

HONG KONG CONSERVATION STRATEGY

INTRODUCTION DRAFT

PREFACE

This is a collection of prominent discussion papers of the Hong Kong Conservation Strategy.

There is no need to explain why a conservation strategy is needed, for Hong Kong, and why we, amongst others, should be working on it.

Please read and comment on our proposals, before it is too late for anybody to think about the future of Hong Kong.

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Hong Kong Conservation Strategy

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TOWARDS A CONSERVATION STRATEGY FOR HONG KONG

1. Hong Kong, being a predominantly industrial community in a very confined space and having a high population density, pushes to the limit the natural capacity of the environment to absorb the associated pollution loads. Hong Kong is thus more in need of proper environmental protection measures than most other countries or cities which can, for example, afford to move their industry to outlying areas or distribute their population more evenly to reduce the risk of a large percentage of population being exposed to a high concentration of pollutants.
2. In response to the urgency of the need of proper environmental pollution measures, this paper attempts to provide a framework and principles for setting a comprehensive Hong Kong Conservation Strategy. With these guidelines, the writer anticipates that the objectives of conservation in the Colony should be achieved as expeditiously as possible and also, the integration of conservation with development can be speeded up.
3. The most effective way of integrating conservation with development in an efficient manner is through overcoming the main obstacles to achieving the requirement of conservation. The main obstacles, according to the World Conservation Strategy are
 - absence of conservation at the policy-making level
 - lack of environmental planning and of rational use allocation
 - poor legislation and organization
 - lack of training and of basic information
 - lack of support for conservation

The following sections will be devoted to the discussion of these 5 main obstacles and their possible solution.

4. Absence of Conservation At the Policy Making Level Problem:

Many developing countries are always described as developing with great inflexibility and with little thought given to ecological consideration, thus available resources are mis-allocated in an inefficient manner.

Solution:

The most effective way society can avoid such problems is to integrate every stage of the conservation and development process, from the initial setting of

policies to their eventual implementation and operation. The World Conservation Strategy (W.C.S.) recommends anticipatory environmental policies, a cross-sectoral conservation policy and a broader system of national accounting in order to integrate conservation with development at the policy-making level.

Anticipatory environmental policies

In order to achieve several important policy goal, --the satisfaction of basic needs, such as food, clothing, sanitation and shelter; the optimum use of available resources; and the control of pollution and other forms of environmental degradation—we need policies that attempt to anticipate significant economic, social and ecological events, rather than simply react to them. Such anticipatory environmental policies involve actions to ensure that conservation and other environmental requirements are taken fully into account at the earliest possible stage of any major decision likely to affect the environment.

Cross-sectoral conservation policy

- It is recommended that government adopt a cross-sectoral conservation policy to: commit themselves to achieving the objectives of conservation; define the conservation requirements and responsibilities of the various government sectors in relation to those objectives; indicate a time table or target date for meeting the requirements and carrying out the responsibilities.

5. Lack Of Conservation Planning And Of Rational Use Allocation

Problem:

--It is always contended by environmentalists that the prospects of sustainable development will be impaired, sometimes permanently if environmental planning and the allocation of uses on the basis of investigation and planning are absent.

Solution:

--The W. C. S. proposes an integrated method of evaluating land and water resources (Ecosystem Evaluation), supplemented by environmental assessments, as a means of improving environmental planning.

Ecosystem Evaluation

Certain principles are fundamental to the approach and methods employed in

ecosystem evaluation.

Ecosystem suitability is assessed and classified with respect to specified kind of use.

Evaluation requires a comparison of output obtained and the input needed for each different use.

An interdisciplinary approach is required. Evaluation is in terms relevant to the physical, economic and social context of the area concerned.

Suitability refers to use on a sustained basis. Evaluation involves comparison.

Assessments of Environmental Effects

Environmental assessments are a means of ensuring that ecological and social information is included with physical and economic information as the basis of making decisions. In fact, the assessment of environmental effects is an activity designed to identify, predict, interpret and communicate information about the effects of an action. Be it a policy, programme, legislative proposal, engineering project or other operation with environmental implications on human health and well-being, including the well being of the eco-system on which human survival depends.

6. Poor Legislation and Organization

Problems:

Legislation

- Legislation concerning living resources in many countries is marred by gaps, duplication and even conflicts. A still more common and especially serious problem, however, is the failure to implement laws and regulations whatever their quality.

Organization

Two common failings of organization are a lack of coordination among agencies responsible for living resources, and mandates that charge the same agency with both the exploitation and the protection of a resource.

