



PEOPLE’S REPUBLIC OF CHINA

HONG KONG

Size of the Special Administrative Region	1 045 km²
Climate	Tropical
Population	6, 84 M
Population density	6550 inhab/km²
Population growth rate (1993 – 1999)	2.6%
Part of urban population	100%
Life expectancy at birth	79
Infant mortality (per 1000 live birth)	3
Access to improved water sources (% of population)	100
Official languages	Chinese, English
Religions	Buddhism, Christian
Gross domestic product	167 billion USD (1999)
Gdp per capita	24.364 USD / hab
Inflation	2,4 %
Gdp growth rate	+1.8 % (1999)
Gdp repartition in different sectors (1998)	Industry: 15,2% (manufacturing: 6,2%), services: 84,7%.
Unemployment rate	6,1 %
Illiteracy (% of population age 15+)	7
Tourism	11 M visitors (1996)

HONG KONG: HOW SUSTAINABILITY IS MANAGED IN A HIGH DENSITY CITY

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Introduction

Hong Kong is well known for its high-density and high-rise development¹. Tall buildings are not limited to commercial and industrial uses but are also typical of residential properties. With a developable area of merely around 200 sq. km (20% of the total area) but a population of 6.8 million at the end of 1999, high-rise development is not a choice but a condition of survival. On average, every square km of land needs to accommodate 6,313 persons. In the most densely populated district, the population density is as high as 82,107 per sq. km. These density levels are very high, even when compared with those of other metropolises such as London (4,483 persons per sq. km), Tokyo (5,384 per sq. km) and Singapore (4,700 per sq. km).

Given the city's fast population growth and thriving economic activities but limited land and natural resources, achieving sustainability poses a major challenge not only to the government but also to the community.

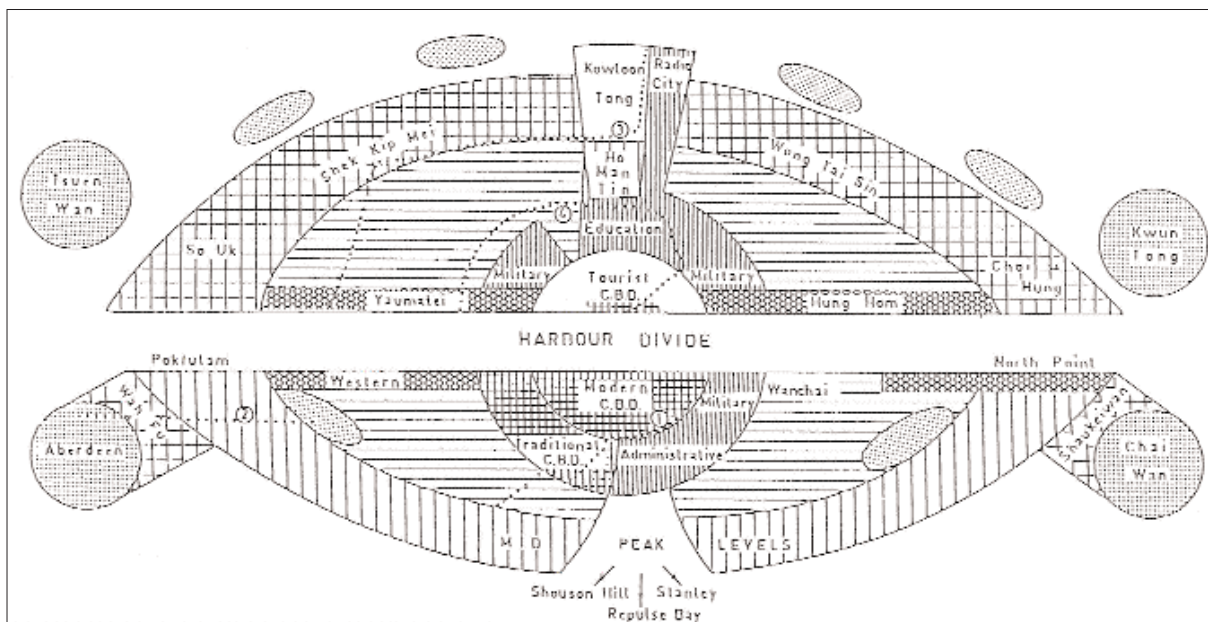
This paper thus aims to discuss how Hong Kong, as one of the world's most densely populated cities, perceives and manages sustainability. It initially examines how, before environmental sustainability became an issue, the city was organized in order to sustain its growth. It then examines how the recent concept of sustainable development has been translated in the city and how it has affected urban development. Finally, it will scrutinize the direction that Hong Kong is taking in order to achieve sustainability.

New-Town Development

The Central District and the New Towns

Prior to 1973, the urban form of Hong Kong exhibited a uni-centric pattern with peripheral extension; and since then, it has evolved into a multi-nuclear pattern with the development of new towns. The coastal strips flanking the inner Victoria Harbour has, however, continued to be the Central Business District (Figure 1). Development in this central area indeed started even before the official inauguration of Hong Kong as a British colony in 1842 because of its thriving trading activities. Initial settlement between 1841 and 1860 took place at the northern central shores of the Hong Kong Island, and later further expanded along the waterfront and southward up the foothills

of Victoria Peak. The ceding of the Kowloon Peninsula to the British Government in 1861 spurred urban growth in the Kowloon Peninsula, resulting in development along the two coasts around the inner harbour area. After the Second World War, due to the large influx of migrants from China, the urban areas bordering both sides of the harbour became extremely overcrowded. From 1954, the construction of public housing and industrial sites on the urban fringe of New Kowloon and in the newly developed areas of the Hong Kong Island has induced urban growth to the peripheral areas. By the early seventies, a complex and compact city center comprised of modern and traditional central business districts had been established. In the traditional central business district, the land use pattern was similar to



Source: McGee, T. & Drakakis-Smith, D., *Fieldwork in Urban Geography: Hong Kong and Macao* (Hong Kong: Longman, 1974)

