A Place to Live
More Effective Low-Cost Housing in Asia
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A PLACE TO LIVE: More Effective Low-Cost Housing in Asia

Editor: Y.M. Yeung
Résumé

Dans un climat d'urbanisation rapide et de pauvreté générale, le problème du logement des populations pauvres constitue un défi pour la plupart des gouvernements de l'Asie. Cet ouvrage passe en revue les principaux programmes d'habitations à loyer modéré qui existaient à la fin des années 1970 dans six pays asiatiques.

A Hong Kong et à Singapour, les programmes de logements sociaux ont contribué considérablement à répondre aux besoins d'une grande portion de la population. Cet ouvrage examine l'expérience récemment acquise dans l'aménagement de nouvelles villes et la construction subséquente de logements sociaux. Dans les deux villes-états, on a tenté de mettre l'accent sur la gestion du logement en l'adaptant plus étroitement aux besoins, nouveaux et réels, de la population.

En Thaïlande, aux Philippines, en Malaisie et en Indonésie, des programmes similaires, mais adaptés aux pays, ont été mis sur pied afin d'améliorer les conditions d'habitation de la population pauvre. La plupart de ces programmes visent plus particulièrement les bidonvilles et les taudis des grandes villes, mais certains portent sur les besoins d'habitation de la population rurale. Ces pays ont lancé beaucoup de projets d'aménagement des sites et des services et d'amélioration des services existants. Leurs gouvernements accordent de plus en plus d'attention au problème du logement, et ce changement d'attitude a été renforcé par l'aide financière internationale qu'ils reçoivent depuis quelques années. Des projets innovateurs entrepris par la population même, qui a dans une certaine mesure réussi à satisfaire ses propres besoins d'habitation, viennent s'ajouter en complément des programmes subventionnés par des organismes nationaux et internationaux.

Resumen

Frente a la acelerada urbanización y expansión de la pobreza, la vivienda para los grupos menos favorecidos se ha convertido en un reto para la mayoría de los gobiernos Asiáticos. Este volumen reseña los principales programas de vivienda de bajo costo realizados a finales de los setenta en seis países Asiáticos.

En Hong Kong y Singapour, el progreso de los programas de vivienda popular para hacer frente a las necesidades de grandes sectores de la población ha sido considerable. Se resume la experiencia reciente en desarrollo de nuevas poblaciones y la provisión de vivienda popular. En ambas ciudades-estados ha habido un intento por colocar mayor énfasis en la administración de la vivienda, haciendo más receptiva a las necesidades nuevas y reales.

En Tailandia, Filipinas, Malasia e Indonesia, han surgido programas similares, específicos de cada país, para mejorar las condiciones de vivienda de los pobres. La mayor parte de estos se centran en los tugurios y barrios marginales de las grandes ciudades, aunque algunos están dirigidos a las necesidades de vivienda de la población rural. Entre los proyectos destacados en estos países están los de lotes con servicios y los de mejora comunal. Los gobiernos respectivos dedican cada vez más atención a la vivienda para lo cual han contado con el respaldo de la asistencia internacional en los últimos años. Complementando estos programas apoyados nacional e internacionalmente están también los empeños innovadores de la misma gente, los cuales han alcanzado un cierto grado de éxito en la provisión de la vivienda propia.
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Housing Needs and Related Urban-Development Programs and Processes in Hong Kong

E.G. Pryor

Given Hong Kong's limited land area and relentless demographic pressure it has proved difficult for both the government and private developers to keep pace with the rapidly escalating demand for housing, particularly as resources were badly needed in the early post-war years for new infrastructure, land for industry, and various social services. Consequently, large settlements of squatters sprang up, sometimes overnight. Indeed, the number of households living in such areas provides a barometer of the extent to which programs for the provision of permanent housing are succeeding in meeting the demand for housing.

Projections prepared by the Commissioner of Census and Statistics indicate that between 1981 and 1996, the population of Hong Kong could increase by 25% from 5.1 to 6.4 million persons. This represents an average growth of 1.7%/year, which, relative to demographic trends in other Southeast Asian countries, is a moderate rate. However, the number of households is expected to grow at 3.4% per year, due to smaller family sizes and, because housing programs must relate to the accommodation of households, this trend will have major implications in resource allocations for the provision of residential land and housing development. The projections in Table 1 indicate the general dimension of the problem.

