



# Some low-income housing delivery subsystems in Bangkok, Thailand

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## I. INTRODUCTION

**THE URBAN POOR** in developing countries face tremendous problems in finding adequate housing which is suitably located, provided with basic infrastructure and services and has security of tenure. Most such housing, whether provided by the public or the private sector, is too expensive for the low-income groups. As a result, they settle for less than adequate housing. Since a suitable location for employment opportunities is a major requirement, they accept housing with few or no basic services, with little security of tenure and of inferior quality. Such housing is usually supplied by the informal sector.

The types of housing supplied by the informal sector depend to a large extent on the political, socio-economic, legal and physical conditions of the city concerned. The low-income housing conditions differ from one country to another and even from one city to another. Moreover, within a particular city the low-income population does not form a homogeneous group, but has a wide variety of housing needs and priorities, catered for by a variety of informal housing delivery subsystems.<sup>(1)</sup> This paper describes some of the low-income housing delivery subsystems in Bangkok.

## II. THE LOW-INCOME HOUSING DELIVERY SYSTEM IN BANGKOK

**AT HABITAT**, THE United Nations Conference on Human Settlements in Vancouver in 1976, a report on Bangkok's low-income housing system stated that it "...delivers housing solutions daily to satisfy the needs of the low-income people. It is made up of several subsystems: the squatters' housing subsystem, the employee housing subsystem, the filtered housing subsystem, the public housing subsystem and the rural commuters' subsystem. These again are divided into several types. Altogether they provide housing for all the low-income people in the city."<sup>(2)</sup>

### a. Squatters' Housing Subsystem

These are wooden dwellings usually on unfilled land. The subsystem is divided into three types:

1. Hardoy J.E. and Satterthwaite D. (1986), "Shelter, Infrastructure and Services in the Third World Cities", *Habitat International*, Vol. 10, No.3, pp.251-252.

2. Angel S., Benjamin D. and de Goede K.H. (1977), "The Low-income Housing System in Bangkok", *Ekistics*, Vol. 44, No. 261, p. 80.

- squatter settlements, built without the landowner's permission;
- rental 'squatter settlements' which are built with the consent of the landowner to whom the dwellers pay a nominal rent (and thus not strictly 'squatters');
- boat houses which occupy a permanent location on the canals in the city.

## **b. Employee Housing Subsystem**

This is housing at or near the place of work. The subsystem is divided into five types:

- workplace site houses: wooden houses built with permission from the employer on the factory site and constructed by the workers for themselves and their families using second-hand materials;
- factory site dormitories: usually crowded quarters where a number of young single people share one room, with little space or privacy;
- staff and servant quarters: quarters for maids, gardeners, guards and other staff and their families within middle and high-income residential compounds or in the compounds of public institutions and business premises; the quarters are provided as payment in kind by the employer;
- institutional housing: barrack-type houses built for soldiers, railway workers etc. and their families;
- itinerant construction workers' housing: temporary houses on the construction site built out of the building materials to hand by construction workers for themselves and their families.

## **c. Filtered Housing Subsystem**

These are dwellings created by dividing larger houses (in particular buildings with shops), into small cubicles which are rented to low-income households. This practice is prevalent in the older parts of the city, particularly in Chinatown.

## **d. Public Housing Subsystem**

These consist of walk-up apartment buildings, row houses, single-family units and the like developed by the National Housing Authority (NHA) and other public agencies.