Figure 1. Hong Kong Metropolitan Area: A Representative Land-Use Model

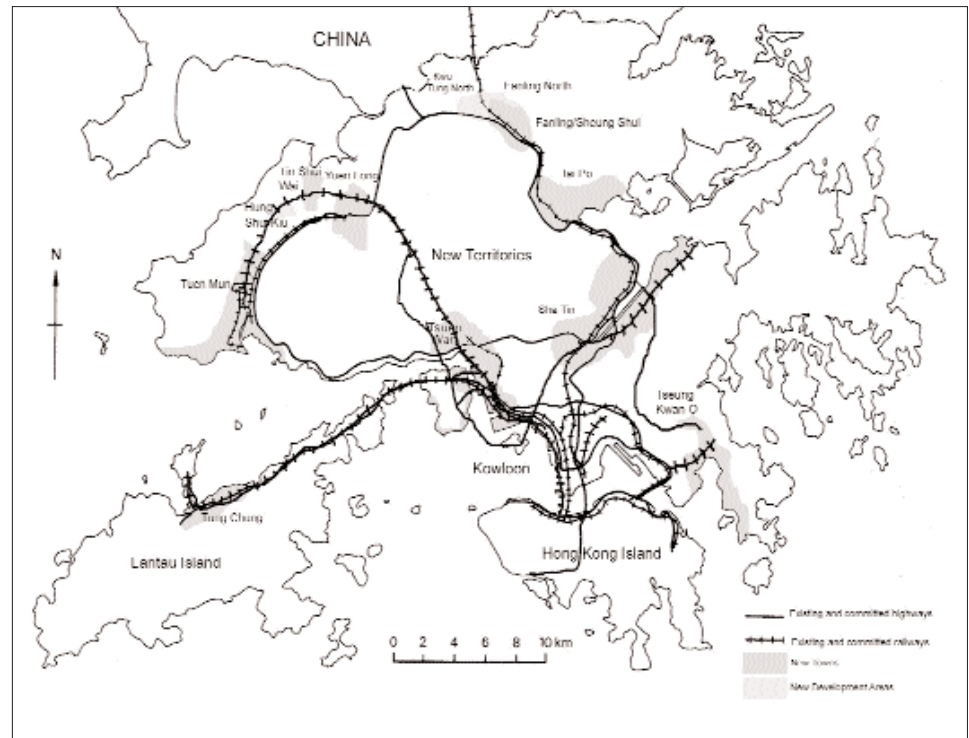


Figure 2. Transport Network of Existing and Planned New Towns

that of other Asian cities in that the retailing, industry, hawking, storage and residential functions were all inter-mixed and seldom separated morphologically. The overall urban form of Hong Kong also exhibited both concentric and sectoral patterns of land use. While the low-income and the middle-income residential zones radiated from the city center, the high-value residential zones formed wedges inserted into the lower value housing zones. Clusters of squatter settlements were also found in the outer region or at the periphery of Hong Kong Island and Kowloon. Some new or expanded town centers also began to emerge². Although the government's construction of public housing and industrial estates in new areas steered urban expansion, these efforts were more corollaries of the natural growth of the city and mainly responded to economic demands.

Large-scale urban development changing the urban form of Hong Kong nonetheless took place in the New Territories after 1973 because of the government's Ten-Year Housing Program. As early as 1957, the government had the intention of building new towns on the British model to accommodate the rapidly expanding population and industrial activities of Hong Kong. In 1960, a new town with a target population of over one million and a supply of 202 hectare of industrial land was planned at Tsuen Wan, in the south-west of the New Territories (Figure 2). The government, learning from the experience of the earlier satellite town project on the urban fringe, provided adequate residential land to reduce the commuting time for the workers and local traffic congestion. However, the development of the new town in the subsequent years concen-

trated on public housing construction and the servicing of industrial land, and the attention given to community facilities was minimal. Two more new towns with populations of around one million, following the development approach and principles of the first one were planned in the early sixties. However, enthusiasm for the new plans quickly subsided during the second half of the sixties and the first half of the seventies. The main reasons were the economic recession resulting from the 1967 riots which were local responses to the Cultural Revolution taking place in China, and the lower than expected rate of population growth. Also it was found that the supply of residential and industrial land in the first new town was excessive³.

The impetus for implementing the new town program was re-activated by the Ten-Year Housing Program, whose target was the construction of new and modern homes for 1.8 million people within ten years. The Program was announced by the first policy speech of the then newly-appointed Governor Sir Murray Maclehoose. He pointed out that " 300,000 people still live in squatter's huts or temporary housing. Many units in resettlement estates are badly overcrowded, or have no separate wash places or lavatories. It is estimated that a further 310,000 people would need rehousing if all of those in shared private flats and tenements were to have a self-contained home, and few of those could afford the rents asked by private landlords. " In his conclusion, he stated that " the inadequacy and scarcity of housing and all that this implies, and the harsh situations that result from it, is one of the major and most constant sources of friction and unhappiness between the government and the population. It offends alike our humanity, our civic pride and our political good sense.⁴ "

It was acknowledged that a large amount of new land would be needed to provide sites for this massive housing program, all the more so

as the housing standards were to be improved. Thus it was intended that " the bulk of the new housing must be provided in the new towns in the New Territories - the complex of Tsuen Wan, Tsing I and Kwai Chung, Sha Tin and Castle Peak.⁵ " Furthermore, three principles for new town development were laid down to make them attractive to potential inhabitants: good communications with the old urban areas; the provision of housing to be accompanied with full provision of community services; and the provision of employment. In short, " these towns must be built as a whole.⁶ "

Not only were two originally-planned new towns developed but, in January 1979, three more market towns (Yuen Long, Fangling/Sheung Shui and Tai Po) were designated for development into new towns, and another two (Tseung Kwan O and Tin Shui Wai) were added in 1982. A ninth one, the Tung Chung New Town, in close proximity to the new airport, was announced in 1989. Three New Development Areas (Fanling North, Kwu Tung and Hung Shui Kiu), which are extensions to the existing towns in the north and north-west New Territories, were announced this year. Thus altogether there are nine new towns in Hong Kong and they are planned to house a total population of about 4.5 million. As shown in Figure 2, because of the new-town program, the urban form of Hong Kong has become multi-centered.

