

LOW-INCOME HOUSING-TECHNOLOGY AND POLICY

VOLUME III



Edited by

R. P. Pama, S. Angel and J. H. De Goede

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on

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Asian Institute of Technology

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FOREWORD TO VOLUME III

Volume III contains the keynote lectures given during the International Conference on Low-Income Housing – Technology and Policy, and additional papers submitted during the Conference. The Conference was held at the Asian Institute of Technology between June 7 and 10, 1977, and was attended by over 200 participants from 26 countries the world over. The short duration of the conference, the large number of topics and papers discussed, and the large number of participants gave the meeting an aura of intensity and urgency.

The many faces of the intractable low-income housing situation in the developing world were illuminated from a large number of different angles. The Conference provided a unique opportunity for the participants to meet many new people sharing their concern and their commitment to housing the poor. The strength and the energy accompanying this important commitment could be felt throughout the conference, and imbued the atmosphere with a sense of unity of purpose and a basic agreement on the common objective – decent human shelter for every family around the world. This basic agreement transcended the healthy disagreement, debate and argument on the various specific issues raised and discussed during the conference.

While it is difficult to assess the degree of agreement or disagreement among the participants, the organizers were able to feel a large measure of consensus among the participants on a large number of issues:

Housing must be seen as one aspect of national development. Rural development is essential as a break on migration to the urban areas, which is at the root of the inability of urban administrations to provide adequate housing services for incoming migrants. Governments, necessarily limited by resource constraints, must align their objectives in housing with realistic programs that can be implemented with existing resources – whether they be financial, manpower, material, or technical resources. Housing programs must be multi-faceted and tailored to the specific needs to the lower income population, which finds itself in a variety of different circumstances in terms of location, employment, income, cultural and social traditions, and community structure. Programs which maximize the participation and the inputs of the users are more likely to succeed, while at the same time reducing the burden on the government of providing total housing packages.

There seemed to be considerable agreement that there has emerged a realistic approach to low-income housing, which often lacks the political will necessary to implement it, particularly as it pertains to obtaining land for low-income housing. Nevertheless, serious progress on the land issue has been reported in several countries. A key element of this new approach is the emphasis on housing assistance, rather than housing construction. Many reports stress the emergence of joint efforts by governments, private organizations, and low-income people in housing. Sites and services programs, slum improvement programs, and various other mechanisms to aid groups and individuals in housing themselves adequately are on the increase, and are already in full operation in a number of places. It is becoming clear that this new approach, coupled with the use of appropriate technology in construction, and with a strong emphasis on local building materials and on traditional norms of social organization of communities, is gaining ground. In this sense, the conference high-lighted the consolidation of a new paradigm in housing, stressing and acknowledging the people's efforts in housing themselves, the governments' efforts to provide housing assistance in a large variety of ways, and the professionals' renewed interest in simple and efficient appropriate technologies, more specifically suited to human needs.

The editors and organizers of the Conference wish to thank all the participants in the conference for their active collaboration in making the conference a success and to extend their warm appreciation to all of those who helped finance, organize, plan and execute the Conference.

The editors are especially indebted to Mr. Rashidul Hasan Khan who prepared the final manuscript of the third volume.

R.P. Pama
S. Angel
J.H. de Goede

Asian Institute of Technology
Bangkok, Thailand
January, 1978

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HOUSING POLICIES - CONSTITUTIONAL DIRECTIONS

CHAPTER VI
KEYNOTE LECTURES

*International Conference on
LOW INCOME HOUSING - TECHNOLOGY AND POLICY
Bangkok, Thailand
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THE LOW INCOME HOUSING DELIVERY SYSTEM IN ASIA

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with

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I INTRODUCTION

The focus of this article is the entire system for delivering low-income housing in Asia. Understanding the housing situation in Asia requires an investigation of the system of arrangements that low-income people make for obtaining adequate shelter for themselves. This system ranges over the entire realm of social and economic institutions and agreements, far beyond the limited concern of government housing agencies with the construction of low-cost housing units, or with incentives to the private construction sector to inspire them to build cheaply. It is a system of arrangements between people—low income people on the one hand, and many other people that have access to housing resources, whether they be land, finance, materials, permits, contacts or simply information. Understanding the workings of this complex system simplifies considerably the vast housing task confronting Asian governments today. For them it becomes possible to use the limited resources available to government for housing in a way which maximizes the number of solutions to peoples' housing problems. For every low-income family has a housing problem. This problem can be solved in many ways. An efficient solution, a sensible use of resources, makes it possible to solve more housing problems, and thus

advance toward the ultimate goal of decent shelter for everyone. This approach to housing is not necessarily new, but it is different than the more hard-headed approach which usually focusses on the construction of low-cost housing units. We have called this approach the Arithmetical Approach¹. We shall first discuss the Arithmetical Approach and then show the contrast between the arithmetical approach and the delivery system approach.

The crucial magic of the Arithmetical Approach to housing is hidden in determination of Standards. Minimum housing standards have to be determined independently, usually by professionals. These standards then cut the available housing stock in two. The housing units which are below the standard, and the housing units which are above the standard. When we cut the housing stock in two we treat all substandard housing as non-housing. We determine that there is a Shortage of housing. By shortage we mean the shortage of standard housing. We then calculate how many people live in the city, or how many households there are, so that we can see what the housing shortage is. By counting how many households we have and how many good houses we have, and subtracting one from the other we complete the Housing Need. The Housing Need is, arithmetically speaking, the number of good houses that will have to be built, given the population and the housing stock in the city. Once we project the population into the future, we also find out how many people are going to need housing. This can be added to the Housing Need to obtain the Future Housing Need. In all cases, we find that we need enormous numbers of standard housing units.

We already have a large number of housing need studies practically every developing country has one. Once the housing studies are completed, we have to consider Housing Cost. We have to consider what is the cost providing one minimum standard housing unit. Then we have to estimate how much people can pay for a standard unit. If what they can pay covers only part of the cost, the rest of it has to be a subsidy. We can then calculate how much the government will have to spend on housing in the next five or ten years to meet the Future Housing Need. Although many such exercises have been conducted, government housing budgets remain low, and the number of people living in slums and

squatters has not decreased appreciably. This is understandable. A government conscious of its development budget cannot afford adequate housing because housing is a low-priority development expenditure. It is not only a low-priority for government, but it is also a low-priority for the people themselves. People are not willing to put enough money in housing. The government is also not willing to put enough money in housing.

At any event, regardless of the recognized hopelessness of ever meeting the Future Housing Need, the government usually embarks on an ambitious housing program. Construction starts and soon there is something to show. But one nagging question always remains: "Is there any hope that this housing program can provide decent housing for everyone?" In most of the construction programs that governments embark on this is not possible. They start with a promise that they will provide housing for everyone, but they cannot fulfill this promise because the cost of constructing housing is too high, both for the government and for the people. This, in essence, is the arithmetical approach to the Housing Problem. And approached arithmetically, the housing problem cannot be solved.

The approach which we want to contrast with this arithmetical approach is the delivery system approach to housing, which starts by saying that there is no housing problem, that there is no housing shortage, and that there is no housing need.

People who have made decisions to migrate to urban areas are assumed to have made a realistic decision, based on good information. If they had made a mistake by coming to the urban areas, then in order to solve the housing problem we shall have to improve the communication of true information between the rural areas and urban areas. We could, for example, organize site visits for low-income people before they decide to move in. This is, of course, of limited value. We believe that the decision to migrate is largely a rational decision. This decision includes the knowledge that good housing is not available in urban areas. The families who come to the urban areas expect to have difficulties in obtaining good shelter. They are not likely to recognize that there is a housing problem only after they have already settled in the city. They learn about "the housing problem" when they are already settled in the city, when their expectations rise and when their ability to manipulate the system to their advantage increases. Now they may find themselves in groups,

they can organize, they can make a few demands, they start to have "a problem". And they start to try to solve their problem by making it a political issue which is fair, this what they have chosen to do and this is how they choose to go about it.