## **e. Rural Commuters' Subsystem**

A considerable number of people live in the peri-urban and rural areas around Bangkok and commute to work in the city by train, car, bus or boat.<sup>(3)</sup>

The authors of the report concluded that "...the majority of the system's components rely little on planners, engineers and other professionals, and receive little attention from government housing agencies. Yet, because of this delivery system, there is no

3. See reference 2, pp. 79-84.

4. See reference 2, p.83.

'housing shortage' in Bangkok. Everybody is housed in one way or another, and there are no people sleeping on the streets. This system is reliable, and can provide a great number of housing solutions, whenever they are needed."<sup>(4)</sup>

### III. RECENT DEVELOPMENTS IN BANGKOK

**THIRTEEN YEARS LATER**, this system is still largely in place. The lack of information on the size of each of the subsystems in the past and at present makes it difficult to determine changes in the relative importance of each of the subsystems. However, it can be assumed that changes have occurred, because the overall conditions in Bangkok have altered dramatically in the past few years. The most important change is probably the economic growth of Thailand which is due mainly to a boom in exports, tourism and foreign investment, and which is concentrated in the Bangkok Metropolitan Region and surrounding provinces.

This rapid economic growth has two important consequences for the low-income population and its housing conditions. No doubt, low-income households have benefited from the economic growth which must have resulted in an increase in real income for the entire population of Bangkok. However, the rapid economic growth has also increased the demand for land, particularly for hotels, shopping areas, office space and condominiums in various parts of the city, and for factories and housing estates on the urban fringe. This has led to a sharp increase in land prices in the Bangkok Metropolitan Region.

The increase in real income has made it possible for a growing proportion of Bangkok's population to find accommodation in the formal housing market. But the increase in land prices has made it more difficult for the lowest-income groups to find affordable land and housing in the city centre. Informal housing for the urban poor is gradually being pushed towards the urban fringe. This is not a problem for industrial workers who can find employment in the many new factories around the city. However, many low-income households are self-employed or employed in the service sector and small-scale industries which are concentrated in the city centre. They see their housing possibilities increasingly threatened.

### IV. SLUMS

**IT IS CLEAR** from the previous description of squatter housing subsystems that what have been called 'rental squatter settlements' are in fact not squatter housing at all, as the residents occupy the land with the consent of the owner and usually (though not always) pay rent. Nowadays, this subsystem is generally referred to in Bangkok as slums (in Thai: 'salams') which, unfortunately, covers both land-rental slum and squatter settlements. The land-rental slums are by far the most important housing delivery subsystem in Bangkok.

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Since Bangkok's growth is mostly unplanned, many plots of land cannot be easily developed because of their inaccessibility (i.e. a lack of access roads and bridges). As these plots are currently not very valuable, the owners often allow low-income households to occupy the land at a nominal rent or even free of charge. The low-income family and the landowner may sign a contract which allows the former to occupy the land and build a house, but stipulates that the landowner can terminate the lease by giving 30 days notice. Consequently, security of tenure in the slums is low. However, despite this, many slums in Bangkok have been in existence for several decades.

Sometimes the landowner provides a house as well as walkways and electricity and water supplies, but usually the slum dwellers have to build their own houses out of wood, corrugated iron sheets and waste materials. The land is usually unfilled and the houses are built on posts because the plots flood during the rainy season. Slum dwellers may rent out their house or one or more rooms in their house to other families. Families also settle in between the slum houses and, if they do not pay rent to the landowner, may be considered squatters.

Slums are found on private land (65 per cent), on government-owned land (28 per cent) and on land of mixed ownership (seven per cent). Of a total of 383 government-owned slum land parcels, 311 are wholly or partly owned by five major landowners.<sup>(5)</sup>

5. PADCO (1987), *The Land and Housing Markets of Bangkok: Strategies for Public Sector Participation*, Volume II, Technical Reports, Bangkok, p.5.10

**TABLE 1: THE LARGEST PUBLIC LANDOWNERS OF 'SLUMS'**

Owner	Number of land parcels
Temples	118 (31%)
Crown Property Bureau	74 (19%)
Royal Irrigation Department	48 (12%)
Treasury Department	37 (10%)
State Railways of Thailand	34 (9%)
Other Agencies	72 (19%)
Total	383 (100%)