The response of the Hong Kong government to the escalation of population growth has been to pursue a vigorous program of land development to provide sites for housing and other urban uses. In broad terms, three development phases can be identified.

1953–1972. The commencement of this phase began on Christmas day, 1953, when a large squatter fire at Shek Kip Mei made 53,000 persons homeless. The land made available by the fire provided a catalyst for the initiation of an intensive program of housing resettlement, whereby low-rental public-housing estates with densities of up to 5000 persons/ha were erected to provide new homes for squatter households cleared from land that was subsequently made available for various urban uses.

It was also recognized by the government that incentives should be given to private developers and, to that end, new control regulations for buildings were introduced in 1956 to permit the high-rise redevelopment of existing properties. The resultant effects on housing supply were dramatic, with the new development being concentrated in the urban areas of Hong Kong Island, Kowloon, and New Kowloon. Generally, however, there was no overall objective for policy except an awareness to produce additional housing as quickly as possible.
Table 1. Projected growth of population for Hong Kong, 1981–1996.

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of persons (000)</td>
<td>5167</td>
<td>5556</td>
<td>5935</td>
<td>6254</td>
<td>+21.0</td>
</tr>
<tr>
<td>No. of households (000)</td>
<td>1259</td>
<td>1487</td>
<td>1714</td>
<td>1908</td>
<td>+51.5</td>
</tr>
<tr>
<td>Average household size (persons)</td>
<td>4.10</td>
<td>3.74</td>
<td>3.46</td>
<td>3.28</td>
<td>−20.0</td>
</tr>
</tbody>
</table>

Source: Commissioner of Census and Statistics.

1972–1980. This phase of development was characterized by a greater appreciation of the need to aim towards the achievement of housing production targets, principally in the public sector, in that, in 1972, the government accepted a commitment to produce low-rental housing for 1.5 million persons over a 10-year period. The broad objectives of this program were:

- to eliminate all squatter areas;
- to provide self-contained housing for all those households sharing accommodation in the private sector;
- to relieve overcrowding in existing government housing estates and to redevelop obsolete estates;
- to provide housing for those people made homeless by government schemes and policies.

Generally, little consideration was given either to the contribution of private developers or to the role that temporary housing and sharing would need to play during periods of housing shortages. Notwithstanding, the public-housing program provided a much-needed impetus and, to achieve the ambitious targets, administrative steps were taken to establish a New Territories Development Department to provide the necessary land and services for six new towns in areas with a combined ultimate capacity of about 2.6 million persons (see Fung Tung, this volume, Figure 1). The result of these efforts so far is that about 2 million persons or 40% of the population now lives in public housing.

Post-1980. A position has now been reached where it is clear that the development capacity of the first-generation new towns will have been realized within the next 10 years and steps are now being taken to identify suitable second-generation new towns to meet housing and other land-use needs up to the turn of the century.

The magnitude of the work involved in responding to the long-term housing and other land-use requirements of the territory makes it essential that planning and development programs be carefully orchestrated within a framework that proceeds from general policies to specific details. The system and processes employed to that end are the focus of attention of this paper.

**Formulation of Policies and Targets**

When the decision was taken, in 1972, to accept a 10-year target for the provision of housing for 1.5 million persons it was recognized that housing
development would be the cornerstone on which to base the planning and development of new urban areas. Thus, the derivation of policy targets for the provision of housing over a given period of time is important in determining the dimension of urban investment programs. One approach to the formulation of policies and targets envisages the following sequence of steps:

- Step 1: Determine the broad objectives to be achieved for a given program, i.e., housing.
- Step 2: Forecast the demand over a given time period.
- Step 3: Estimate the future supply of the service required.
- Step 4: Determine shortfalls in performance relative to the forecast demand.
- Step 5: Postulate and evaluate alternatives for meeting shortfalls and loop back to Step 2 to evaluate the effects.
- Step 6: Decide on a course of action and prepare programs for implementation.
- Step 7: Review.

Step 1: Determining the Objectives

An assessment of the broad dimension of investment programs depends, first, on the specific objectives it is desired to achieve for a given service. In the case of housing in Hong Kong it has been accepted that the long-term goal should be to provide every household with an unshared, self-contained dwelling built of permanent materials at a rent or purchase price that they can reasonably afford.