The reality of housing in third world cities is a result of a number of fairly rational, economic, political and cultural changes which usually take place under some pressure, but there is no "housing problem" as such. It is a problem for the people who want to change the existing system, for those who want to improve the situation or for those that feel that the houses of the poor are dirty and hurt their eyes.

Even though there is no housing problem we cannot sit idle because there are a lot of people with housing problems. And the housing problems of people require attention and consideration. Instead of constructing more housing units, our attention must focus on finding housing solutions. The emphasis must be on the solutions which would be satisfactory to families in the present, taking into account that the present is continuously changing. The emphasis of the delivery system approach is on trying to move away from unrealistic fixed standards and from the construction of housing units and to look at housing solutions - to look at the variety of ways by which the low-income people in the cities find a solution to their housing problems. Usually their solution to their individual housing problems does not lend itself to a simple judgement of whether it is a good or bad solution. It is important, to find out whether with their very limited resources with their connections, with their understanding of the system, and with their building capabilities, they are able to produce some form of housing for themselves. As they get more advanced in the urbanization process, as they get stronger, as they get economically more sophisticated, as they get richer, we should find out whether they can and do improve their housing, and if not, why not. We consider housing standards to be dynamic agreements between government agencies or employers on the one hand, and groups of people on the other, concerning the next acceptable level of development is the new standard. Once we reach that standard we are going to be unhappy with it, and we are going to require a better standard. These kinds of standards are based on a realistic approach which considers what is possible with the resources that are available to the people, to the agencies, to whoever is involved in the housing process. The standards are just a reflection of what is needed at this time in this particular community, and what is

available in terms of resources. If this is below what we consider to be a basic minimum standard that means that we must change our own views as to what the appropriate standards are.

In discussing the delivery system approach, it is necessary to look very carefully at the variety of housing arrangements that are available. We shall discuss each type of arrangement and begin to see in each case what are the possible inputs - professional, technical, that can and will allow it to improve.

One assumption that we must make here is that if we want to improve the housing situation in the third world, we must rely heavily on energies other than our own, whether we are government officials, technicians, or financiers. We don't have enough energy to deal with housing problems by ourselves. We need the support of other people in getting housing improvements. The support of other people, particularly the people in the different low-income communities, will not be forthcoming unless their self interest is tapped. If we want their support we have to be doing something which is in the self interest of the people involved. That is the rationale for introducing the need for participation, the need for being a part of the decision making process, the discussion of priorities, the phasing of improvements, the available financial mechanisms. This is all required not only because participation is good in itself, but because without participation there is not enough energy to produce the necessary changes in the system in order to improve it over time.

With this short introduction we now proceed to the discussion of the different types of low-income housing which we have found in the region. Initially, a typology of low-income housing arrangements was developed for Bangkok². We then proceeded to explore the low-income housing delivery system in Asia through specific case studies in six primate cities: Bombay, Colombo, Dacca, Jakarta, Manila, and Taipei. In studying these cities, we did not aim at measuring the level of poverty or the socio-economic conditions of the people, but rather at identifying as many types of arrangements of low-income housing as possible. Our aim was simple. Each time we identified a type of low-income housing which is already available within the living fabric of a city, it meant that the context for its creation is already available there, that it can be improved, that it can be multiplied, that it can be strengthened, and that it can be copied by other people in other countries.

For the purposes of this study, we defined the low-income population in the city as 40 percent of the population earning the lowest household incomes. Figure 1 and Figure 2 provide information on the distribution of incomes in the six cities studied³. With the use of this information it was possible to identify a maximum household income for each city, beyond which households were not considered to be low-income households. Having identified the target population, six researchers surveyed the six cities, in search of low-income housing arrangements. Only existing arrangements were documented, ignoring plans or hopes for other types which did not actually exist. Table 9 in the appendix provides some information on the number of communities surveyed and the number of households questioned. All in all, a very small sample of low-income households were contacted, a total of 2,681, which amount to approximately 0.17% of the total estimated number of low-income households in the six cities. These households were not selected at random from the entire population, but once a community was identified, five households were selected at random within the community. The statistical results reproduced in Tables 1 through 8 in the Appendix must, therefore, be taken with extreme caution. They must be seen as indicative rather than conclusive.

We shall now proceed to the discussion of the findings of our survey - the components that make up the low income housing delivery system.

II THE LOW INCOME HOUSING DELIVERY SYSTEM

Our study of low-income housing arrangements revealed a large number of housing types. All the types identified previously in Bangkok were also found in one or more of the cities studied. We did not, however, include Bangkok in this report as the statistical data for it is not compatible with the data for the six other cities.

The final classification we arrived at, which is depicted in Figure 3, was the result of discussion and comparison of the findings in the different cities. As noted earlier, only housing arrangements that were actually found in the field were included. We have insisted on creating a two-dimensional, non-overlapping classification, for the sake of simplicity and ease of communication. In the identification of subsystems we therefore stressed the most important factor as the key characteristic of the sub-system, although a number of other, weaker, characteristics may be shared with other subsystems. The

resulting classification arranges the different types in a hierarchical arrangement, commonly known as a "tree" structure.

Seven different subsystems were identified in six cities surveyed in this study. These are the Squatter Housing Subsystem, the Temporary Land Tenure Subsystem, the Private Housing Subsystem, the Commuters Housing Subsystem, the Employees Housing Subsystem, the Public Construction Subsystem, and the Public Assistance Subsystem.

A number of tables in the Appendix provide some neumarical indicators concerning the various subsystems. Table 1 describes the levels of satisfaction with housing conditions in the various subsystems. Location was found to be satisfactory in most subsystems, except for the rural commuters. Opinions about roads and walkways were mostly neutral. People were most critical about water supply, which was either unsatisfactory or neutral in most cases. Opinions about sewage and garbage collection were mostly neutral. Neighborliness and security were found to be satisfactory almost everywhere. Opinions about the structural condition of houses varied, and people were found to be neutral concerning the amount of space they occupied. The main conclusion which can be drawn here is that our perception of the standards of low-income housing arrangements do not necessarily correspond to the perceptions of the people living with these arrangements. Generally, people's opinions are more positive.

Table 2 provides some general information on the people's perceptions of the first priorities for improvement of their housing conditions. These vary from city to city, but water supply, sewage and garbage facilities, and roads and walkways seem to rank high in most subsystems.

Table 3 provides data on the ranges of monthly household incomes in the various housing subsystems. There do not appear to be major income variations between the different subsystems. It appears that the low-income people are distributed throughout the system, and that household incomes in the squatter housing subsystems are somewhat lower than incomes in the other subsystems. Clearly, more data is needed to substantiate these conjectures.

Table 4 presents data on the ranges of monthly housing expenditures in the different subsystems. In all cities, except Taipei, these amount to only a few dollars per month, clearly far short of being able to afford housing on the private market. Table 5 presents the ranges of monthly housing expenditures as a percentage of monthly household incomes. In general, percentages

are higher in Taipei, where housing is better and more expensive. In the other cities, they vary from one subsystem to another and no clear pattern emerges. The average expenditure amounts to approximately 10% of monthly incomes, but in some cases it is as low as 2% (squatter housing in Colombo) or as high as 20% (public construction housing in Jakarta).

Ranges of floor areas of dwellings are shown in Table 6. The commuters housing subsystem seems to be the most spacious, as dwellings are outside the city. Squatter housing appears to be the most crowded, averaging 11m^2 in Bombay, 12m^2 in Colombo and 9m^2 in Dacca. In terms of floor area per person the employees housing subsystem and the commuter housing subsystem appear to be the most spacious, as we can see in Table 7. Space per person varies from $2\text{m}^2/\text{person}$ in some squatter housing to over $10\text{m}^2/\text{person}$ in some commuter housing. Again, housing in Taipei is considerably more spacious than in the other cities.