Solution:

Review of legislation concerning living resources

- Hong Kong should review and consolidate its legislation concerning living resources to ensure that it provides sufficiently for ensure that it provides sufficiently for conservation. Hong Kong should also review—and if necessary

strengthen—its capacity to implement its conservation legislation, both existing and required.

- There should be specific legislation aimed at achieving the objectives of conservation by providing for both the sustainable utilization and the protection of living resources and of their support systems.
- Special attention should be paid to the enforcement of conservation law. Enforcement is a multi-disciplinary activity that should begin with the design of legislation. It is necessary but not sufficient to provide adequately trained and funded personnel to implement and police the law. It is also important to make sure in advance that the law is ecologically, ecologically and socially feasible.

General principles for organization with Government

- Government should review the status, organization and funding of agencies with responsibilities for living resources. They should take the necessary steps including changes in legislation to ensure that conservation policies are implemented and that the agencies concerned have the resources and the staff to carry out promptly and fully ecosystem evaluation, environmental assessments and any other measures required for the conservation of living resources.
- Also, the following principles should form the basis of organization within government to achieve conservation.
 - the different agencies with responsibilities for living resources should have clear mandates and such mandates should specifically include conservation;
 - there should be a permanent mechanism for joint consultation on and coordinating of both the formulation and the implementation policies;
 - such a mechanism can be achieved by giving new authority agencies or by establishing new units in existing agencies; by setting up comprehensive agencies responsible for all living resources; or by setting up cabinet-level unites to ensure that all sectors concerned carry out their conservation responsibilities;
 - each agency should be required by statute to disclose and explain its position to the public
 - policies and decision should be implemented; sufficient financial and other resources should be provided to make this possible.

7. Lack Of Training And Basic Information

Problem:

Lack of Training

- A major constraint on the implementation of conservation measures is a

lack of trained personnel.

Lack of Basic Information

- Hong Kong also lacks adequate information. Generally this is because the city's data gathering capabilities are weak, but even when they are satisfactory, information flow is hampered by poor data retrieval and distribution system. As a result of such deficiencies, Hong Kong lacks the information base necessary for rational resource planning.

Solutions

Ways of increasing the number of trained personnel

Hong Kong should review the capacity of its universities and other centers of higher education to train professionals and technicians in the expertise and skills necessary for planning and managing the use of living resources. Training is required at three levels: professional; technician; user.

At the professional level there is a need both for the specialists (individuals able to make detailed studies, surveys, and designs for specific practices) and for generalists (individual with a broad grasp of the theory and practice of conservation either within a sector or a cross-sectorally and with an overall understanding of the various disciplines involved). Appropriate university or college courses are required to meet either need.

At the technician level there is an acute need for people trained to operate in the field as agricultural and fisheries extension officers, wildlife and protected area managers, soil conservation workers, foresters, and so on. This need is probably most effectively met by a combination of institutional and in-service training. Institutional (post-secondary school) training enables the students to acquire rapidly the essential practical experience.

Finally at the user level, farmers, pastoralists, fishermen, loggers, plantation operators and other land and water users need to be trained in production methods that are both sustainable and more productive in the long term than present practice. This requires the extension services be staffed with sufficient member of extension workers to maintain effective contact with land/ water users and of specialists to provide extension workers with adequate technical support.

More management-oriented research and research-oriented management

- Government should place living resource research high in its national scientific and research programmes. They should establish national councils to encourage universities and other bodies to increase and

coordinate their living resource research activities and to relate research to conservation action on the ground. Research programme should cover three broad overlapping areas.

- inventory—this includes research on the distribution of ecosystems and species in Hong Kong.
- functional—this includes research on ecosystem dynamics and relationship, the effects of human activities on ecological processes and vice versa, baseline monitoring and other basic ecosystem, species and population studies.
- management-oriented—this includes research into standard, techniques and technologies that will improve the planning and management of living resource use.

8. Lack Of Support For Conservation

Problem:

- Lack of awareness of the benefits of conservation and of its relevance to everyday concerns prevents policy makers, development practitioners and the general public from seeing the urgent need to achieve conservation objectives. Ultimately, ecosystems and species are being destroyed because people do not see that it is in their interests not to destroy them.
- There are in fact two distinct problems:
Public participation in conservation/ development decision is seldom adequate.
Although there has been progress there is insufficient environmental education.

Solution:

Greater public participation in planning and decision making concerning living resource use.

- Local community involvement and consultation and other forms of public participation in planning, decision making and management are valuable means of testing and integrating economic, social and ecological objectives.
- Participation tends to build public confidence and improve the public's understanding of management objectives. It provides additional data for planners and policy makers. Public participation is particularly important in rural development, for without the active involvement of the people—including identification by them of the problems that most need tackling and how to deal with them—little can be achieved.