All the new towns are connected with the main urban center by highways and most of them are connected with mass transit railways, either underground or at grade. As shown in Table 1 and Figure 2, all these towns are to be linked up by mass transit railway lines by the year 2006. Commuting between the new towns and the city center is mainly by public transport, which is the usual means (90 per cent) of travelling in Hong Kong⁷. Owing to the high density of the new towns, mass public transport is necessary to move the huge number of commuters. The public transport system carried a total of almost 10.65 million passen-

Table 1. Transport Network of Existing New Towns

New Towns	Major Highway		Railway			
	To CBD Existing	To Other New Towns Existing	To CDB		To Other New Towns	
			Existing	Committed ¹	Existing	Committed ¹
Tsuen Wan	✓	✓	✓	n.a. ²	✓	n.a.
Sha Tin	✓	✓	✓	n.a.	✓	n.a.
Tuen Mun	✓	✓	*	✓	✓ ³	✓
Tai Po	✓	✓	✓	n.a.	✓	n.a.
Fanling/Sheung Shui	✓	✓	✓	n.a.	✓ ³	n.a.
Yuen Long	✓	✓	*	✓	✓ ³	✓
Tin Shui Wai	✓	✓	*	✓	✓	
Tseung Kwan O	✓	✓	*	✓	*	✓
Tung Chung	✓	✓	✓	n.a.	✓	n.a.

Notes:

1. Due for completion by 2006.

2. Not applicable.

3. The Light Rail running through these three new towns is currently not connected to other new towns, but the committed railway will connect these new towns to the main railway systems.

ger trips per day in 1999⁸. There is a wide range of public passenger transport modes operating in the city, including buses, the underground train system, heavy and light railways, mini-buses, ferries, trams and taxis. With their vast numbers of customers and the permission given to railway companies to develop properties at the railway stations, public-transport operators in Hong Kong are not only self-funding, but in fact profitable. The franchised buses are usually guaranteed a profit rate of 12-15 per cent by the government.

Why the Changes in Urban Policy?

The shift from a uni-centric to a multinuclear pattern of urban development reflects the use of the new-town approach by Hong Kong as a way to sustain its growth: providing decent housing to the fast-growing population so as to enhance social stability and political popularity; and providing cheaper land for economic

activities especially industrial operations. Although the latter objective has not been quite achieved, as we shall see later, the former has been successful because of the semi-voluntary nature of public housing allocation. As shown in Table 2, new towns in Hong Kong are gigantic, targeted to accommodate population sizes of 320,000 to 860,000. The sheer speed of population growth has necessitated development on such a scale. The high natural increase rates (around 28 per 1,000 population) and the large influx of immigrants from China in the post-war years had expanded the population from 1.8 million in 1949 to 4.1 million in 1972⁹. Thus if the government was to eradicate the housing shortage quickly, large new towns had to be built.

Figure 2 shows that most of the new towns in Hong Kong were built on reclaimed land on river estuaries along the coast. Given Hong Kong's hilly topography, it is both difficult and

Table 2. The Population and Development Areas of New Towns

New Towns	Existing Population	Target Population	Total Development Area (ha.)	Projected Population Density (per km2)
Tsuen Wan	790,000	860,000	2,850	3,018
Sha Tin	630,000	670,000	2,000	3,350
Tuen Mun	490,000	630,000	2,250	2,800
Tai Po	300,000	332,000	1,270	2,614
Fanling/Sheung Shui	230,000	547,000 ¹	1,481	3,693
Yuen Long	167,000	440,000 ²	1,605	2,741
Tin Shui Wai	150,000	340,000	430	7,907
Tseung Kwan O	220,000	520,000	1,090	4,771
Tung Chung/Tai O	20,000	320,000	760	4,211
Total	2,997,000	4,659,000	13,736	-

Sources: Based on Territory Development Department, Hong Kong: The Facts: New Town (Hong Kong: Information Services Department, 1999); Planning Department and Territory Development Department, Planning and Development Study On North East New Territories: Development Proposals for Kwu Tung North, Fanling North and Ping Che/Ta Kwu Ling: Consultation Digest (Hong Kong: Planning Department and Territory Development Department, 1999); Planning Department and Territory Development Department, Planning and Development Study on North West New Territories: Development Proposals for Hung Shui Kiu: Consultation Digest (Hong Kong: Planning Department and Territory Development Department, 1999).

- Notes:
- 1. Includes the New Development Areas of Fanling North and Kwu Tung North.
 - 2. Includes the New Development Area of Hung Shui Kiu.

expensive to form land, and this is why these coastal sites were chosen. Land reclamation is expensive, but it is quicker and cheaper than to take over land from the indigenous residents of the New Territories. Although all land in Hong Kong, except for a small parcel in the central district, has been leasehold land since colonial days, the land rights of the indigenous residents in the rural New Territories have been treated with great care in order to minimize hostility. While all land take-overs are fully compensated for at market rates (usually assessed at the potential market rate not at the price of the existing superstructure), the negotiation could be lengthy either because of the unwillingness of the original residents to be moved to another place or because they are unsatisfied with the amount of the compensa-

tion. The cost of land development is thus high in Hong Kong whether it is done by reclamation or by the take-over of land. When these factors are coupled with the scarcity of developable land in Hong Kong and the fact that the new towns were primarily developed to provide sites of cheap public housing, it is logical that concentrated high-density and high-rise development should have been preferred to low-rise urban sprawl. Apart from its social and political reasons, the large-scale housing program in the new towns also spurred economic development. From the sixties to the eighties, Hong Kong adopted an export-led economic growth strategy based on the manufacturing industry. A constant supply of cheap labour was therefore essential, and the provision of public housing helped lower

labour wages and tie down the working population. Thus it has often been argued that new town development in Hong Kong was public-housing led. While this is true for the formative years of the respective new towns, private housing development often played a major role as planned, once the infrastructure and transport network had been completed. As a matter of fact, except during periods of economic recession, there was always a shortage of land for private housing development. Land sale has been an important source of government revenue and the real-estate sector has become a major economic sector since the eighties. Thus it was important that new land sites be supplied through the new town program.