Finally, in Table 9 we have made a first attempt at estimating the population in each subsystem in each of the cities. This is a difficult, if not impossible, task because no information is as yet available from official sources. Estimates thus combine some published data with some educated guesswork. The temporary land tenure subsystem appears to be the smallest in volume, although in the case of Bangkok it provides shelter for more than 50% of the low-income population. The squatter housing subsystem, the private housing subsystem and the public assistance subsystem appear to be the larger ones. The public construction subsystem is relatively small. The emergence of the public assistance subsystem as a major contribution of low-income housing is an important new trend. The number of programs already in operation is surprisingly large, as can be seen from Figure 1.

Having discussed some general characteristics of the seven subsystems that comprise the housing delivery system, we can now proceed to describe each subsystem, and the variety of arrangements it contains.

The Squatters Housing Subsystem

Communities belonging to this subsystem are located on land parcels over which the people have no legal rights, and generally pay no land rent. Housing units are therefore considered to be illegal structures, and are usually not counted as part of the housing stock. The majority of the squatters build structures

of a temporary or semi-permanent nature, while some build no structure at all.

We have considered five major types of arrangements for obtaining housing under this subsystem: Pure Squatters; Mini Squatters; Abandoned buildings; Floating Squatters; and Structures on expropriated land. The Floating Squatters can be further divided into four subtypes, as we shall explain below.

Pure Squatter Settlements are formed by squatters who group themselves to form communities. These settlements usually appear on vacant and unused public and private land, or along the public right-of-way: Roads, railway tracks, rivers, canals, and electrical power lines. They are also found on slopes of hills, areas subject to flooding, along the beaches and in areas without vehicular access. This type of settlement was found in all six cities surveyed in this study (see plates 1, 2, and 3).

Mini Squatters are those who set up independent and isolated dwelling units which do not form communities or settlements. They are found living in areas occupied by other land uses, usually on unuseable small plots of land. Mini Squatters were found in the high and middle-income residential areas of Bombay, Dacca, Jakarta and Taipei.

Squatters were also found in Abandoned Buildings. These are old, uncompleted or damaged structures which are considered as uninhabitable, but which can be used by squatters. This type was found only in Dacca.

Floating Squatters are those who do not occupy a fixed location in the city. They are of two types: Seasonal Squatters and Pavement Dwellers. Seasonal Structures are built by squatters which are purely temporary and appear in particular seasons, following climatic, agriculturally-based cycles. The bamboo sellers of Dacca furnish an example of this type. Boat Houses berthed along the rivers and canals are used for residential purposes. Seasonal Squatters in boat houses were found in Dacca, but are also common in Bangkok and Hong Kong.

There are two types of Pavement Dwellers, who are also squatters, although their housing is of the most informal quality, if it is to be considered housing at all. The Open Air Pavement Dwellers are those who sleep on pavements and do not have a structure to shelter them; they can be found in Bombay and Dacca (see Plate 4). Sheltered Pavement Dwellers usually build temporary structures which can be assembled or dismantled within a very short time, while

some live under sheltered or cantilivered parts of permanent structures. Most sheltered pavement dwellers can be found in public buildings such as transport terminals, shopping centers and building edges along minor roads in Bombay, Dacca and Jakarta.

A final type of pure squatter arrangement is that in which people live in Structures on Expropriated Land. These people are awaiting eviction from their previously owned land, which has been appropriated by government for development projects.

The Temporary Land Tenure Subsystem

Dwelling units in this subsystem are generally built by the occupants themselves on land obtained from others temporarily either on a rental basis or free of charge. It consists of two main types: Land Rental and Free Land. The Free Land type is further divided into two types, Free Land at Work Place and Residential Free Land.

In the Land Rental type people obtain temporary land tenure security by payment of rent or lease. Their dwelling units are located on privately owned land, which the owner does not need for development at present. This type appears in all the six cities covered by the study. (see Plate 5).

Free Land at Work Place is provided to workers free of charge within the compound of or nearby. The difference between this type and the Employees Housing Subsystem to be discussed later is that here, only the land is provided by the employers and not the house. This type was found in both Dacca and Manila. In the Residential Free Land type, houses are constructed on surplus land of private owners.

In some of the cities the Temporary Land Tenure Subsystem is predominant in the peripheral areas. People living in this subsystem amount to less than 5 percent of the total low-income population in each of the six surveyed cities.

The Private Housing Subsystem

Dwelling units included in this subsystem are owned by, rented to or provided free to the present occupants. In this subsystem both the land and the house are owned by private individuals, with no governmental or institutional involvement.

The Private Housing Subsystem consists of Rental Housing, Owned Housing and the Free Lodging Surplus types. The rental housing is further subdivided into Rental Tenements, Rental Houses and Single People's Lodgings. Rental houses are found in two forms, Single Family Houses and Subdivided Houses. There are four types of Owned Housing: Filtered Houses, Inherited Houses, Owner-built Houses and Purchased Houses.

Rental Housing includes those units which are rented to the occupants by landlords. In Rental Tenements, several dwellings, occupied by different individual households, are found under the same roof. Usually these tenements are in the form of row-houses, with the occupants sharing common amenities and services. They are generally found in high density areas in all six cities included in the study (see Plates 6 to 7). Single Family Houses are detached housing units rented only to single families. They can be found in Colombo, Dacca and Jakarta and are generally located near the peripheries of those cities (see Plate 8). Subdivided Houses are independent structures subdivided into a number of cubicles which are occupied by different households. Often the tenants are found to be living along with the owner of the house. Many of these houses are delapidated and are found in older parts of Colombo, Dacca, Jakarta and Taipei. Single People's Lodgings are those units rented to single member households where the individual may be either a bachelor or a married person who cannot afford to keep his/her family in the city. These houses are divided into a number of rooms, each room being shared by a few such persons. This type is available in Bombay, Dacca and Taipei. In some instances such units can be found in the central areas of the city and in others, in areas away from the city center, (see Plate 9).

Owned Housing consists of those units which are occupied by the owners themselves. Within this category, Filtered Houses are those which were originally built for higher income groups but are now owned by low-income people. This type is available in Manila and Taipei only. Houses inherited by the present occupants from their better off ancestors are referred to as Inherited Houses. These housing units are neither built nor purchased by the owners. They are usually scattered in the old city areas and the rural periphery. This type is found in five cities: Colombo, Dacca, Jakarta, Manila and Taipei. Owner-Built Houses are built by the owners on their own land for themselves. The owners have full control over the construction of such units, which are

The Employees Housing Subsystem

This type of housing is provided by public or private employers to their respective low-income employees either free of charge or at a nominal rent which is deducted from their salaries and wages. The term of tenure in this housing subsystem usually ends with the termination of employment.

Five major types are available in this subsystem. These are: Institutional Housing; Factory Site Dormitories and Barracks; Maintenance Staff Quarters; Shops and Workshop; and Construction Site Sheds. Institutional Housing is further divided into two categories, Government Workers Housing and Private Organizations Housing.

Government Workers Housing is provided by government or semi-government institutions to their low-income employees either free or at nominal rent. This type is found in Bombay (see Plat 11), Colombo, Dacca, Jakarta and Taipei. Private Organizations Housing is similar to the government type and offers housing solutions to low-income workers in the private sector. This type is available in Colombo (see Plate 12) and Dacca. Both these types appear as small communities within or near residential areas.

Factory-Site Dormitories and Barracks are constructed by the factory owners for their low-income workers within or near the factory premises. These housing units are usually in the form of dormitories and barracks (see Plates 13 and 14), which are essentially row houses subdivided into an number of cubicles each occupied by an individual family. These units are mainly provided free of charge and are available mainly in the industrial areas.

Maintenance Staff Quarters are accommodations provided by employers to their maintenance staff, such as domestic servants, guards, drivers, cleaners and gardeners who stay at the work place or at the employer's residence. In some cases, the units do not appear as independent quarters, but are convertible office rooms or rooms within the employer's residence. These accommodations are always available free or charge.

Shops and Workshop also provide accommodation as free of charge. In this type the workers are living in the shops and workshops where they usually work. This type is predominant in commercial and industrial areas specially in hotels, restaurants, small shops and repairing shops. Several such arrangement were identified in Bombay and Dacca.

predominantly located in the suburbs. This type is available in the same five cities in which Inherited Houses are found. Houses purchased but not built by the owners for their own use are known as Purchased Houses. It is obvious that these houses are available only in areas where land values are extremely low and within the reach of low-income people. This type is found in Dacca, Jakarta (see Plate 10) and Taipei.