What might be termed 'genuine' squatter settlements where land is occupied without the consent of the owner, form only about 16 per cent of the total number of informal settlements in Bangkok; land-rental 'slums' are more consistent with Thailand's system of values which condemns any infringement of private property rights. Squatter settlements are mostly situated along the city's 'klongs' (waterways) which serve as irrigation and drainage canals and transportation routes. The strip of public land along the 'klong' is rarely used and the urban poor, therefore, consider it a suitable place to live.<sup>(6)</sup>

Together, slums and squatter settlements house about 20 per cent of Bangkok's six million inhabitants. An analysis of aerial photographs taken in 1974 and 1984 revealed that there were some 632 slums and 108 squatter settlements in Bangkok in 1974, and that their numbers had increased to 845 slums and 175 squatter settlements by 1984. The slums and squatter settlements are, however, growing at a slower rate than the city as a whole, and the share of slum housing in the total number of

6. Pornchokchai S. (1988), "Spontaneous Settlements. Canal Housing: Settlements along Lad Prao Canal", UNCHS-PGCHS International Workshop on Housing, Bangkok.

7. See reference 5, pp.1-8.

residential units decreased from 25 per cent to 18 per cent in the period 1974-1984.<sup>(7)</sup>

## V. SLUM EVICTIONS

**WITH RAPIDLY INCREASING** land prices, an increasing number of landowners decide to develop or sell their land. Thai society attaches great importance to avoiding conflict, so landowners often stop collecting rent from the slum dwellers to signal that they intend to terminate the lease contract, although it may take several more years before they actually request the slum dwellers to leave. This gives the slum dwellers time to prepare for the eventual eviction and can be seen as a form of compensation. With the same view to avoiding conflict, many slum communities accept that their stay on the land is only temporary and agree to leave when ordered to do so by the landowner.

If the community does not accept the eviction order, a fire may destroy all or most of the mainly wooden houses in the slum. The standard contract between slum dwellers and landowner stipulates that the lease is automatically terminated if a fire destroys the houses. Moreover, the building regulations of the Bangkok Metropolitan Administration state that structures destroyed by fire cannot be rebuilt within 45 days, in order to allow officials to investigate the causes of the fire. For the landowners, fires are thus an effective means of evicting slum dwellers from their property. Slum dwellers who return to the site to rebuild their houses become virtual squatters on the land they occupied for years.

Aerial photographs show that 150 slums disappeared between 1974 and 1984. A survey conducted by the National Housing Authority to assess the rate of slum evictions in Bangkok revealed that, in the period 1984-1986, more than 5,000 slum households were evicted from 49 (mainly squatter) settlements. In the same period, nine slums (1,500 households) underwent demolition, 12 communities (1,200 households) received a court order to vacate the land, 43 communities (8,000 households) received eviction notices, 10 slums (3,000 households) were situated in expropriation areas and 72 communities (14,000 households) had heard rumours of pending evictions. In 843 of the 1,020 slums, there were no clear signs of eviction.<sup>(8)</sup>

8. See reference 5, pp.5. 12.

## VI. LAND SHARING

**THE REDUCED POSSIBILITIES** for renting land in the inner-city, due to the increase in land values, have forced the urban poor to look for new ways of housing themselves. Some slum communities have been able to turn the increased land values to their own advantage. While most slum dwellers still agree to vacate the land after receiving an eviction notice, non-governmental organizations (NGOs) in Bangkok have convinced some slum communities not to give up the land so easily. Emphasizing the

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right of the urban poor to live in the city, these NGOs have introduced a new approach called 'land-sharing'.

Land-sharing is an agreement between slum dwellers occupying a piece of land and the landowner to share that land between them. The slum dwellers agree to vacate the commercially most valuable portion of the land they occupy so that the landowner can develop or sell it. The landowner agrees to sell the other portion of the land to the slum dwellers at a price below its market value. This approach has received the support of the National Housing Authority (NHA) and has succeeded, in a limited number of cases and in a variety of circumstances, in providing land for housing the city's poor. Below are some examples of land-sharing schemes.

