,356
1964	2,173,724	272,342	66,743	12,052
1965*	2,407,585	309,294	233,861	26,952
1966	2,500,367	323,255	92,782	13,961
1967	2,614,356	340,064	113,989	16,809
1968	2,718,794	361,544	104,438	21,480
1969	2,850,756	382,546	131,962	21,002
1970	2,971,753	402,652	120,997	20,106
1971	3,075,300	420,051	103,547	17,399

^{*}Municipal Bounderies changed.

Source: The Metropolitan City Municipality.

If an average size of family is 5.5 persons it can be computed that the shortfall in number of houses built during the decade has been approximately 170,000 units or 17,000 units nanually.

Construction of public housing, particularly for low income families, is the government's responsibility. Until now, the public housing construction programme has not advanced very rapidly because of a number of obstacles. There is not as yet an accepted government housing policy and it is, therefore, impossible to prepare a long range programme or even to allocate sufficient manpower for such work. Moreover, there are many agencies involved in similar activities with the result that annual budget allocations are spread thin among uncoordinated agencies. Nor are there any accepted guidelines on sources of funds.

Measures Adopted by the Government for Overcoming the Problems on Housing Finance.

In order seriously to tackle these housing problems the NEDB has recommended that the government establish the following definite policy on housing to serve as the guideline of operating agencies;

The government will build and promote the construction of housing facilities to balance with the demand of the people, income level, and also the Government's resources. The government shall provide land and a town plan and shall promote investment in construction materials manufacturing. This will be done by an efficient agency.

To implement the general policies set up above the following measures will be undertaken by the government:

- (a) Formulation of a national housing development programme covering a period of 30 years (1972–2002) which will have to be revised and updated from time to time to adjust to changing circumstances.
- (b) The greater part of the government housing programme will be for low income families. For middle income families housing will be undertaken not only by the government but also by the private sector. The government shall assist and promote the private sector to invest in housing projects.
- (c) In order the render assistance to the rural population and to lessen the need to migrate to the towns, the government shall expand its activities in the field of land settlement schemes and land allocation projects for the rural population with inadequate farm land.
- (d) The government shall conduct housing demand surveys at regular intervals in order to be informed about changes and developments so that the projects can be adjusted in accordance with the actual situation.
- (e) In order to achieve coordination between the various government agencies, a coordinating committee will be set up to determine policy matters and to find solutions to various problems. This committee will also look into questions of administrative improvements.
- (f) The Government shall assist and promote the establishment of financial institutions to extend housing credit at low rates of interest.

- (g) The Government will seek additional funds through the issuance of Bonds or other kinds of loans for the direct expansion of housing programmes or shall guarantee housing loans, both domestic and external.
- (h) The Government shall promote new methods of lower-cost construction. The government will promote long term investments in construction and building materials industries. Assistance will also be given to research on construction material development and skill training activities.
- (i) The Government shall prepare Master Plans for towns, and relate these plans to housing heeds in urban, rural and regional areas of the Kingdom.
 - (j) Housing problems in the densely populated urban areas will receive high priority
- (k) A target is set to eliminate the housing shortage in the Bangkok metropolitan area within 10 years. This is to be done by aiming at an annual rate of housing construction of 10 units per 1,000 population.
- (l) Quality control on housing shall be enforced. Consideration will be given to the health, social and environmental aspects of the housing programmes.
- (m) Housing policies and their implementation shall be in accordance with general town planning principles.
- (n) The Government shall seek capital and shall promote private investment in this field so that expenditures on housing construction will amount to 4% of Gross National Product within 10 years.
- (o) The Government will provide and assist in the provision of land for housing construction, particularly in the larger urban areas by first using public land.
- (p) The Government shall make amendments in laws, rules and regulations so that housing programmes can be developed efficiently and in accordance with the policies and guidelines set up by the Government.

During the Third Plan period, the existing complex problems of Metropolitan development will be alleviated by the following actions.

A central housing agency will be established to replace the various agencies with similar functions in the Second Plan period. The establishment of this new single central agency will be undertaken in stages. The first stage would be the appointment of a housing coordination committee with its own secretariat, assigned the responsibility of formulating an overall housing plan and coordinating the work of other existing implementing agencies. Future housing construction programmes of the various government agencies will have to be integrated with the general principles set up by the Committee. Housing programmes within this framework shall not be restricted to new construction but shall also include redevelopment and urban renewal programmes. Slums and squatter settlements which are now scattered all over the area will be redeveloped.

With regard to financing, studies will be undertaken and housing finance institutions will be established. These financial institutions will assist in the housing construction, urban renewal

and slum clearance programmes. Sources of finance will be sought both domestically and from abroad. Domestic savings for housing purposes will be promoted. Foreign finance, in the form of both loans and grants will be sought to improve the housing conditions of the Bangkok metropolitan area.

The target set for housing construction and urban redevelopment for the Third Plan shall be that within a period of 10 years, there should be no more housing shortage in the Bangkok metropolitan area. Housing for low income families which is the direct responsibility of the Government will be built in various parts of the metropolitan area, both in the central districts and in the suburbs. During the Third Plan, the target has been set for developing slum areas housing 30,000 families, building 5,073 units of flats and 780 units of row housing for low income housing projects. Promotional privileges will also be granted to the private sector to induce investment capital into the field of middle income housing in the metropolitan area.

Studies and recommendations will also be made on standards of housing and building materials, and these will be useful to builders both government and private. The study, research, planning design and setting up of standards of construction and building materials shall be undertaken jointly by the various agencies concerned. Most of the work in this field will be performed by the center for building research and development of the Applied Science Research Corporation of Thailand. The center for building research and development shall be expanded to be able to cope with the amount and quality of work that expected to be performed during the Third Plan period.

With the aim of providing information which is useful for future planning activities, data collection in the field of housing will also be regularly undertaken and its coverage will extend much beyond what has been done during the Second Plan period.

It can generally be said that housing problems, both in terms of quality and quantity, are mostly felt in the Bangkok meteropolitan area. The problems have been accumulating for a long time and urgent action must be undertaken in the Third Plan period.

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