Surplus houses of charitable private owners which are given free of charge for use by low-income people are called Free lodging Surplus. The occupants in this type do not squat, own, or pay rent, nor are they employees of the owners of the houses. This type is found in Dacca only, usually on private unused land in residential communities.

The Commuters Housing Subsystem

Commuters are those people who travel regularly to their work place in the city from areas outside the city. These commuters who participate in the economic activities of the city are part of the day-time population, but are not included in the city population. The commuters obtain their housing at their place of origin and try to compensate for their higher travel costs by lower housing expenditures.

There are two types of commuters identified in this study: Inter-urban Commuters and the Rural Commuters.

Inter-urban Commuters are those who travel to the city from other urban centers. This type is found in four cities: Bombay, Colombo, Dacca and Taipei. Inter-urban Commuters usually come from nearby satellite towns or industrial towns as well as from other urban areas far away from the cities.

Commuters who travel to the city from the surrounding rural areas are called Rural Commuters. People living in this type of housing can be seen in Colombo, Dacca, Jakarta, Manila and Taipei. The majority of the Rural Commuters live in villages close to or along the transportation routes connected with the city, such as railways, highways and rivers.

The major modes of transportation used by the people living in the Commuters Housing Subsystem are public buses, trains and boats. The locational Characteristics of this subsystem are therefore of major importance.

Construction Site Sheds are temporary dwellings built by the construction workers themselves using the materials available at the site which are provided by their employers. These sheds are provided free and the rooms are shared by fellow workers. They are dismantled at the completion of the construction project. This type of accommodation appears in all the six cities included in this study.

The Public Construction Subsystem

This subsystem consists of housing units built by government agencies for low-income people. This is a government effort to alleviate the low-income housing problem. The dwelling units are either sold or rented to the people, usually at a subsidized rate.

There are four types of housing available in this subsystem: Public Flats and Row Houses; Welfare Tenements; Transit and Relief Camps; and Hire Purchase Single Houses.

Public Flats and Row Houses are constructed by government or semi-government agencies in the form of flats or row houses, some of which are multi-storey buildings. The Public Flats and Row Houses are permanent structures which are partitioned into apartment units, each of which is occupied by a single family. They are found in planned residential zones, and are available in all the six cities in the study.

Welfare Tenements are free or highly subsidized dwellings provided by the government as a part of its social welfare scheme. They are found only in Taipei, primarily in the peripheral areas of the city.

Transit and Relief Camps are temporary accommodations provided by the government for displaced people. Transit camps are dwelling units for low-income people who cannot be permanently settled immediately. Relief camps are those units provided to people rendered homeless by disasters, natural calamities, and wars. The transit camps are permanent structures whereas the relief camps are temporary or make shift buildings (see Plates 15 and 16). These types are found in Bombay, Dacca and Manila.

Hire Purchase Single Houses are dwelling units constructed by the government for sale to low-income people, on an instalment basis. This type is available only in Dacca, in areas specially developed for this purpose (see Plate 17).

Housing units in the Public Construction Subsystem are essentially located in residential zones, especially in planned communities. In some cases they are also found in the suburbs.

The Public Assistance Subsystem

This subsystem is the one in which the government and the people through joint effort try to solve housing problems: These housing solutions are based on the improvement of existing housing units or on the creation of opportunities for people to build their own houses. It naturally encompasses, therefore, the provision and improvement of amenities and services.

This subsystem can be divided into two main forms of public assistance, squatters Assistance and Assistance to Private Housing. The former can be divided into three categories: Squatter Improvement; Squatter Resettlement; and Temporary Sites. Squatter Improvement further subdivides into Land Subdivision, Neighbourhood Amenities and Construction Loans, while Squatter Resettlement subdivides into Sites and Services and Core Housing.

Assistance to Private Housing can be divided into two categories: Assistance to Rental Housing and assistance to Owned Housing. Assistance to Rental Housing is subdivided into four types: Neighbourhood Amenities; Transfer of Ownership Schemes; Structural Repairs; and Quarters Allowances. Finally, Assistance to Owned Housing is subdivided into five types: Neighbourhood Amenities; Aided Self Help Houses; Rental of Abandoned Properties by Government; Loans to buy Apartments and Row Houses; and House Construction Loans.

Under Squatter Improvement Land Subdivision results when the land which is at present illegally occupied by squatters is subdivided into smaller parcels and sold to the occupants. This type is found in Manila only. Neighbourhood Amenities in Squatter improvement, which include provision of basic infrastructure such as water, electricity, roads and walkways, sewage and garbage collection are provided to improve the condition of the squatters. This type appears in existing squatter areas in Bombay, Colombo, Jakarta and Manila. Construction Loans are provided by government agencies to squatters to build their houses. These loans are given on favourable terms with subsidized interest to individuals or associations and are found in Bombay only. Under Squatter Resettlement, the Sites and Services type is that in which the government develops land by providing infrastructure, and allocates it to former squatters for resettlement.

On the developed plots the settlers build their own structures. Most of the people benefiting from these schemes are former squatters who were evicted from other location in the city. This type is found in Bombay, Colombo, Dacca (Plate 18), Jakarta (Plate 19) and Manila. In Core Housing the government constructs concrete slabs, toilets and bathing compartments on public land and provides these to the people at nominal prices. This type is found only in Manila and is usually located at the periphery of the metropolitan area.

Temporary Sites are locations provided to squatters who are evicted from their original settlements. As soon as the government finds better ways to accommodate these squatters, they are moved from the temporary sites. This type is identified in Colombo (see Plate 20).

Neighbourhood Amenities under Assistance to Rental housing are common services provided to rental or leased houses by public agencies. This type is found in Colombo and Jakarta only. Under the Transfer of Ownership Scheme the ownership of the houses along with the land is transferred to the tenants or to an authorized government organization by means of government legislation. This is another type found only in Colombo. In Structural Repair programmes old rental houses and tenements are renovated by the government. This type of assistance is available only in Bombay in the central part of the city. Quarters Allowance is a subsidy provided to the employees of government or private institutions to rent houses from private sources. Employees not provided housing by their employers are entitled to receive this allowance. Housing obtained with the help of this allowance can be found in Dacca only and is available in middle income and low-income communities.

Under Assistance to Owned Housing, Neighbourhood Amenities are provided by public agencies to the houses owned by the low-income people. This type of assistance is normally given to needy communities, and is found in Jakarta and Taipei. In the Aided Self Help Houses type, the government provides the land, construction materials and technical know how, while labour is provided by the people themselves. This assistance is provided at the community level. This type is found in Colombo and it emerges in the areas where land values are relatively cheap. In Rental of Abandoned Properties by Government, privately owned houses which are declared abandoned are rented to the people by the government. Some of the properties abandoned by their owners are made available to low-income people at a comparatively low rent. This type appears in

Dacca only. Loans to Buy Apartments and Row Houses are provided to the low-income individuals by the government or state owned banks. This type of assistance is found in Taipei only. House Construction Loans are provided to the low-income people by the government or commercial banks on favourable terms to build or repair dwelling units. Loans are available to individuals or groups of people. This type of assistance is found in Colombo and Taipei.

Conclusion

This short survey gives a brief outline of the richness and complexity of the low-income housing delivery system in Asia. The aims of this survey was to discover and illustrate the activities now taking place in the provision of low income housing, rather than to look into futuristic suggestions of what might be possible if resources were available. There is considerable more work required to unearth the mechanisms that underlie the various arrangements, and make possible their continuation. With more understanding it may be possible to strengthen various arrangements, or try to institute new arrangements where they do not exist. Given a better understanding the requirements and constraints of each type of arrangement, it may be possible to decide on a better allocation of limited housing resources.