The population of Wat Ladbuakaw built their houses on 1.6 hectares of private land. In 1964, the landowner stopped collecting rent and, in 1978, a fire destroyed 500 houses. After the fire, some 300 families rebuilt their houses but the landowner sold the land to a developer who started evicting the residents and offering compensation ranging from 375 to 6,250 baht. About 220 families accepted the offer and left. In 1982, the National Housing Authority (NHA) proposed 'land-sharing' and 0.32 hectares were sold to the NGO at 500 baht per square metre although the market value was 900 baht per square metre. The residents are now paying 455-650 baht per month over a period of five years to the NHA to purchase the land. They have built their own houses on 67 plots ranging in size from 34 to 60 square metres.

The Klong Toey slum was built on land belonging to the Port Authority of Thailand (PAT). When the Port Authority needed land for a container terminal, it began to evict 1,780 families. Following action by the community, supported by local NGOs, and under pressure from the government, the Port Authority agreed to lease 10 hectares in Klong Toey to the National Housing Authority at 0.25 baht per square metre per month for a period of 20 years. The NHA developed a sites-and-services scheme and leased the plots (ranging in size from 60-108 square metres) for 60-1,100 baht per month to the slum dwellers. They built their own houses with loans from two NGOs and with technical assistance from the Royal Thai Army. About 1,080 families have been rehoused in this area.

In 1979, a developer started evicting the 500 families from the Manangkasila slum which had been built on Treasury Department land. The developer offered compensation to the residents of 200 baht per square metre of built-up land. More than 80 families accepted the offer and moved out. The others formed an organization to negotiate better compensation, possibly in the form of land-sharing. In 1982, the landowner agreed to lease 0.67 of the 1.75 hectare site on a yearly basis to the Manangkasila Credit Union Housing Co-operative which was made up of the remaining 198 families. Each family made a down-payment of 700 baht and pays a monthly rent of 0.5 baht per square metre. For the very small plots (20-40 square metres), the NHA designed a two-and-a-half-storey house, of which 150 have been built.

The Crown Property Bureau owns the land where the Rama IV slum is situated. In 1966, fires demolished many houses. The landowner told the residents to vacate the land and leased it to a developer, although not all the inhabitants' lease contracts had

9. Panroj Islam P. and Yap K.S. (1989), "Land-sharing as a Low-income Housing Policy", *Habitat International*, Vol.13, No.1, pp.117-126.

10. Bangkok Post, 27 April 1989.

11. Angel S. and Yap K.S. (1988), *The Sengki Land-Sharing Project: A Preliminary Evaluation*, Report submitted to the United Nations Centre for Human Settlements (Habitat) in Nairobi (Kenya), Bangkok.

12. See reference 9, p.122.

expired. When the contracts expired and the developer tried to evict the 700 families, the slum dwellers mobilized political support. The struggle received extensive publicity and backing from local and international NGOs. In 1981, the developer agreed to designate 2.4 of the 8.43 hectares for the construction of four eight-storey buildings for the slum dwellers who were to be given 20-year leases on the flats. However, by 1989, the construction of these buildings had not yet begun.<sup>(9)</sup>

In 1980, the Crown Property Bureau started evicting the 159 families who lived in the Sam Yod slum. The community organized itself and solicited support from NGOs, politicians and the National Housing Authority. In 1982, one of the NGOs proposed a land-sharing scheme which the residents rejected. In 1986, the NHA prepared a new plan with four-storey buildings to resettle 192 families. This plan was accepted by the landowner and the community leaders. In early 1989, the Crown Property Bureau and the NHA told the slum dwellers to vacate the site for the construction of a shopping complex, a car park and the flats. This will take two years and the slum dwellers will have to find temporary accommodation elsewhere whilst their flats are being built.<sup>(10)</sup>