The most important economic objective of the new town, however, was to decentralize economic activities, mainly industry. Yet, except in the oldest new town and the industrial estates, the vacancy rates of industrial premises in the new towns have been high. The reasons for the slow industrial development are manifold and the most important factors are the abundant availability of both cheap labour and land in China since its opening in 1980. The others are inertia in industrial re-location due to long-established links with facilities and business connections in the main urban area and transport cost and time, not to speak of traffic jams and inconvenience so long as the new towns have not matured. Needless to say, the new towns have not been able to overcome conglomeration effects to attract high-order commercial activities from the central business area. They thus become the economic and residential adjuncts of the central city¹⁰.

A study conducted by a transport consultancy firm found that generally less than half of the employees in the new towns worked in their area of domicile in 1992¹¹. The average journey-to-work time by public transport was about three-quarters of an hour to one hour. However, as the average time was the mean of the time taken by those who travelled within

the area and those who commuted, the travel time of the latter group must have been higher than the average. Inevitably their family and social life would have been adversely affected by the long commuting time. This might be one of the reasons contributing to the higher divorce rates in all the outer new towns of Tuen Mun, Yuen Long, Fanling/Sheung Shui and Tin Shui Wai, which were 2.2 per cent, 2.5 per cent, 2 per cent and 2.2 per cent in 1996 respectively (Table 3). Likewise, the higher crime rates are found in the districts of Tuen Mun (1,146 per 100,000 population) and Yuen Long (1,654 per 100,000 population) where the outer new towns are located (Table 4). There has in fact been a tendency for the better-off to move back to the main urban area.

The government's effort to improve the transport system, especially in recent years, is nonetheless impressive. For instance, the route length of the underground railway was doubled from 43.2 km in 1988 to 82.2 km in 1999, and that of the light railway was increased from 23 km to 31.8 km in the same period¹². At the same time, the total road length in Hong Kong increased from 1,434 km to 1,885 km between 1988 and 1999. Vehicle speed accordingly increased from an average 28.3 km per hour to 31 km per hour. In the New territories where the new towns are located, the increase in the same period was more significant: from 35.9 to 44.6 km per hour¹³. The recent completion of Route 3, a highway linking Yuen Long with Central has effectively reduced commuting time between the new town and the main urban area by thirty minutes. With the completion of the railway network connecting all new towns with the city center in 2006, commuting time will be further reduced. Nevertheless, the inability of the new towns to attract high-order economic activities eventually led to the government's announcement of the Metroplan in 1988, signalling a return to the harbour area for re-creating land for economic activities.

Table 3. Divorce Rates in New Towns

New Towns	Divorce Rate ¹ 1996 (%)
Tuen Mun	2.2%
Sha Tin	1.8%
Yuen Long	2.5%
Tsuen Wan	1.5%
Tai Po	1.8%
Fanling/Sheung Shui	2.0%
Tseung Kwan O	1.5%
Tin Shui Wai	2.2%
All new towns	1.8%
Whole territory	1.9%

Source: Based on Census and Statistics Department, 1996 Population By-census: Main Tables (Hong Kong: Census and Statistics Department, 1997).

Note:
1. The divorce rate is calculated with the number of divorces and the size of the population at age 15 and above

Table 4. Crime Rates in New Towns

District ¹	Crime Rate (Per 100,000 population)	
	1996	1999
Tuen Mun	1,146	1,088
Sha Tin	896	762
Yuen Long	1,654	1,648
Tai Po	1,016	1,139
Tsuen Wan	1,110	929
Lantau	1,043	1,067
Kwun Tong	1,103	720
All new towns	1,118	1,008
Whole territory	1,253	1,122

Sources: Based on Royal Hong Kong Police Force, Crime and Enforcement Report 1996 (Hong Kong: Statistics Office, Crime Wing, 1996); Hong Kong Police Force, Crime and Enforcement Report 1999 (Hong Kong: Statistics Office, Crime Wing, 1999).

Note:
1. The statistics provided by the Hong Kong Police Force are classified by Police Regions which are different from the new town boundaries. The crime rate in Tseung Kwan is grouped under Kwun Tong, whereas those of Fanling/Sheung Shui and Tin Shui Wai are grouped under Yuen Long.

New Concerns in City Growth: Sustainability, Sustainable Development and Community Participation

Economic Changes and Environmental Consciousness

The late eighties saw the start of a gradual shift in the concerns of urban development in Hong Kong. As shown in Table 5, due to the deployment of industrial operations to southern China where land and labour are much cheaper, the manufacturing industry in Hong Kong dwindled and, by the nineties, it had ceased to be a major economic sector. However, the 'open door' policy of China has resurrected the entrepot function of Hong Kong and import, export and re-export activities resumed their place as major economic activities (Table 5). Since the eighties, the finance and service sector has also been growing rapidly, and Hong Kong has gradually become a regional center for these activities. These new economic developments reinforced the importance of the central business areas as conglomeration effects, and forward and backward linkages are essential for servicing and financing. The back-to-harbour strategy thus got the upper hand. The Ports and Airport Development Strategy, with its emphasis on expanding the hub function of Hong Kong, was thus conceived at the end of the eighties. Another important strand of societal development affecting the concept of urban development today was the growing awareness of environmental quality in the eighties – at least in the minds of some government officials. The global call for environmental protection and the environmental problems confronting Hong Kong¹⁴ finally led to the announcement of a major environmental policy in 1989 in the form of the White Paper on 'Pollution in Hong Kong – A Time to Act'. The Paper stated that "serious environmental pollution in Hong Kong is an unfortunate by-product of economic suc-

cess and population growth. One of the government's major priorities is to halt the decline in environmental conditions and to do more to improve our environment."¹⁵ The Paper set out a ten-year program to tackle environmental problems that had accumulated over decades of rapid growth in the economy and population. The disposal of solid waste, sewage, chemical waste, air pollution, and noise problems were major concerns. It also promised that a review of progress would be published every two years.