NOTES

1&2. See Angel, S., Benjamin, S. and De Goede, J.H., "The Low-income Housing Delivery System in Bangkok", *Ekistics*, August, 1977.

3. Sources used for the construction of the figures 1 & 2:

BOMBAY: The Housing Situation in Greater Bombay, Tata Institute of Social Sciences (1972); Development Plan Report of New Bombay (1972); International Institute of Population Studies (?).

COLOMBO: Socio Economic Survey (1969-70); Survey of Sri Lanka Consumer Finances (1973); Colombo Master Plan Study (1973 and 1986 projected); Colombo Master Plan (1976); Department of Census and Statistics (1976).

DACCA: Director General, Statistical Bureau, Ministry of Planning, Government of Bangladesh (1974); Census Report (1974), Ministry of Planning, Government of Bangladesh (1974).

JAKARTA: Institute of Demography, University of Indonesia (1972); Planned Community Development, Jakarta Urban Development (1973); LEKNAS-LIPI National Institute of Economics and Social Research (1975); Badan Kebijakan Perumahan Nasional (1975); Kantor Sensus dan Statistik DKI, Jakarta (1975), unpublished report; City Government of Jakarta (1976).

MANILA: Bureau of Statistics and Census (1971); National Census and Statistical Office, unpublished report (?).

TAIPEI: Report on the Survey of Family Income & Expenditure and Personal Income Distribution of Taipei City (1975).

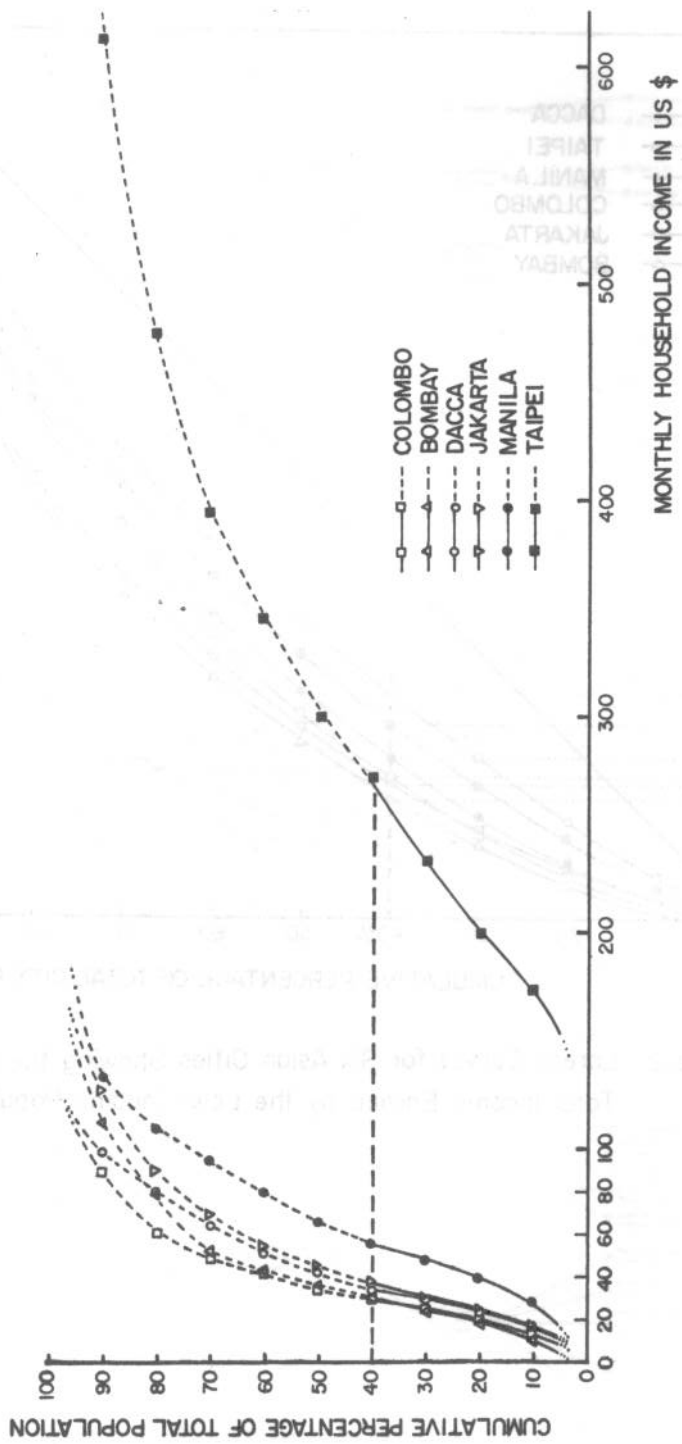


Figure 1: Income Distribution Curves for the Six Asian Cities Showing the Monthly Household Incomes of the Forty Percent of the Urban Households Earning the Lowest Incomes

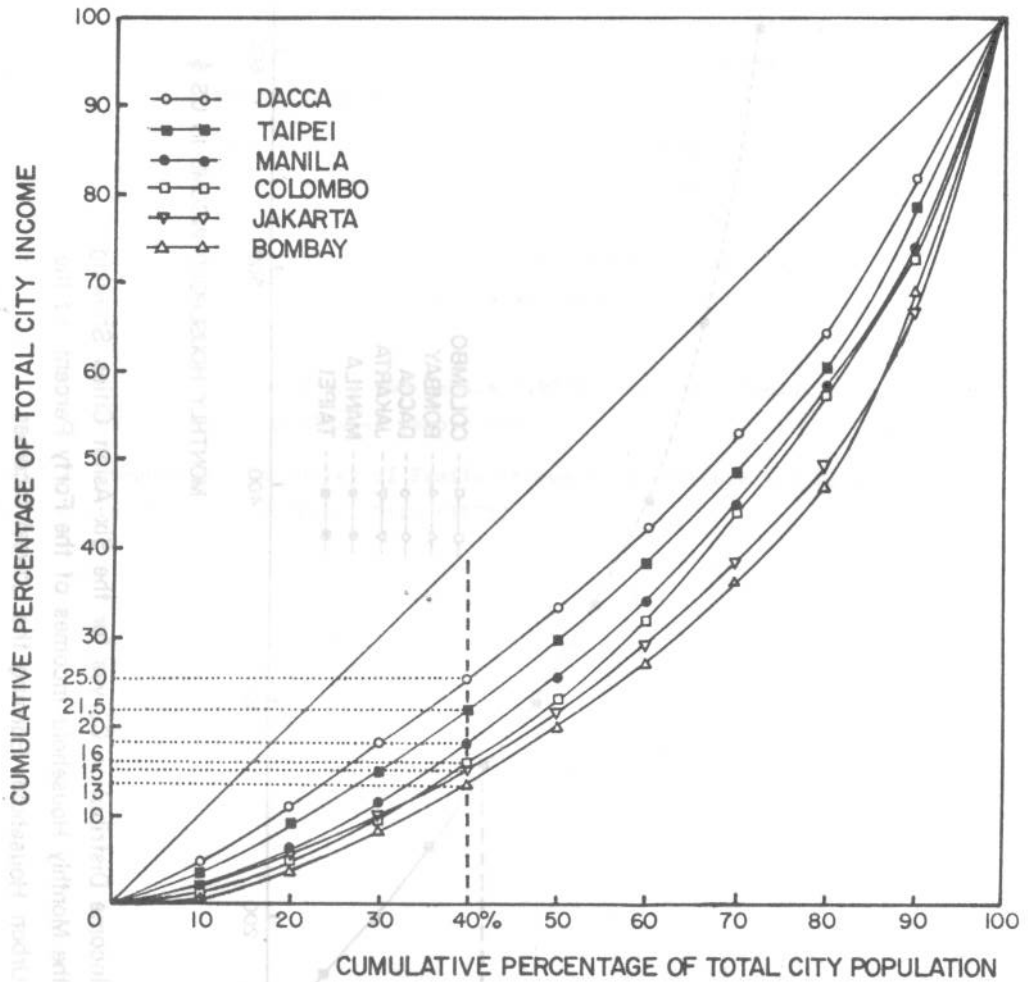


Figure 2: Lorenz Curves for Six Asian Cities Showing the Share of Total Income Earned by the Low -Income Population