The land on which the Soi Sengki slum is situated belongs to the King's Property Bureau (KPB) which did not try to evict the slum dwellers, but refused to renew the leases after a fire destroyed the settlement. In 1984, the Bureau agreed to sell 0.6 of the 1.1 hectares to the slum dwellers who formed a co-operative and bought the land in 1987. Having made a downpayment of 20 per cent, the co-operative is now paying the Bureau 75,000 baht a month over a period of five years. A total of 143 households have been selected for the scheme. The plots have been demarcated, but no houses have been built yet, as some of the lowest-income households have difficulty in paying for their plots and other households claim larger plots than those which have been allocated to them.<sup>(11)</sup>

Land-sharing represents an interesting approach to securing land for housing the poor but it must be stressed that only in the above six cases were slum communities able to achieve land-sharing, and that in three of the six cases the agreement has yet to be fully implemented. Moreover, many households originally living in these six slum communities could not wait for the outcome of the negotiations and left before an agreement had been reached. In many slums, land-sharing is not possible because the area is too small to partition or the reconstruction of the settlement is too expensive for the slum dwellers.<sup>(12)</sup>

Land-sharing also tends to ignore the heterogeneity of the slum population. A slum usually houses people renting land, people renting houses and squatters who do not necessarily operate in the same housing submarket. It accommodates households with very different income levels who can afford different forms of housing; some may be able to buy a plot in the scheme, some may already own land or a house on the urban fringe, while others may be too poor to take part in the project or may prefer to rent land.

## VII. RESETTLEMENT

**IN VIEW OF** the rapidly increasing land prices, landowners nowadays may offer 10,000 baht or more to households which are prepared to vacate their land immediately. Many communities now initially resist such a buy-out and ask for higher compensation. Some have succeeded in obtaining compensation of 40,000 baht per household. This may be sufficient to buy a plot of land on the urban fringe, but it is not usually enough to also finance the construction of a house. A recent example of this kind of resettlement is the Klong Koom Resettlement Project.

Three slum communities with a total of 110 households occupied land belonging to the State Railways of Thailand (SRT). Although located not far from the city centre, the land had not been developed due to a lack of access roads. In December 1988, a new road (Rama IX Road) was opened in the area and this increased land values considerably as the land was now accessible and available for development. The State Railways leased 14 hectares of land to a private developer who planned the construction of shopping villages, hotels, an office condominium, a department store, restaurants and supermarkets at a total estimated cost of 1,500-2,000 million baht.<sup>(13)</sup>

In October 1988, the State Railways and the developer offered the three communities 8,500 baht per household to vacate the land. The communities rejected the offer and proposed land-sharing but this, in turn, was rejected by the State Railways and the developer. In February 1989, the offer was increased to 10,000 baht per household together with a strip of suburban land running alongside a railway line, 20 metres wide and long enough to resettle all the households. The communities also rejected this offer. They demanded compensation of 40,000 baht per household and requested that the National Housing Authority buy a plot of land which they had identified as affordable and suitably located in Bangkapi in the north-east of Bangkok. However, as negotiations continued, more and more households accepted the 10,000 baht compensation and houses were demolished. One of the three communities fell apart when its leader accepted 12,000 baht and left. Soon afterwards, the other families dismantled their houses and moved away. Three families found shelter under a bridge nearby.

The remaining two communities persisted and negotiated compensation of 18,000 baht per household which they used to buy 1.1 hectares of land in Bangkapi. In May 1989, the 40 remaining families from Rama IX Road (and 50 other households evicted from slums in Juay Kwan and Pratnunam) resettled on the land which they bought for 375 baht per square metre. The land is cheap because there is no public access to the plot and the existing unpaved road runs over the property of four different landowners; the price of better situated land in that area is about 1,000 baht per square metre. The National Housing Authority prepared a layout plan with 80 square metre plots and raised the access roads. However, to date, the plots have not been filled, there is no proper water supply, no electricity and no drainage.