The first review in 1991 focused on the progress of the program on combating environmental problems. The second review published in 1993 took a more comprehensive approach. Apart from reviewing the progress of the ten-year program, it set out a basis for future action to protect the environment, including initiatives for improving the government's own performance in environmental protection, educating and involving the public in protecting the environment and introducing the concept of environmental sustainability. Community response also pointed to the need of to tackle air pollution, strengthen environmental education, promote conservation of resources and promote sustainable development in a wider sense.

The second review published in 1996 formally adopted 'sustainability' as its theme, defining it as "living our lives in such a way that we do not thoughtlessly deprive future generations of the right to fresh air, clean water, adequate food, pleasant surroundings, and the basis for continued prosperity."¹⁶ The review announced the commencement of a major study aimed at building considerations of sustainability into strategic development planning, and enhancing public awareness and education on environmental issues.

Table 5. Economic Structure of Hong Kong, 1981-1996

	1981	1989	1996
<i>Manufacturing</i>			
Labor Force (%)	41	30	16
Share of GDP ¹ (%)	23	19	7
<i>Wholesale, retail and import/export trades, restaurants and hotels</i>			
Labor Force (%)	19	25	30
Share of GDP ¹ (%)	20	24	27
<i>Financing, insurance, real estate and business services</i>			
Labor Force (%)	5	7	12
Share of GDP ¹ (%)	24	20	25
<i>Construction</i>			
Labor Force (%)	8	8	9
Share of GDP ¹ (%)	8	5	6
<i>Transport, storage and communication</i>			
Labor Force (%)	8	10	11
Share of GDP ¹ (%)	8	9	10
<i>Community, social and personal services</i>			
Labor Force (%)	15	18	22
Share of GDP ¹ (%)	13	15	18
<i>Others</i>			
Labor Force (%)	5 ²	2	1 ²
Share of GDP ¹ (%)	12 ³	14 ³	16 ³

Sources: Based on Census and Statistics Department, Hong Kong Annual Digest of Statistics (Hong Kong: Government Printer, 1982, 1990, 1991, 1997 & 1999).

Notes:

1. GDP at factor cost (production-based estimates).

2. Figures added up to more than 100 because of rounding of figures.

3. Figures added up to more than 100 because of rounding of figures and the fact that bank service charges have not been deducted from individual sectors by the Census and Statistics Department.

Prior to the publication of the final review of the 1989 White paper in 1998, a government study on "Sustainable Development for the 21st Century" had already been commissioned in September 1997. The study aims to develop a tool to help decision-makers incorporate the concept of sustainability into Hong Kong's future development. Two large consultation exercises were conducted to raise public awareness and provide the public and stakeholders with opportunities to comment on the main outputs of the study including the proposed definition, guiding principles, sustainability indicators, decision support tool and institutional changes. Taking the public views into consideration, the findings and recommendations of the study together with the outcome of the reviews of the 1989 White Paper will form the basis for the next White Paper on the Environment which will become Hong Kong's Agenda 21¹⁷.

Sustainable Development and Urban Policy

Environmental Regulations

Although at the time of writing, Hong Kong's Agenda 21 is still in the making, the global emphasis on sustainable development, particularly environmental sustainability, has already affected the direction of urban planning and development in the past decade, especially last year. The first important step in adding an environmental dimension in the urban development stage was the inclusion of a chapter on environment in the Hong Kong Planning Standards and Guidelines in 1985. In the same year, all new major housing development projects (which amount to no less than 2,000 units) were required to undertake an environmental impact assessment study. The environmental concerns of the above guidelines and planning authorities include the suitability of the quality of the local environment for residential development (specifically in terms of air and water quality, noise level and waste treat-

ment), the compatibility of the proposed project with existing land uses and infrastructure, the impact of the proposed development on the environment both during the construction process and after completion (especially its impact on sensitive receivers and sensitive parts of the natural environment) mitigation measures against undesirable environmental impact, and the planning gains to the locality in environmental terms. The promulgation of the Environmental Impact Assessment Ordinance in 1997 further imposes statutory environmental requirements on large residential development projects, ensuring that these developments provide accommodation that meets the prevailing environmental standards.¹⁸

However, the ordinance has no impact on the environmental quality of the existing housing stock. As a matter of fact, about 58 per cent (1,193,419 units) of the existing housing stock was produced before 1985 when environmental awareness was low¹⁹. Furthermore, looking into the future, the Territorial Development Strategy Review of 1996 pointed out that given the size of the projected population growth, Hong Kong would have to face serious adverse environmental impacts generated by its activities, even with the implementation of mitigation measures. There was a need for a comprehensive environmental baseline study. SUSDEV21 grew out of this new awareness.²⁰

Sustainable Development Study

SUSDEV21 proposed eight guiding principles that translate the local definition of sustainable development (as defined above) into different aspects of development that affect sustainability in the SAR (Table 6). These principles, apart from the added emphasis on environmental sustainability, do not depart from the past goals of city development before environmental protection had become an issue. Perhaps, as pointed out by the incumbent Director of Planning, "if sustainable development is about balancing the community's

Table 6. Guiding Principles for Sustainable Development
in Hong Kong, SUSDEV 21

Economy	Hong Kong should achieve a competitive and prosperous market-based economy which provides the resources to meet the needs and aspirations of the population, both now and in the future.
Health and Hygiene	Hong Kong should provide a living and working environment and pursue policies which promote and protect the health of the people of Hong Kong.
Natural Resources	Hong Kong should promote the sustainable use of natural resources through improving consumption efficiency, minimising the use of non-renewable resources and re-using, recycling waste and recovering energy from wastes.
Society and Social Infrastructure	Hong Kong should foster a stable and progressive society and enable individuals to contribute to and fulfil their potential by providing universal access to adequate and appropriate social infrastructure.
Biodiversity	To maintain the biodiversity of Hong Kong and to minimize any threat which consumption in Hong Kong may have on biodiversity elsewhere.
Cultural Vibrancy and Recreation	Protect and enhance the vibrancy of Hong Kong's recreational opportunities, leisure activities, cultural diversity, archaeological, historical and architectural assets.
Environmental Quality	Hong Kong should be pro-active in avoiding environmental problems, seek to find opportunities to enhance environmental quality, and minimize the unwanted side effects, locally, nationally and internationally, of development and inefficiencies such as air, noise and water pollution or land contamination.
Mobility	Hong Kong should provide safe, accessible and efficient transport systems and pedestrian facilities along with an efficient transport network for the movement of goods and facilitation of services for the community.