Step 2: Forecasting the Demand

The next step is to assess the demand arising from, first, existing households and, second, the projected number of additional households over the assumed planning period. This is broken down into the needs for subsidized public-rental housing for low-income households, partly subsidized home-ownership dwellings for middle-income groups, and open-market dwellings for upper-income households. The demand for housing in Hong Kong arises from three sectors, namely, the public-housing sector, the private-housing sector, and the temporary-housing sector. The estimates for each in Hong Kong, in 1980, are given in Table 2.

To the estimates of current housing needs must be added forecasts of the future demand over a given planning period and any adjustments to current needs that might arise as a result of potential changes of household incomes. Over the period 1980 to 1985, the estimates for Hong Kong are as given in Table 3.

Steps 3 and 4: Estimating Future Housing Supply and Determining Shortfalls

An estimation of the future supply of housing must take into account not only existing self-contained flats that are likely to become vacant as a result of turnover, but also the production of new flats determined on the basis of known or assumed programs in the public and private sectors. This process requires a degree of guesswork, particularly with respect to private
Table 2. Housing demand (no. of households) in Hong Kong, 1980.

<table>
<thead>
<tr>
<th>Type of housing</th>
<th>Sector from which housing need arises</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public</td>
<td>Private</td>
</tr>
<tr>
<td>Public-rental housing</td>
<td>140 000</td>
<td>77 000</td>
</tr>
<tr>
<td>Home ownership (government subsidized and private)</td>
<td>20 000</td>
<td>133 000</td>
</tr>
<tr>
<td>Total</td>
<td>160 000</td>
<td>210 000</td>
</tr>
</tbody>
</table>

Table 3. Estimates of housing demand (no. of households) in Hong Kong, 1980–1985.

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Public-rental housing</td>
<td>257 000</td>
<td>101 000</td>
<td>358 000</td>
</tr>
<tr>
<td>Home ownership (government subsidized and private sector)</td>
<td>253 000</td>
<td>189 000</td>
<td>442 000</td>
</tr>
<tr>
<td>Total</td>
<td>510 000</td>
<td>290 000</td>
<td>800 000</td>
</tr>
</tbody>
</table>

Table 4. Projection of housing situation for Hong Kong, 1980.

<table>
<thead>
<tr>
<th>Demand/supply</th>
<th>Public-sector housing</th>
<th>Home-ownership housing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential housing demand 1980–1985 (households)</td>
<td>358 000</td>
<td>442 000</td>
<td>800 000</td>
</tr>
<tr>
<td>Potential housing supply 1980–1985 (flats)</td>
<td>184 000</td>
<td>188 000</td>
<td>372 000</td>
</tr>
<tr>
<td>Shortfall (flats)</td>
<td>174 000</td>
<td>254 000</td>
<td>428 000</td>
</tr>
</tbody>
</table>

Housing, the production of which tends to be cyclical according to the level of effective demand. However, given such estimates, a comparison can be made with the forecast demand which will then indicate the likely extent of shortfalls or even overproduction. A review of the situation in 1980 produced the results given in Table 4.

Step 5: Postulating and Evaluating Alternatives for Meeting Shortfalls

From Table 4, it is apparent that the supply of housing forecast in 1980 would not meet the objective of providing every household with a self-contained flat by 1985. Under such circumstances it is imperative to consider the means by which the gap between demand and supply can be narrowed. The principal alternatives include:

(a) Taking steps to boost supply through such means as increasing densities, providing additional sites, and offering incentives to private developers.

(b) Redefining the categories of households eligible for self-contained housing, e.g., by excluding a proportion of the one- and two-person households that can be expected to share accommodation.

(c) Redefining the type of accommodation considered to offer a satisfactory standard of housing, e.g., dwellings in which households have to share toilet facilities may be considered acceptable.

(d) Limiting the assessment of demand to levels determined both by the
capacity of the construction industry and by the redefinition of rehousing targets for specific categories of public- and private-sector households.

Thus, in a situation where potential demand far exceeds supply, it is essential that consideration be given to all four of those options. In Hong Kong, a consensus was reached that has resulted in the policy approval of the following targets:

1. The annual production of not less than 30,000 public-rental flats, generally for low-income households.
2. The annual production of 10,000 flats per year for government-sponsored home-ownership flats, generally for middle-income households.
3. The maintenance of a high level of production in the private sector, assumed to be about 30,000 flats per year, generally for upper-income households.
4. The provision by government of additional temporary housing for 50,000 persons.