The families have made a down-payment of 10,000 baht for the land and have received a loan from the National Housing Auth-

13. *Business*, 1989: 90-91, pp. 223-224.



ority which they pay back at a rate of 650 baht per month; after two years, a bank will take over the loan. The residents from Rama IX Road have 8,000 baht compensation left for the construction of their houses. This is obviously insufficient and most families have, therefore, built their houses with materials from their former slum settlement.

## VIII. INFORMAL LAND SUBDIVISIONS

**THE KLONG KOOM** Resettlement project resembles the informal subdivisions which are common on the urban fringe of Bangkok. Land subdivisions consist of unfilled plots served by paved or unpaved raised roads, water from a well and electricity. The developer, who may be the original landowner, a broker, the village headman or a business company, usually negotiates with the owners of adjacent plots for free right-of-way to the land in exchange for road access at the edge of their plots. Narrow lanes are thus laid wherever landowners are most co-operative, often resulting in a haphazard road network.

In the late 1960s, land subdivisions gained a bad reputation as developers failed to transfer the plots to the buyers, while others failed to deliver the services which had been promised. In 1972, a decree was issued to curb malpractice in the subdivision and sale of land. In addition, regulations were set requiring minimum plot sizes, wide and properly paved roads, drainage, sewage treatment and public amenities. However, these regulations increased the cost of land subdivisions and pushed their price beyond the means of many households.

Fortunately, many small developers continued to subdivide land in the old manner using a loophole in the decree which exempts a subdivision of nine plots or less from the regulations. The developers obtain one or more land parcels and divide each parcel into nine plots; each plot is then transferred to relatives and acquaintances. Once the new deeds have been obtained, they again submit each plot for subdivision into nine plots until the desired plot size has been achieved. In this way, the subdivider can circumvent the regulations and provide minimum infrastructure such as narrow lanes without proper drainage.<sup>(14)</sup>

For lower middle-income families in Bangkok, informal subdivisions are an important submarket as they provide plots at an affordable price; they are a form of private sector sites-and-services project. The infrastructure conditions in the land subdivisions may not be very different from those in a rental slum with unpaved roads, unfilled land and minimal infrastructure but there is security of tenure because the families own the land. A disadvantage of most informal land subdivisions is their remote location on the urban fringe. However, some are located near industrial areas and provide housing opportunities for factory workers.

As the Bangkok Metropolitan Region is quickly becoming industrialized, the number of factory workers is increasing, particularly in the north and south-east of the city. Due to the high demand, factory worker housing has developed on land sub-

14. See reference 5, pp.4, 6-7.

divisions in the area. An employee of a factory buys a plot of land in the subdivision and initially lives there on his own. When he discovers the high demand for low-cost accommodation, he adds a row of six to 12 rooms to his house to rent to his fellow factory workers. Most of the structures are single-storeyed, but some are double-storeyed. They are built of wood or cement blocks with each unit usually occupied by a single family and the water supply coming from a deep well.

## IX. LOW-COST HOUSING

**THERE HAS BEEN** rapid growth in Bangkok's private housing market in recent years. Although private developers did not enter the market until the late 1960s, they rapidly increased their production from 18,690 housing units by 1974, to 122,490 housing units by 1984. In the early 1980s, the demand for middle-income housing, particularly in the suburban areas, began to weaken due to rising construction costs, high land prices, high commuting costs and the unavailability of housing finance. To reduce construction costs, developers started to build townhouses and condominiums. However, the market for such units became saturated.<sup>(15)</sup>

In the 1980s, developers moved into the low-cost housing market and produced large numbers of complete land-and-housing units in the outlying suburbs for less than 250,000 baht, despite increased land prices. Most of the houses cost 175,000-200,000 baht with a down-payment of 50,000 baht; monthly repayments are 1,750 baht on a 15-year mortgage loan at 11.75 per cent interest. A significant number of the houses cost 150,000-175,000 baht, with a down-payment of 46,000 baht and monthly repayments of 1,500 baht. Although beyond the means of the lowest-income groups, these houses extend the range of people who can afford to purchase houses and are an important contribution to the housing stock.