Source: Planning Department, *Sustainable Development in Hong Kong for the 21st Century: Second Stage Consultation: Consultation Document* (Hong Kong: Planning Department, 1999), p.14.

social, economic and environmental needs, I would venture to suggest that considerations for sustainable development have long been very much a part of our planning process, albeit under a different cover. "²¹ However, he acknowledged that if Hong Kong was to continue with the past demand-led development path, there would be serious long-term environmental consequences; and " it would be difficult, if not impossible, to provide all the necessary facilities of the right scale, at the right locations and at the right time to satisfy all development needs, and without any adverse environmental impacts. "²² He thus suggested Hong Kong should have a new way of managing demands – promoting environmentally friendly economic activities, discouraging environmentally damaging activities, and ultimately cultivating a sense of sustainability into people's way of living. Thus environmental sustainability is at the core of sustainable development in Hong Kong, although this is yet to be confirmed with the impending announcement of Hong Kong's Agenda 21.

Nevertheless the sustainability indicators and " the computer aided sustainability evaluation tool " proposed by SUSDEV21 were unable, from the very outset, to address the environmental sustainability issue. The computer system was devised for consistent, disciplined and cross-sectoral examination of the implications of any proposed policy for the sustainability indicators. The performance of the indicators will be assessed against announced government targets and objectives of existing socio-economic policies, but not against a standard by which sustainability can be achieved. For instance, while the study proposed to include an indicator of living space standard, it did not stipulate a minimum standard for a satisfactory living environment that would be compatible with the environmental and spatial capacity of Hong Kong not only for this generation but also for generations to come. Unless a resolution to this issue is sought, the space standard indicator will provides no reference to

sustainable housing development.²³ The computer system and the indicators so far remain at best analytical tools for the study of policy impact.

Long-Term Positioning:

A World City in Asia

While it still remains to be seen whether the final version of these sustainability tools can address the issues of sustainable development squarely, the Chief Executive in his Policy Speech last year has already summarized recent efforts and the future direction of urban growth to improve the quality of the living environment.²⁴ The future directions were set especially in the light of the long-term development objectives of Hong Kong and the perspectives of sustainable development. As a new government that does not have a time limit on its sovereignty, the Government of the Hong Kong Special Administrative Region saw it as an imperative to establish a clear position for Hong Kong. It was decided to position Hong Kong as a world city in Asia, with a status comparable to that of New York in North America and London in Europe. Rightly or wrongly, the Chief Executive maintained that Hong Kong's economic link with China was its greatest advantage in developing into a world-class city. However, he acknowledged that creating a first-rate living environment is one of the most urgent tasks for nurturing and attracting the world's most talented people to the city.

An important urban policy to achieve this objective lay in the adoption of a comprehensive approach to urban redevelopment. This approach has already been mooted in the government and the community for the last few years because of the slow pace of urban redevelopment under the old system. The major problem has been multiple ownership of high-rise buildings, rendering the purchase of premises very difficult for the redevelopment agent and developers. A more powerful urban renewal authority is soon to be set up, and its

task is to redevelop the nine old urban areas. With the adoption of a comprehensive approach, it is hoped that there will be comprehensive planning over larger areas, providing additional space, green belts, pedestrianized precincts and community facilities with improvements to road networks and the preservation of the heritage and the distinctive features of the old districts. If the pace of urban renewal is quickened as intended, the old urban area will become a major source of new land supply, thus augmenting the supremacy of the main urban area.

Preserving the countryside is also highlighted as an important task. Not only is the natural landscape of Lantau Island and Sai Kung District to be preserved, but there is also a general recognition by the planning authorities and the community that the rural characteristics of other outlying islands should be preserved. Equally there is also a recent emphasis by the planning authorities on improving the preservation of areas of ecological value such as wetlands in Mai Po (a Ramsar site) and its neighbouring areas, and Sha Lo Tung with its rare species of dragonflies. The Chief Executive also pledged that in 2001 the managed country park areas of Lantau Island would be extended. Whereas a million trees have been planted in the past two years, the government would draw up a comprehensive conservation policy and work with the community to work on urban greening and urban greenery protection. The government has the ambitious vision of making Hong Kong a green model for Asia.

Finally the Victoria Harbour. To reclaim land from the inner Victoria Harbour along the two coastal fronts has always been the major means of creating new land for the expansion of the city center. This policy, however, was hampered by rising community concern over the environment and the preservation of Hong Kong's natural landscape. In 1998, when the zoning plans of two large-scale reclamation projects (the old airport site and the Central-

Wanchai district), which were approved by the Executive Council, were gazetted, the public strongly opposed its implementation. The scale of the former was reduced by 138 ha to prevent the harbour from becoming a big channel, whereas the latter was minimized just to enable the construction of much-needed transport facilities to relieve traffic congestion. The community's concern for the harbour has also led to the adoption, by the government, of a proactive approach in protecting the harbour and containing reclamation to the absolute minimum. Thus the late nineties marked a significant drift from the long-held urban policy of creating land by large-scale reclamation of the harbour. This has at least two important ramifications: a greater need to enhance urban redevelopment to provide land for the expansion of economic activities in the city center; and the development of more land in the New Territories to house the population originally planned to be accommodated on the old airport site, totalling 80,000 people. These two reclamation projects also had a far-reaching impact on Hong Kong's urban planning system, reshaping its mode of governance.

Urban Governance in Transformation: Public Participation

In the past, public participation in Hong Kong's land use planning system was limited, although it was not as restrictive as that described by some of the critics²⁵. In the making of statutory zoning plans, public participation is defined by Sections 2 to 7 of the Town Planning Ordinance. Sections 2 to 4 stipulate the appointment, functions and powers of the Town Planning Board. The Board is mainly comprised of non-official members who are drawn from different professional and business sectors of the community. Therefore public participation at the decision-making level is restrictive and elitist.