In deciding on such targets, it has had to be accepted that there must be an integrated housing and land policy that recognizes the complex interaction that exists between:

- the range of household incomes;
- the degree of subsidy by government on land and capital finance;
- the capacity of the construction industry to produce new permanent housing;
- the involvement of financial institutions in making mortgage financing available;
- the restrictions placed by government on rents and the resale of property;
- the role of sharing and squatting housing as an expedient.

The combination of these factors is illustrated by the model (Figure 1) which indicates that, over the income scale, there has to be a range of housing types, the rents and purchase prices of which must be set at levels appropriate to affordability. In turn, affordability is affected by the degree of subsidy by government on land and capital finance as well as by the mortgage terms offered by financial institutions. The greater the degree of subsidy, the tighter should be restrictions on resales. The model also indicates that policies should encourage upward mobility in the housing market and that, during times of restricted supply of permanent housing, sharing and squatting have to be tolerated.

Step 6: Developing Programs

Having established targets for housing production that are considered to be within reasonable practical limits, detailed plans and programs can then be drawn up for implementation. The foundation for such programs is an adequate supply of land that must be planned for in the short, medium, and long term. It is at this point that strategic, long-term planning considerations must first be examined with regard to the short- and medium-term life expectancy of current production plans for urban land.

**Long-Term Development Strategy**

On the basis of the housing-policy targets approved in 1972, steps were
taken to develop six new towns and, given current development programs, the development potential of these first-generation new towns should have been largely absorbed by the end of the 1980s.

To sustain housing production at agreed target levels in both the public and private sectors in the 1990s, it will be necessary to start producing a steady flow of sites in second-generation new towns and urban extensions as from 1984/1985. Two additional new towns have already been identified at Junk Bay and Ma On Shan, and work has started on planning and land production that is likely to be spread over 7 or 8 years. However, these two areas are likely to accommodate only about 500,000 persons, which would be equivalent to a 2-year supply of housing.

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The search for additional areas must therefore proceed and this will need to be undertaken in a systematic way so as to ensure that the final choice of a long-term development strategy will optimize the use of scarce resources. To this end, the basic approach will require:

- an assessment of the development potential of each sub-region for incremental levels of population growth;
- the postulation of a range of long-term territorial population distributions;
- the testing of each alternative population distribution from a transportation point of view;
- the merging of land development and territorial transportation costs to derive a series of land-use and transportation concepts;
- the evaluation of each concept in terms of general feasibility, political acceptability, effects on environment, etc.;
- the selection of a preferred concept, the designation of new areas for urban development, and the determination of a broad time scale for the implementation of work.

One of the main evaluation criteria that will influence the selection of a preferred strategy will be the principle that areas selected for development should follow a progression involving the resolution of the least threshold limitations, i.e., difficult areas should be left for later stages of development. Also, the preferred strategy should encourage public and private investment to follow common directions of growth. Another important principle is that development risks should be carefully spread. Finally, the preferred strategy should attempt to ensure that every dollar invested in major infrastructure should aim to have a multiple development benefit. Thus, it is important to ensure that, as far as practicable, major economic development projects such as a replacement airport, new container-port facilities, and industrial estates are serviced by transportation corridors along which there are opportunities for housing and other related urban development.

**Planning and Programming of New Urban Development Areas**

To meet long-term needs for housing and related urban uses, it is to be expected that additional urban areas of some considerable magnitude will be required. Once such areas have been identified within the framework of a long-term development strategy it will be necessary to proceed with planning and the formulation of development programs.

The planning of new development areas can be expected to follow broadly the pattern already established for first generation new towns, beginning with desk-top studies that, for a predetermined population, will have to quantify the broad land-use needs required for:

- public-rental housing for low-income groups;
- government-subsidized house ownership; schemes for middle-income households;
- private housing for upper-income households;
- manufacturing industry;
- district open spaces and specialized recreation facilities;
- major community uses such as hospitals, technical institutes, and civic centres; and
• major utility installations such as sewage-treatment works, and refuse-disposal facilities.

Determining land requirements for such uses requires that assumptions be made as to the standards of provision considered appropriate for long-term planning purposes. Such standards were formulated through interdepartmental consultations having regard to policy objectives in various fields, including education, social welfare, medical and health, housing, industry and commerce, recreation and sport, and transportation. It is the normal practice for standards to be approved by the Land Development Policy Committee (LDPC). Standards are kept constantly under review in the light of feedback surveys and the introduction of new policies approved by the Executive Council.