Environmental education campaigns and programmes

- If the users of living resources (farmers, fishermen, industries based on living resources, recreational users, and so on) are unaware of the need to conserve the resources they are using, an education campaign should be prepared for them; the same goes for other groups that may have an impact on living resources, even if they do not use them so directly.
 - The most important target groups are:
 - legislators and administrators;
 - development practitioners, industry and commerce, and trade unions;
 - professional bodies and special interest groups;
 - communities most affected by conservations projects;
 - school children and students;
 - Education programmes directed at any of the first three groups require clear, succinct information materials showing the contribution of conservation to the achievement of the policies and goals that most concern the target audience.
 - Whenever possible, education programmes should be included in all conservation and resource-use projects in order to improve local understanding and support for conservation and to enhance the projects' prospects of lasting success.
 - School curricula should include environmental education both as an intrinsic part of other subjects (so that conservation attitudes can influence all activities) and as a separate subject (so that ecology can be taught more formally and its concepts more readily grasped)
 - As well as focusing on special interest groups, the several mass media (radio, television, newspapers and periodicals) should be fully used to reach the public.
9. Having identified our 5 main obstacles to achieving the requirement of conservation, the writer sincerely hoped that the planners and executors of the environmental protection bodies be they on the behalf of government or non-governmental organizations, can formulate (as soon as possible) an appropriate Hong Kong Conservation Strategy- a comprehensive strategy that can stimulate appropriate actions, raise public consciousness, overcome any apathy or resistance there might be to taking the action needed.

HONG KONG CONSERVATION STRATEGY:

AN URBAN-ECOLOGICAL SYNTHESIS

1. Preamble

1.1 Conservation has been defined by the World Conservation Strategy (WCS) as:

“the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the ends and aspirations of future generations. Thus conservation is positive, embracing preservation, maintenance, sustainable utilization, restoration, and enhancement of the natural environment.”

The 3 objectives of living resource conservation as identified by the WCS are: (1) to maintain essential ecological processes and life-support systems (eg. Recycling of nutrients, cleansing of waters) on which human survival and development depend; (b) to preserve genetic diversity on which depend the breeding programs necessary for the protection and improvement of cultivated plants and domestic animals, as well as much scientific advance, technical innovation, and security of the many industries that use living resources; and (c) to ensure the sustainable utilization of species and ecosystems which support (human) communities and industries. Thus conservation and development are “mutually dependent”.

1.2 Whilst the basic objectives and philosophy of the WCS are generally acknowledged, they need to be selectively and cogently assessed when applied to any living systems community (human or otherwise) and translated to the regional and local contexts of the area. If a more “pragmatic” and “utilitarian” approach is adopted, then it is not illogical to construe that “ecological processes” and “life-support system” should embrace non-physical elements as well, especially in the case of Hong Kong which contains very scarce living resources but which supports a human population approaching 6 million.

1.3 Hence any sensible and rational development-conservation strategy for HK must be formulated within the context of its socio-economic, cultural and political arena in congruence with the present and anticipated societal guidance.

1.4 The most crucial question to ask is: conservation of what? How and for whom? It is commonly acknowledged that “conservation” implies far more than merely

conservation of living resources per se; it embraces the whole array of “resources” in the sectors of housing, infrastructure (communal and utility services etc), transport, recreation, economic productivity, energy systems, and socio-cultural resources including man, heritage, and even social organizations including Government legislation/ enforcement.

- 1.5 If an ecosystems approach is adopted, the said elements must be analyzed and then synthesized with respect to their interplays within the broad “conservation stage” (however defined) and within a matrix of on-going actions recommended herewith. The following attempts to synthesize them in their ecological contexts from which pathways to future conservation are suggested. This is followed by more specified recommendations on selected sectors from the strategy (para 5 refers).

2. Conceptualization of an “Urban Ecosystem”

2.1 Hypothesis

It is argued that a city is organized in a manner that is not only similar to an ecological community (eg. Habitats of flora/ fauna), it is a true member of that class of phenomena—albeit in an advanced, highly elaborated form. Thus the generalizations and laws applying to community as a level of organization in ecological theory must also apply to cities. Studies of synthesized urban communities will generate useful predictions regarding their performance in which the biomass is predominately human. The formulation of ecological models could permit the acquisition and organization of information for positive improvement of the viability of the system or repercussions on it, from which strategic pathways/ alternatives for the future could be devised.

2.2 Concepts

- (a) **COMMUNITY** is made up of a cluster of interdependent populations interacting and exchanging with a physical environment.
- (b) **BOUNDARY OF A COMMUNITY:** the semi-permeable barrier that separates it from others and makes it possible to assign membership of individual with minimal disagreement amongst observers. It is construed as an edge or line (physically identifiable or abstract, as in law) that accommodates a much lower intensity of transactions and continuing relationships.