Sections 5 to 7 set out the procedure for making statutory plans (i.e. the outline zoning

plans), delineating when and how the public can participate. The first opportunity for the public to express views is when a draft zoning plan is advertised in the newspapers and gazetted for public inspection. Within a period of two months, anybody who feels that she or he may be affected by the proposed plan can object to the plan, and propose alternatives. The Town Planning Board will consider the objections and, if the objection is not upheld, a hearing will be conducted by the Board. If the plan is amended according to the objection, the Board will notify persons whose land interest is affected by the amendments. If objections are raised subsequently, the Board will conduct a hearing inviting both the original and further objectors to attend. If further amendments are made owing to the hearing, they will be gazetted for three weeks, starting off another round of public consultation. Finally, when all objections have been heard and amendments made as deemed justified by the Board, the draft plan, with or without amendments, is submitted to the Chief Executive (the Governor before July 1997) in Council (the Executive Council) for approval. Any non-withdrawn objects are to be attached as well.

Thus, the public is consulted in the plan-making process of statutory zoning plans. However, the general public is only involved when the draft plan is completed and the participation is in the form of objection submission. The involvement of the public is thus often considered to be too late and too divisive. Although in the earlier stages of the plan-making process, statutory and advisory bodies such as the District Boards are consulted, public participation is limited to the few who sit on those organizations. The closed-door meetings of the Town Planning Board are viewed by the public as a black-box operation, even though members of the Board may have striven to their utmost to balance the competing interests of all parties concerned and performed their duty with due diligence.

The outline zoning plans of the two above-discussed reclamation schemes were gazetted in May 1998 and September 1998 respectively. At that time, the community's concern for the harbour had been heightened by the passing of the controversial Protection of the Harbour Ordinance in June 1997. The widespread community opposition to the outline zoning plans, the useful suggestions of the objectors (including, *inter alia*, professional institutes, academics and developers) for alternative plans, an increasingly democratized society, and heightened environmental concerns in previous years led to the adoption of a different planning approach in the process of revision of the two plans. Concept plans of the two districts were published for public consultation (mainly in the form of public forum) prior to the re-drafting of the zoning plans. Consequently the amended draft Central-Wanchai zoning plan, duly taking account of public concern about large-scale harbour reclamation, the prominence of the locality, the historical value of the place, etc, was well received by the community. These two planning exercises have led to a number of major changes in the public consultation practices of the planning preparation process.

These changes are summarized in the latest issue of the annual report of the Planning Department published in 2000²⁶. First, the past practice of consulting only the public on the findings of a planning study, on the basis of which zoning plans are drawn, has been redefined on the basis of consulting the public on the focus and methodology of the study as well. Second, public consultation forums are used as a more proactive consultation tool. It is regarded as an effective consensus-building method as it provides a channel for different community sectors to learn and appreciate each other's views. It in fact has the benefit of exposing to the public the conflicting interests within the community and lessening the arbitration tasks of the planning authorities. Third, specific target groups such as local residents, stakeholder groups and professional

institutes are invited to the forums. Discussion meetings, briefings and site visits are also arranged for the concerned parties. Fourth, the importance of access to planning information is acknowledged. Consultation materials, including technical reports, are made as comprehensible and accessible as possible. The SUSDEV21 study is a case in point. Furthermore, the Planning Department also endeavours to produce a report after each consultation exercise summarizing the comments received and explaining how they will be incorporated. The report is sent to the participants and uploaded in the home page of the Planning Department.

Thus, the public involvement in the planning process has been made more significant in

the past two years. While the changes outlined above mainly pertain to the plan preparation stage which is non-statutory, a comprehensive review of the Town Planning Ordinance is being undertaken and the Legislative Council is considering an amendment bill. It is anticipated that, when the bill is eventually passed, not only will the statutory planning making process be made more transparent and participatory, but local planning applications, which are currently considered behind closed doors in order to protect commercial information, may be made more consultative. The public will be better empowered to influence urban development, as an essential means to achieve sustainable development.

Conclusion

Thus the development of large-scale new towns and the reclamation of land from the sea have been the major means used by the government of Hong Kong to meet housing needs and provide sites for economic activities. These two means were used because of the mountainous topography of Hong Kong, the difficulty (and therefore unwillingness of the government) to take over land from the indigenous residents in the New Territories, and the slow process of urban redevelopment due to multiple ownership rights in high-rise buildings. The new town program has been successful in decentralising the population and improving housing standards largely because of the massive public housing program. The de-concentration of economic activities has generally failed primarily because of the availability of cheaper land and labour in southern China, and the growth of the servicing, financing and trading activities since the eighties,

which require land in more central locations. Following the global trend of promoting sustainable development, and due to aggravating environmental problems, new directions of city growth emerged in the late eighties. To date, 'sustainable development' has been formally adopted in the city's development policy. Although environmental sustainability seems to constitute the core of this new horizon of urban growth, a greater emphasis has been given to cultural heritage, quality of life and natural assets such as the harbour. However, confronted with competition from the neighbouring areas, including fast growing Chinese cities, the new government has taken the development of Hong Kong into a world city of Asia as its long-term development goal. While this may enhance the economic sustainability of Hong Kong, its potential conflict with the general concept of sustainable development and other strands of

sustainability, particularly environmental sustainability, seemed not to have been mooted within the government. It is also worrying that the proposed policy tool for assessing the sustainability impact of future major policies and programs does not include sustainability standards apart from those relating to safety

and health. Thus its ability to help Hong Kong achieve the tenets of sustainable development is very much in doubt. Nevertheless, the continuous empowerment of the public in planning is a favourable development, bringing Hong Kong into a new phase of urban governance.