The next step requires the broad assessment of land-use requirements to be translated into a conceptual plan. For this purpose, a complete inventory of the existing characteristics of the development area needs to be prepared including established land uses and land status, landscape features and topography, geological and geotechnical characteristics, drainage patterns, water depths, potential sources of fill material for reclamation works, alignments and capacities of utility services, transportation routes and services, and existing demographic profiles and settlement patterns.

Various concepts of urban forms then need to be derived and evaluated against a set of environmental, sociological, financial, and economic objectives. In this process, assessments also need to be made of the future travel demands and the type and capacity of transportation facilities required to provide a satisfactory level of service.

Complex studies may be required using computerized modeling techniques to derive the most cost-effective and time-effective solution to transportation. Similarly, studies also need to be made of future requirements for the provision of utility services including water, electricity, gas, sewerage, and refuse disposal.

In due course, a preferred pattern of land use and supportive infrastructure can be derived and phased for progressive implementation. The normal practice in Hong Kong is for development plans to be arranged in a series of packages, each of which can, if necessary, stand as self-contained entities should circumstances require a curtailment of work.

The broad conceptual plans and development packages then provide a basis for the formulation for each package of detailed implementation programs for the production and development of land. This process, in itself, is a complex system involving six major steps: land acquisition (where private land is required); land clearance; land formation; provision of services; release of sites by allocation, sale, or tender; and building development.

Land Acquisition

Under the Crown Lands Resumption Ordinance the Governor-in-Council may declare any work to be a public purpose for which the land needed may be acquired compulsorily by government. After the gazetting and posting of resumption notices, negotiations may be entered into
between government and landholders to settle upon a purchase price but, if necessary, a tribunal may be appointed to reach agreement thereon. No appeals against decisions taken under this ordinance are allowed. Such procedures are followed in the urban areas of Hong Kong Island, Kowloon, and New Kowloon and may be applied in urban layout areas in the New Territories. On this latter account, however, a unique administrative process exists whereby private land may be acquired by government by means of letters of exchange called letters “A” and “B.” Letter “A” is used where resumption proceedings have not commenced but circumstances require the early possession of a site. Letter “B” is used where resumption has already been gazetted, and it takes the place of negotiations that would otherwise ensue under the Crown Lands Resumption Ordinance.

Under the letter of exchange system, the first step is to prepare and approve a layout for a proposed urban area that may contain a number of private lots. The locations, dimensions, area, status, and ownership of each private lot are carefully recorded. When the scheme was first introduced, the owners of agricultural lots (which comprise the majority of landholdings in the New Territories) were offered an exchange of 2 m² of urban land for every 5 m² of agricultural land surrendered. For urban land the ratio of exchange is 1:1. Letters of entitlement are issued accordingly and registered by the Land Authority. Exchanges are effected when government has land available in an urban layout for private residential, commercial, or industrial development. Exchanges may be offered in any layout area in the New Territories. Sites are normally made available through tenders open to holders of letters of exchange, the successful tenderers being decided on the basis of the age and area of the letters of exchange surrendered. Successful tenderers must then pay to the government the difference between the area of entitlement at the respective urban and agricultural values set at the date of surrender. Periodic land sales and reviews by government of agricultural land values fix such rates. The difference is essentially a betterment rate to cover the costs of land formation and the provision of services. Any incremental value of sites since the date of exchange accrues to the successful tenderer.

If holders of letters of exchange so desire, they may, at any time, sell their entitlements on the open market and, over the years, a very active brokerage system has developed. By and large, this system has been well accepted by landowners and has provided an effective means for the assembly of land.

The ratio of 5:2 exchange was devised on the basis that, under normal circumstances, it would be reasonable to expect that 40% of a layout area could be made available for private development. However, over the years, more land has had to be provided for community uses, highways, and other public uses so that the exchange ratio has been adjusted to 5:1 plus an ex-gratia cash payment (currently HK$1108 or US$201/m²) for 50% of the area of lot holdings. There is currently a backlog of about 1 million m² net but it is anticipated that this commitment could be met within the next 5 years.

The system does not discriminate between residential, commercial, and industrial sites nor between variations in permitted building density in such zones in terms of the rates of exchange. With the benefit of hindsight,
it might have been appropriate to have recognized the differential values of sites in different zones.

Land required for a public purpose must be gazetted with the approval of the Executive Council and it is the practice to acquire only that area which is strictly necessary for the implementation of works. The entire process of demarcation, gazetting, negotiation, and reversion takes between 9 and 12 months.