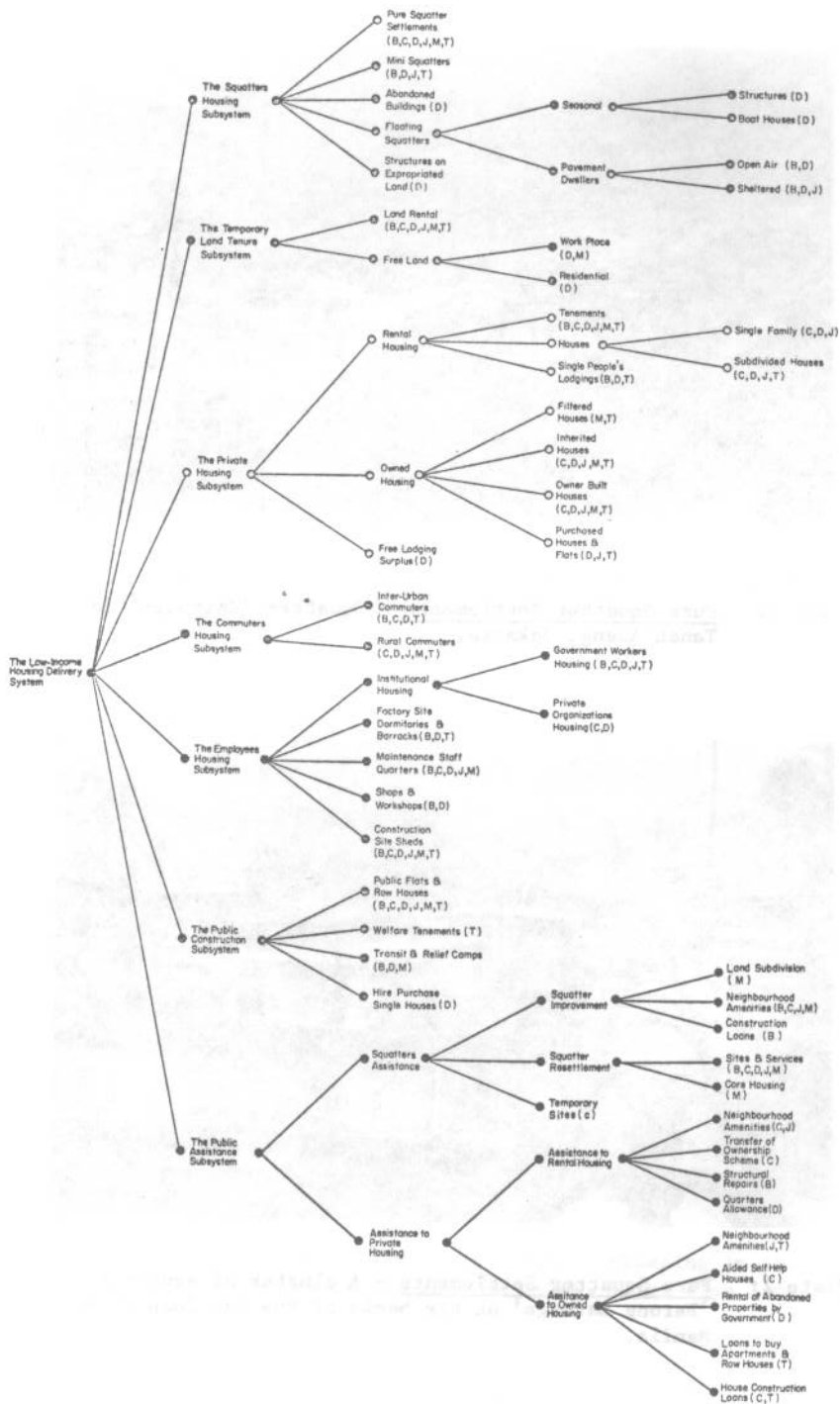


Fig.3 : The Existing Low-Income Housing Delivery System in Six Asian Cities , 1977
 (Letters in Paranthese are Initials of Cities where Housing Type was Found)



Plate 1: Pure Squatter Settlements - Squatter 'Kampungs' in Tanah Abang, Jakarta.



Plate 2: Pure Squatter Settlements - A cluster of squatter 'Barong Barongs' on the banks of the San Juan River, Manila.



Plate 3: Pure Squatter Settlements - A dense squatter settlement on land reserved for public use in Premnagar, Bombay.



Plate 4: Open Air Pavement Dwellers - People sleeping in the lap of luxury: sky above and mud below, Tulsi Pipe Line Road, Bombay.



Plate 5: Land Rental - A low-income community on private land adjacent to school, J. Abad Santos Street, Manila,

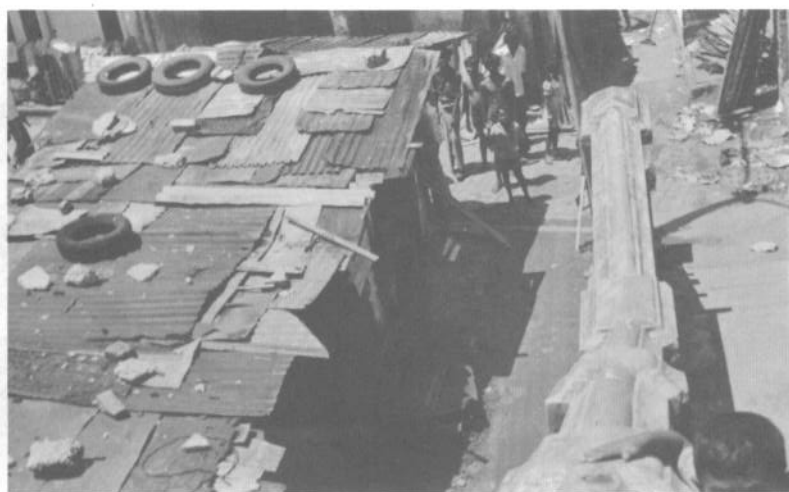


Plate 6: Tenements - Structures constructed by private individuals for rent to low-income people, Urugodawatta, Colombo.



Plate 7: Tenements - A rental tenement served by an unpaved road at Ping-Kiang Street, Taipei.



Plate 8: Single Family Rental Houses - A community where more than a hundred families share a few toilets and a tube well in Kamapur, Dacca.



Plate 9: Single People's Lodgings - Crowded rooms, usually furnished with two-tier beds, at Kong-Kuan, Taipei.



Plate 10: Purchased Houses - Houses purchased in cash by low-income families, Klender, Jakarta.



Plate 11: Government Workers' Housing - A housing colony provided to government employees in Bandra, Bombay.



Plate 12: Private Organizations' Housing - Workers are provided with row-houses built by their employer on his private land, Kelaniy, Colombo.

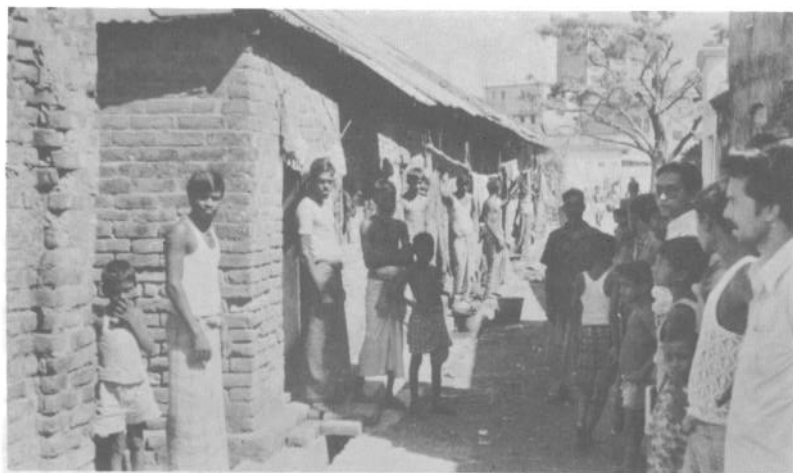


Plate 13: Factory-Site Dormitories and Barracks - Barracks adjacent to the factory given free to workers, Gandaria, Bacca.