Notes:

1. This paper presents some of the findings of the research project " Sustainable housing development in Hong Kong, " funded by the Research Grant Committee of the University Grants Council, Hong Kong. The author would like to thank the Council for supporting the project.
2. McGee, T. & Drakakis-Smith, D., *Fieldwork in Urban Geography: Hong Kong and Macao* (Hong Kong: Longman, 1974); Lee Fong M.K., " Directions in Urban Growth in Hong Kong " in C.K. Leung, J.W. Cushman and G. Wang (ed.), *Hong Kong: Dilemmas of Growth* (Canberra: Australian National University Press, 1980), pp. 267-288; Sit, F.S.V., " Hong Kong: Western Enclave on the China Coast " in F.S.V. Sit (ed.), *Chinese Cities: The Growth of the Metropolis Since 1949* (Hong Kong: Oxford University Press, 1985), pp. 211-231.
3. Wigglesworth, J. M., " The Development of New Towns " in Dwyer, D.J. (ed.), *Asian Urbanisation: A Hong Kong Casebook* (Hong Kong: Hong Kong University Press, 1971), pp. 48-69; Leung, W. T., " The New Towns Programme " in Chin, T.N. and So, C.L. (eds.), *A Geography of Hong Kong* (Hong Kong: Oxford University Press, 1986, Second Edition), pp. 251-278; Bristow, R., *Hong Kong's New Towns: A Selective Review* (Hong Kong: Oxford University Press, 1989)
4. Legislative Council, *Policy Speech* (Hong Kong: Government Printer, October 1972), pp. 2-3.
5. Legislative Council, *Policy Speech* (Hong Kong: Government Printer, October 1972), p. 3.
6. Legislative Council, *Policy Speech* (Hong Kong: Government Printer, October 1972), p. 4.
7. Transport Department, *Hong Kong: The Facts: Transport* (Hong Kong: Information Services Department, 1999).
8. Census and Statistics Department, *Hong Kong Annual Digest of Statistics 2000* (Hong Kong: Government Printer, 2000).
9. Chiu, and Fong, P.K.W., " Urban Development in Hong Kong in the 1990's: The Implications of the Long Term Housing Strategy, " *Working Paper of The University of Hong Kong, Centre of Urban Studies & Urban Planning* (Hong Kong: The University of Hong Kong, Centre of Urban Studies & Urban Planning, 1989).
10. Sit, F.S.V., " Hong Kong: Western Enclave on the China Coast " in F.S.V. Sit (ed.), *Chinese Cities: The Growth of the Metropolis Since 1949* (Hong Kong: Oxford University Press, 1985).
11. MVA Asia Limited, *Travel Characteristics Survey: Final Report* (Hong Kong: Territory Transport Planning Division, Transport Department, 1993).
12. Mass Transit Railway Corporation, *Annual Report* (Hong Kong: the Corporation, 1989 and 1999); *South China Morning Post*, " Seventy Stops on a 38 km Track, " 19 September 1988; www.info.gov.hk/tb, 27 November 2000.
13. Highways Department, *Hong Kong's Highways* (Hong Kong: Government Printer, 1989), p. 6; www.info.gov.hk/tb, 27 November 2000.
14. The most acute pollution problems at that time were air and noise problems. Some 1.5 to 2 million people were exposed to unacceptable levels of sulphur dioxide and nitrogen dioxide and about 3 million people were exposed to high particulate levels. The air pollution problem was attributable to the use of diesel oil by public transport vehicles which were major means of transport, and the hilly topography and the high-rise buildings which render pollutants difficult to disperse. The major source of noise also came from traffic; more than one million people were exposed daily to unacceptable high levels of noise from road traffic. [Hong Kong Government, *White Paper: Pollution in Hong Kong – A Time to Act* (Hong Kong: Government Printer, 5 June 1989), p. 24 & p. 31].
15. Hong Kong Government, *White Paper: Pollution in Hong Kong*, p. 3.
16. Planning, Environment and Lands Branch, *Heading Towards Sustainability: The Third Review of Progress on the 1989 White Paper: Pollution in Hong Kong - A Time to Act* (Hong Kong: The PEL Branch, Hong Kong Government, 1996), p. 3.
17. Planning, Environment and Lands Bureau, *Sustainable Development: A Green Future: The Fourth Review of Progress on the 1989 White Paper, Pollution in Hong Kong - A Time to Act* (Hong Kong: Planning, Environment and Lands Bureau, Government Secretariat, 1998).
18. Chiu, R.L.H., " Environmental Sustainability of Hong Kong's Housing System and the Housing

- Process Model, " *International Planning Studies*, Vol. 5, No. 1 (2000), pp. 45-64.
19. Chiu, R.L.H., " Environmental Sustainability of Hong Kong's Housing System and the Housing Process Model. "
 20. Planning, Environment and Lands Branch, *Heading towards Sustainability: The Third Review of Progress on the 1989 White Paper: Pollution in Hong Kong - A Time to Act* (Hong Kong: The PEL Branch, Hong Kong Government, 1996), p. 41
 21. Fung, B., " Planning for a Sustainable Hong Kong, " paper presented at the Conference on " Planning for a 'sustainable' Hong Kong " (Hong Kong: 25 February 1998).
 22. Fung, B., " Planning for a Sustainable Hong Kong. "
 23. Chiu, R.L.H. " Indicators for Sustainable Housing Development in Hong Kong, " paper presented at the " Symposium on Sustainable Development – Cooperation among Guangdong, Hong Kong and Macau " (Guangzhou, Macau and Hong Kong: 3–7 April 2000).
 24. The Government of Special Administrative Region, *Policy Objectives: the 1999 Policy Address* (Hong Kong: Printing Department, The Government of the Hong Kong Special Administrative Region, 1999).
 25. See, for example, Wong, J.W.M., " A study of the planning law of Hong Kong and role of public participation in land-use planning, " Working Paper Series, (Hong Kong: Business Research Centre, School of Business, Hong Kong Baptist College, October 1994); Loh, C. " Efficiency vs. public participation in our planning system, " *Planning and Development*, Vol. 13, No. 1 (1997), pp. 9-11.
 26. Planning Department, *Planning Department annual Report 2000*, (Hong Kong: Printing Department, The Government of the Hong Kong Special Administrative Region, 2000), pp. 13-15.