**Land Clearance**

With but few exceptions, private or crown land required for a public purpose requires the clearance of domestic and non-domestic structures, the greater proportion of which usually comprises squatter huts. For those occupants of huts recorded in a 1976 survey who have a majority of household members with 15 years or more residence in Hong Kong, new housing in public-rental estates is offered along with domestic removal allowances. For other occupants, new accommodation in areas of temporary housing is made available together with ex-gratia payments to help cover the costs of re-establishment. Between 1967 and 1980 about 327,000 persons were rehoused in rental estates and 86,000 persons were moved to temporary housing.

For workshop operators occupying structures covered by the 1976 survey, certain trades may be offered new accommodation in government-built flatted factories at commercial rents or may opt for ex-gratia compensation. Noneligible trades receive only ex-gratia compensation. Between 1972 and 1980, for example, over 6500 factories were cleared; of that total 26% were reprovisioned in flatted factories, 42% of admissible trades opted for cash, and the balance of 32% comprised ineligible trades entitled to ex-gratia payments only. For shops, schools, welfare premises, and agricultural holdings various rates of ex-gratia payment apply.

In the quest to provide more land for development every effort is made to soften the disruption to people and businesses. That such policies have been successful is indicated by the generally few occasions when there have been direct confrontations between government officials and squatters, and also by the impressive record of land made available for permanent use.

**Land Formation and Provision of Services**

Land formation is usually undertaken by means of terracing hill slopes and using the excavated material to reclaim areas of seabed or to raise the level of valley sites. Such work is undertaken by private contractors through competitive tender and occurs soon after the completion of land resumptions and clearance. The provision of roads, water, storm-water drainage, and sewerage is planned through each new-town development office and construction is also undertaken by private contractors. Utility companies undertake the provision of gas, telephones, and electricity.

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1 Flatted factories refer to multi-storied buildings specially built to accommodate usually small-scale and unobnoxious industries for economy of land.
Release of Sites and Building Development

For private residential, commercial, and industrial development, sites are released onto the market either by auction to the highest bidder or by tender to holders of letters of exchange entitlements in urban layouts in the New Territories. The rate at which such sites are released and their locations are determined by a centrally controlled Land Disposal Sub-Committee of the Special Committee on Land Production (SCLP), which, each year, sets targets with regard to policy objectives. Building covenants are usually imposed requiring the completion of work within 3 years.

For non-profit making organizations that wish to establish new community facilities, land allocations at nil premium may be granted. Also, sites are made available for government-funded facilities to be built within the context of a public-works program that determines priorities and regulates the sequence of events from design to allocation of funds and the letting of contracts for such facilities as schools, community centres, bus termini, and clinics. Private treaty grants at full market value are made to those undertaking the development of public utilities.

Public-Housing Program

Within each new-town development program there are, as indicated, a number of sub-programs, the principal one relating to public housing for which an overall target has been set at 35,000 flats per year. To achieve this target, a sophisticated monitoring system has been set up that spans a 10-year development period, with detailed programing being undertaken for projects in the first quinquennium, and general programing being undertaken for projects in the second quinquennium.

For projects included in the first quinquennial period there is a comprehensive breakdown of estates planned to come on stream in both the new towns and the main urban areas. Each estate has a designated capacity in terms of population and flats and, at the commencement of each fiscal year, a target completion date is set, from which point programs are derived in a backward sequence with respect to all the main components and tasks involved in planning and building a new estate. The principal tasks include building construction, piling work, site-formation work, and many others.

Certain of the tasks may overlap and, on average, the total lead time for the completion of a new estate is about 5 years. At present, there is a total of 150 projects due for completion by 1985/1986 and, for each project, up to 20 different agencies are involved. There are at least 10 major items that need to be brought to fruition for every new scheme and so that production targets can be kept on schedule, great care has to be exercised over the monitoring of progress from various sources of information including regular progress meetings, site reports, telephone calls, and routine correspondence.

As information is received, key factors are recorded in chart form to determine whether any delays are likely to be incurred. If so, decisions have to be taken as to whether delays can be made good either by the
application of additional resources to the project concerned or by the advancement of an alternative project. Virtually every day, corrective action is taken and, in each quarter, a major review of the entire program is undertaken.

Computerized systems are used extensively in the monitoring process. The monitoring system for the public-housing development program has now been in operation for about 5 years and the sophisticated processes used have succeeded in keeping overall delays to a minimum.