According to the National Housing Authority, the private sector houses constructed in 1980 could be afforded by households earning 10,000 baht or more per month. These households formed only 15 per cent of the population of Bangkok in 1980; in other words, private sector housing was unaffordable by 85 per cent of Bangkok's population. In 1987, the private sector was producing housing units which required monthly repayments of 1,500 baht and, therefore, were affordable by households with an income of 6,000 baht per month. Such households now form 55 per cent of the city's population. Many see this development as evidence that, without market restrictions, the private sector is able to produce affordable housing for lower-income groups.<sup>(16)</sup>

However, the low-cost houses produced in 1987 differ markedly from the houses built in 1980. The plots and the floor areas of the 1987 low-cost houses are smaller than those of the 1980 low-cost houses; the 1987 houses are almost exclusively row houses; and the projects are located further away from the city centre. Moreover, several temporary rather than structural factors have contributed to the downward trend. As the banking system experienced high liquidity, the Government Housing Bank offered

15. Department of International Economic and Social Affairs (DIESA) of the United Nations (1987), *Population Growth and Policies in Mega-Cities: Bangkok*, Population Policy Paper No. 10, New York, p.27.

16. See reference 5, pp.1-25.

17. "Double-digit Growth Again, Economic Review 1989 Mid-Year", Bangkok Post, p.19.

mortgage loans at 11.75 per cent. This forced commercial banks to lower their rates from an average of 16 per cent in 1980 and local finance and insurance companies also started to compete in the mortgage loan market. The price of building materials was also relatively low, partly due to the low oil prices.

The situation is now changing again.<sup>(17)</sup> The arrival of new industry from Japan, South Korea, Taiwan and Singapore and of capital from Hong Kong has increased the demand for offices and high-income housing. This has resulted in a boom in the construction of office buildings and condominiums which has pushed up the price of land and building materials. It is, therefore, likely that the down-market trend in housing construction has been only a temporary phenomenon. Furthermore, many families in Bangkok have a household income of less than 6,000 baht per month and, therefore, cannot afford private sector low-cost housing. They still have to resort to more informal housing solutions such as slums and squatter settlements.

## X. CONCLUSIONS

**THE INCREASING DEMAND** for land in Bangkok is gradually reducing the opportunities for the urban poor to rent land in the more central locations they need for cheap access to jobs or income earning opportunities. Although landowners are still willing to rent land to the urban poor on a temporary basis, these new slums are situated ever further away from the heart of the city and its informal economic opportunities.

For some slum dwellers this is not a serious problem. Because of Thailand's rapidly growing economy, they can now afford to buy a plot of land in an informal subdivision, or even a private sector low-cost house, and to pay the additional transportation costs. Other slum dwellers have not benefited so much from the economic development but, rather than being evicted from the city, they 'played the market' by capitalizing on the high demand for land and by bargaining for a share in the increased land value. This enabled them to buy rather than to rent land in the city, either on the original site (land-sharing) or at an alternative location (resettlement).

Consequently, three new land-and-housing delivery subsystems have developed in Bangkok in recent years:

- a subsystem for low-cost land-and-housing units in private sector schemes;
- a subsystem for semi-serviced plots in informal land subdivisions;
- a subsystem for commercially less attractive plots of land for sale rather than for rent, mainly in the suburbs.

The size of these subsystems is small relative to the housing needs of Bangkok's low-income population, and their future is uncertain. For most low-income families in Bangkok, they cannot provide adequate housing. These families will probably continue to live in land rental slums, with ever higher densities and deteriorating housing conditions or they will move to new land rental slums located further from the city.