Plate 14: Factory-Site Dormitories and Barracks - Two tier beds in factory-site dormitories, Tatung Company, Taipei.

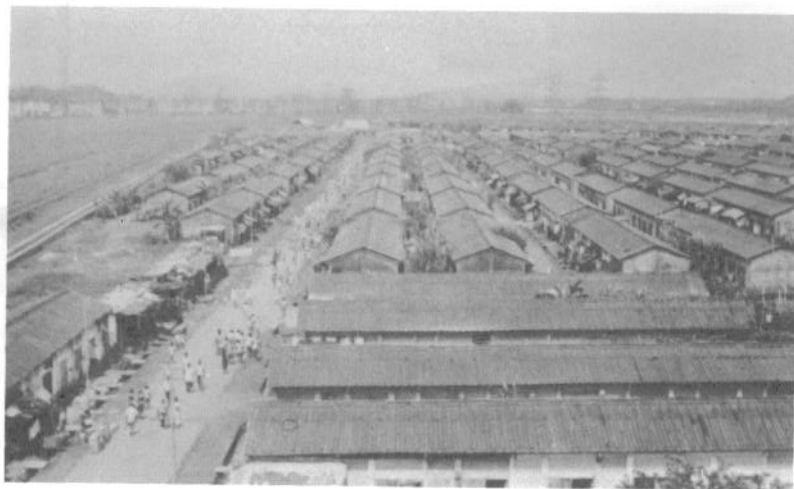


Plate 15: Transit and Relief Camps - Sion Koliwada, the biggest transit camp in Bombay, where people live until their original houses are repaired.



Plate 16: Transit and Relief Camps - The Makati Health Centre Relocation Area in Taguig, Manila, where water is supplied by fire trucks.



Plate 17: Hire-Purchase Single Houses - A Government Nucleous Housing Project in Kalashi, Dacca.



Plate 18: Sites and Services - A squatter resettlement scheme where building materials are provided by relief agencies in Dattapara, Dacca.



Plate 19: Sites and Services - Pedongkelan sites and services project in Jakarta.

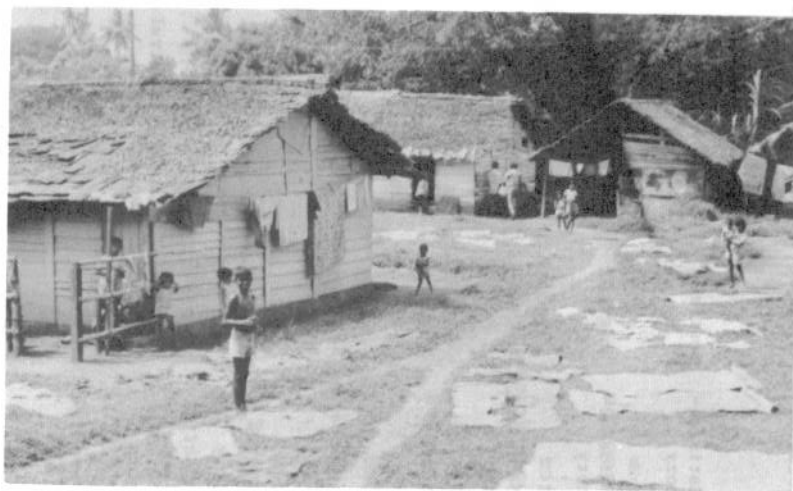


Plate 20: Temporary Sites - A community of evicted households built temporarily out of materials used in their earlier houses, Majid Place, Colombo.

	Location	Roads & Walkways	Water Supply	Sewage & Garbage Collection	Neighborhoodliness	Security	Structural Condition	Rent	Space
Squatters Housing Subsystem	Satisfactory	Neutral	Unsatisfactory	Neutral	Satisfactory	Satisfactory	Neutral	Neutral	Neutral
Temporary Land Tenure Subsystem	Satisfactory	Neutral	Neutral	Neutral	Satisfactory	Satisfactory	Unsatisfactory	Neutral	Neutral
Private Housing Subsystem	Satisfactory	Neutral	Neutral	Neutral	Satisfactory	Neutral	Unsatisfactory	Neutral	Neutral
Commuters Housing Subsystem	Neutral	Neutral	Neutral	Neutral	Satisfactory	Satisfactory	Neutral	Neutral	Neutral
Employees Housing Subsystem	Satisfactory	Satisfactory	Neutral	Neutral	Satisfactory	Satisfactory	Neutral	Satisfactory	Neutral
Public Construction Subsystem	Satisfactory	Satisfactory	Satisfactory	Neutral	Satisfactory	Satisfactory	Satisfactory	Neutral	Satisfactory
Public Assistance Subsystem	Satisfactory	Neutral	Unsatisfactory	Neutral	Satisfactory	Satisfactory	Neutral	Neutral	Neutral

Table 1: Levels of Satisfaction with Housing Conditions in the Various Subsystems, Aggregated for the Six Cities, 1977

	Bombay	Colombo	Dacca	Jakarta	Manila	Taipei
Squatters Housing Subsystem	Toilet facilities	Water Supply	Water Supply	Roads & Walkways	Water Supply	Roads & Walkways
Temporary Land Tenure Subsystem	Toilet facilities	Water Supply	Water Supply	Roads & Walkways	Water Supply	Roads & Walkways
Private Housing Subsystem	Water Supply	Electricity	Sewage & Garbage Collection	Roads & Walkways	Water Supply	Roads & Walkways
Commuters Housing Subsystem	Transport facilities	Water Supply	Sewage & Garbage Collection	Roads & Walkways	Water Supply	Play Ground
Employees Housing Subsystem	Water Supply	Electricity	Water Supply	Sewage & Garbage Collection	-	Roads & Walkways
Public Construction Subsystem	Water Supply	Water Supply	Sewage & Garbage Collection	Water Supply	Sewerage facilities	Sanitation
Public Assistance Subsystem	Water Supply	Water Supply	Sewage & Garbage Collection	Electricity	Water Supply	Roads & Walkways

Table 2: First Priorities for Improvements of Housing Services According to Inhabitants of the Various Housing Subsystems in Six Asian Cities, 1977

	Bombay	Colombo	Dacca	Jakarta	Manila	Taipei
Squatters Housing Subsystem	US \$ 27 ± 8	23 ± 5	23 ± 8	20 ± 8	63 ± 37	168 ± 39
Temporary Land Tenure Subsystem	30 ± 10	22 ± 3	27 ± 8	29 ± 6	66 ± 27	203 ± 36
Private Housing Subsystem	32 ± 10	23 ± 5	28 ± 7	28 ± 7	67 ± 15	193 ± 38
Commuters Housing Subsystem	32 ± 3	22 ± 4	33 ± 4	25 ± 4	94 ± 20	171 ± 36
Employees Housing Subsystem	28 ± 10	24 ± 5	22 ± 9	27 ± 10	50 ± 27	193 ± 41
Public Construction Subsystem	32 ± 8	30 ± 5	28 ± 7	34 ± 2	76 ± 57	151 ± 43
Public Assistance Subsystem	30 ± 9	22 ± 5	30 ± 7	29 ± 7	63 ± 25	195 ± 46

Table 3: Ranges of Monthly Household Income in US \$ in the Various Housing Subsystem in Six Asian Cities, 1977

	Bombay	Colombo	Dacca	Jakarta	Manila	Taipei
Squatters Housing Subsystem	US \$4 ± 4	1 ± 1	2 ± 4	3 ± 2	3 ± 2	10 ± 8
Temporary Land Tenure Subsystem	1 ± 0	1 ± 1	1 ± 1	4 ± 1	4 ± 2	28 ± 13
Private Housing Subsystem	2 ± 2	2 ± 1	5 ± 5	5 ± 2	11 ± 7	22 ± 16
Commuters Housing Subsystem	3 ± 2	2 ± 1	3 ± 2	3 ± 1	5 ± 1	21 ± 6
Employees Housing Subsystem	3 ± 1	1 ± 1	4 ± 1	2 ± 1	0	43 ± 19
Public Construction Subsystem	3 ± 2	3 ± 2	5 ± 2	7 ± 0	1 ± 1	18 ± 13
Public Assistance Subsystem	3 ± 2	2 ± 1	7 ± 6	5 ± 2	4 ± 2	39 ± 20