Another factor that has contributed significantly to the sustained achievement of high levels of flat production has been the use of standardized planning parameters and block designs. In the case of planning parameters, government has devised a comprehensive set of standards for the provision of schools, parking spaces, markets, welfare uses, recreational facilities, and hostels. The Hong Kong Housing Authority has also devised a set of standard domestic block designs that greatly facilitate the preparation of layouts and contract documents. Coupled with this, is the establishment of very precise administrative procedures for the circulation of layout proposals to appropriate government departments and utility requirements to make sure that all requirements have been met. The end result, generally, has been the creation of new estates of bold design that provide a good environment for the creation of new communities.

**Balancing Objectives of Physical and Fiscal Planning**

Whereas the program for each new town is reasonably self-contained, the general pace of development for new towns and public-housing estates depends largely on the ceilings set by government on capital expenditures within the context of overall budgetary strategy. Thus, each year the development objectives considered necessary to be accomplished over the next 5 years have to be costed, with the totals set against expenditure ceilings. Generally, the new-town programs are housing led. In this field, priority is given to direct capital expenditures on public housing whereas investment in site formation is the principal means by which government assists in promoting the development of private housing. Adjustments may be required until a balance is achieved between the objectives of physical and fiscal planning. Subsequently, detailed development programs for each new town and for the public-housing program can be made final and issued as a basis for the implementation of works in the following financial year. Even with such ceilings, the capital expenditures on the new towns and public housing are very considerable, reaching about HK$3600 (US$655) millions in 1980–1981 (excluding home-ownership schemes that are self-financing).

There can be no doubt that since 1973, remarkable results have been achieved, as seen by the rapid transformation of new towns from quiet agricultural communities to busy urban centres. In the field of public housing alone, between 1974 and 1980, a total of 107 000 flats were completed and, over the next 5 years, the current program is expected to yield a further 35 000 flats per year. With regard to the private sector, performance has also been very encouraging with a gross increase of 152 000 flats between 1974 and 1980. Given continued buoyant demand and the steady
supply of sites (including sites made available through redevelopment) private developers could well maintain a production level of 30,000 flats per year.

It may be expected that such development programs will continue, seemingly under their own momentum, but it must not be overlooked that, in Hong Kong, the following considerations and constraints must be allowed for.

(a) The very success of Hong Kong in various socioeconomic fields has itself contributed to recurrent and unforeseen influxes of people from China. This in turn has, at times, threatened to overwhelm the progress made during periods of stability. The best that can be hoped for in future is that, in periods of restricted immigration, sustained high levels of production will start to make significant but relatively temporary inroads into the escalating demand.

(b) Hong Kong’s economy depends on international situations largely beyond the government’s control. Coupled with this is the high dependency of the construction industry on imports of basic building materials, which requires heavy outlays of foreign exchange. Investment decisions affecting capital works depend very much on Hong Kong’s economic position, which can change dramatically in a short space of time.

(c) Even during periods of economic growth, budgetary strategy may require that financial controls be imposed on public-sector expenditure to counter inflationary trends. Such controls affect government spending, curtailing, for example, land production and infrastructure programs that subsequently affect the supply of both public and private housing.

(d) It is well known that Hong Kong has only a limited area of easily developable land and faces considerable difficulties in either acquiring or forming sites. Land for housing must be considered in relation to other essential community uses, including industry, social facilities, recreation, infrastructure, and transportation.

(e) Even if these constraints can be resolved, there remain limits to the capacity of the construction industry arising from competition among various sectors of the industry for skilled labour, materials, and contractors. Generally, the capacity of the construction industry can be improved only by degrees.

(f) Government has periodically found it difficult to compete with salaries and conditions offered to professional staff in the private sector, and thus, development surges tend to parallel heavy expenditures in the public sector.

Conclusion

Hong Kong has embarked on extremely ambitious programs for urban and public-housing development of which a fairly long-term view needs to be taken. The system required to bring these programs to fruition is now well established and, generally, performance has been good. The success of the system hinges largely around the coordinated flow of information and monitoring through executive committees working in the context of the government’s overall policies for fiscal and socioeconomic development. Future performance will have to take account of various constraints,
the nature and effects of which cannot be predicted with great certainty. Nevertheless, the formulation of integrated programs can at least help to ensure the evolution of urban forms that, at any given stage, can stand as reasonably balanced and successful systems.