Table 4: Ranges of Monthly Housing Expenditure in US \$ in the Various Housing Subsystems in Six Asian Cities, 1977

	Bombay	CeLombo	Dacca	Jakarta	Manila	Taipei
Squatters Housing Subsystem	2 m ² ± 1	2 ± 1	2 ± 2	6 ± 2	4 ± 2	9 ± 3
Temporary Land Tenure Subsystem	2 ± 1	2 ± 1	2 ± 2	6 ± 1	4 ± 1	9 ± 3
Private Housing Subsystem	2 ± 1	3 ± 2	3 ± 4	7 ± 5	5 ± 1	12 ± 6
Commuters Housing Subsystem	5 ± 1	4 ± 1	5 ± 3	11 ± 3	5 ± 1	13 ± 4
Employees Housing Subsystem	4 ± 5	7 ± 7	6 ± 7	8 ± 2	6 ± 4	10 ± 5
Public Construction Subsystem	3 ± 1	5 ± 3	3 ± 3	8 ± 4	3 ± 1	6 ± 2
Public Assistance Subsystem	3 ± 2	4 ± 3	3 ± 3	6 ± 2	4 ± 1	13 ± 5

Table 7: Ranges of Floor Areas Per Person in the Various Housing Subsystems in Six Asian Cities, 1977

	Bombay	Colombo	Dacca	Jakarta	Manila	Taipei
Squatters Housing Subsystem	20 % - 30 %	33 - 37	10 - 12	8 - 20	40 - 45	13 - 17
Temporary Land Tenure Subsystem	2 - 6	1 - 2	4 - 5	1 - 2	4 - 5	∟1
Private Housing Subsystem	10 - 18	28 - 32	45 - 60	6 - 14	13 - 15	45 - 53
Commuters Housing Subsystem	-	10 - 15	1 - 2	8 - 12	5 - 6	12 - 15
Employees Housing Subsystem	5 - 9	1 - 2	10 - 11	6 - 16	6 - 7	20 - 26
Public Construction Subsystem	9 - 12	3 - 5	7 - 8	∟1	∟1	5 - 7
Public Assistance Subsystem	30 - 45	28 - 32	18 - 20	50 - 60	25 - 29	5 - 7

Table 8: Ranges of the Estimated Population in Each Housing Subsystem as Percentage of the Total Low-Income Population in Six Asian Cities, 1977

	Bombay	Colombo	Dacca	Jakarta	Manila	Taipei	Six Cities Total
Estimated Low-Income Population (Lowest 40%)	2,670,000	650,000	720,000	2,080,000	2,366,000	850,000	9,336,000
Estimated Number of Low-Income Households	448,000	100,000	136,000	385,000	372,000	147,000	1,588,000
Number of Different Housing Types Identified	19	21	33	19	16	20	47
Number of Communities Surveyed	90	95	101	66	63	108	523
Number of Households Questioned	400	419	411	431	490	503	2,681
Households Questioned as Percentage of Low-Income Households	0.09	0.42	0.3	0.11	0.13	0.36	0.17

Table 9: General Information on the Exploratory Survey of the Low-Income Housing Delivery System
in Six Asian Cities, 1977

SELECTED REFERENCES

GENERAL

ANGEL, S. BENJAMIN, S., DE GOEDE, K., The Low-Income Housing Delivery System in Bangkok, Paper presented to the Self Help Low Cost Housing Workshop, HABITAT, International Conference on Human Settlements, Vancouver, June, 1976.

TURNER, J.F.C., FICHTER, R., Freedom to Build, The McMillan Company, New York, 1972.

UNITED NATIONS, Manual of Self Help Housing, United Nations, New York, 1964.

UNITED NATIONS, Improvement of Slums and Uncontrolled Settlements, New York, 1971.

BOMBAY

GOVERNMENT OF INDIA, Census of India, Housing Reports, Government of India Press, New Delhi, 1971.

GOVERNMENT OF MAHARASHTRA, Administrative Report of Maharashtra Slum Improvement Board, 1975-1976, Bombay, 1976.

GOVERNMENT OF MAHARASHTRA, Urban Housing in Maharashtra, Government Printing Press, Bombay, 1966.

RAMACHANDRAN, P., Housing Situation in Greater Bombay, City and Industrial Development Corporation, Bombay, 1972.

COLOMBO

BULANKULAMA, S.W.P., JOACHIM, M.E., DIAS, E., Integration of Squatters in the Mainstream of Urban Life Through Improvement Programmes Related to Housing in Existing Slums and Squatter Settlement in Colombo, Sri Lanka, Housing Section, Centre for Housing, Building and Planning, United Nations, New York, 1975.

DEPARTMENT OF CENSUS AND STATISTICS, Socio-Economic Survey of Sri Lanka 1969-1970, Vol. I and II, Department of Government Printing, Colombo, 1973.

MARGA INSTITUTE, Housing in Sri Lanka, Colombo 1976.

PEOPLE'S BANK, "Housing", in Economic Review, Colombo, August, 1976.

DACCA

CENTER FOR URBAN STUDIES, Squatters in Bangladesh, University of Dacca, Dacca, 1976.

MINISTRY OF PUBLIC WORKS AND URBAN DEVELOPMENT, Scheme for Resettlement of Urban Squatters at Dacca (Unpublished), Government of Bangladesh, Dacca, 1976.

MINISTRY OF PUBLIC WORKS AND URBAN DEVELOPMENT, National Report on Human Settlements, Government of Bangladesh, Dacca, 1976.

PLANNING COMMISSION, First Five-Year Plan 1973-1978, Government of Bangladesh, Dacca, 1973.

DIRECTOR GENERAL, BANGLADESH STATISTICAL BUREAU, Ministry of Planning, Government of Bangladesh, Income Group Distribution in Dacca City (Unpublished), Dacca, 1976.

JAKARTA

JAKARTA CAPITAL CITY GOVERNMENT, Jakarta's Kampung Improvement Programme, A paper presented at HABITAT conference, Vancouver, Canada, 1976.

KOMPAS, Pembantu Rumah Tangga, Jakarta, 1976.

SARDJONO, DIPOKUSUMO, S. and POERBO, H., "Problems of Housing for Low-income groups", National report of Indonesia, One world only, Report 8, Friedrich Ebert Stiftung, 1973.

TEMPO, Rumah Murah Itu Kok Anu, Jakarta, August 1976.

MANILA

DE VERA, J.S., Housing Needs up to the Year 2000, Manila, November 1974.

LAQUIAN, APRODICIO A., Slums and Squatters in Six Philippines Cities. A Final report on a research grant from the South-east Asia Development Advisory Group (SEADAG), New York, 1972.

METRO MANILA HOUSING AUTHORITY, Metro Manila Housing Programme, Interim Report No. 1, Manila, 1976.

NATIONAL HOUSING AUTHORITY, National Housing Authority, A paper prepared as background for the Sapand Palay Resettlement Project, Manila 1976.

TAIPEI

BUREAU OF BUDGET, Accounting and Statistics, Taipei Municipal Government, A Study of Household Income and Expenditure in Taipei, July to September, Taipei, 1975,

BUREAU OF SOCIAL AFFAIRS, Taipei Municipal Government, A Study on the Housing Options of the Poor Families in Taipei, BSA/TMG, Taipei, 1974.

CHANG FENG-SHU, A Brief on a Public Housing Project, Ministry of Interior Affairs, Taipei, 1976.

CHINA CREDIT INFORMATION SERVICE LIMITED, Survey of Housing Projects in Taiwan, China Credit Information Weekly, Taipei, 1968.