- (c) ENVIRONMENT: is composed of materials and resources necessary for the survival of the constituent populations as well as forms and signs imposed upon it that serve to guide behaviour of the individuals and groups (eg. pollution levels, overcrowding, traffic jams).
- (d) OBSERVER OF A COMMUNITY: acts as a participant in it (whether he likes it or not!): in order to acquire information rapidly he must place himself in busy sites and play an interactive role, thereby taking a risk of modifying some of the relationships likely to be of greatest interest (eg. hawkers, shop-owners, developers, special-interest groups, elites/decision-makers). The average urban citizen, then, is not merely a “spectator” in the city.
- (e) DIMENSIONS TO A COMMUNITY: is correlated with the appearance of organizational levels observed within it—population sizes, territorial limits, energy consumption, materials processing; internal dynamics or life processes (incl. births, deaths, migration, household characteristics, trade, energy flow, organizations, stock market), and all the cyclical relationships that develop between them.

2.3 Synthesis

A city records a huge amount of information about all of these elements. In order to ensure that the conservation strategy so formulated is most useful to the practitioner, the decision-maker and the scholar, it is crucial to pick out from that pool those features that may be expected to have repercussions for the urban community in future, thereby construing specific forecasts of the local systemic trends that could lead to pollution, energy crises or other grave injuries on one hand and the kind of intervention that increases the capacity within the planned societal guidance system to cope with the stresses imposed by the environment and by competitors.

3. Hong Kong as an Urban Ecosystem: Some Observations

3.1 City-region or “Urban Field”

- (a) Like Singapore, HK operates very much like a self-sustaining city-state: the political boundary drawn around the Territory encloses very little rural hinterland.
- (b) HK’s population is 98-99% pure metropolitan in character. It is not

distributed over suburbs, exurbs and satellites in an indefinable manner as in most other metropolises. The HK “hinterland” is much more economically and communally dependent upon the urban “core” and new towns (eg. providing outdoor recreational, utility, agricultural, etc. resources/inputs for the urban population, as justified and exemplified by establishment of Country Parks, water-gathering grounds and other special areas).

(c) The whole Territory should thus be construed as a unique and “complete” city-region rather than bestowing upon it the conventional dichotomy of purely “urban” and “rural” (as in countries having primate cities each with large rural hinterlands). HK is a single, interrelated environment of “town” and “country”, and its future lies in complete “urbanization” including the whole of the New Territories (not in the sense that every bit of land would be developed or built!). This is consonant with the concept of an “urban field” which is characterized by:

- i. A spatially-extended pattern of functional interaction (eg. decentralization of central government functions to district levels),
- ii. A multi-centric form of spatial organization (a “hierarchy” of main urban areas, new towns, market towns rural townships and large-scale private development projects),
- iii. Its outer limits being defined by periodic recreational uses on its resident population (eg. Country Parks).
- iv. High-density activity clusters surrounded by low-density open spaces related to each other by a complex of transport, communication and energy flows (as in new towns); and
- v. Permanent as well as periodic uses of land-extensive environmental resources for activities such as outdoor recreation and agriculture, intermixed with spatially-segregated but permanent and land-intensive uses for residential, economic, cultural and Governmental/ institutional/ community activities.

(d) Even socially and economically, the “boundary” between traditional/ indigenous villages in the NT and urban areas is becoming more permeable: an inevitable trend of the diffusion of urban life-styles, materialistic inputs etc. into the former.

(e) Because of its quasi-self-enclosed nature, the HK ecosystem provides data/

information on the complete functioning of the metropolis, whilst also allowing one to obtain more exact estimates of current rates of growth/change and to press inferences from ecological relationships.

3.2 The Stresses of Growth and Change

(a) The information available in HK shows clearly a community in the midst of exponential growth (1971-78):

(All %s are per annum)

- Land surface area: +0.2% (incl. reclamation)
 - Human population: +3.8% (incl. refugees)
 - No. of vehicle-trips: +3%
 - No. of dwelling units: +3%
 - No. of school places and jobs: +3%
 - Mileage of roadways: +4%
 - Amount of real income for consumption: +5 to 8%
 - Amount of water consumed: +8%
 - No. of vehicle licenses: +9%
 - Solid waste produced: +10 to 12 %
 - Electric power generated: +10 to 12 %
 - No. of telephone installed: +13 to 15 %
 - No of telephone calls: +15=17 %
 - Value of cheques cleared: +20-30 %
 - Addition to capital stock: +35 to 50 %
 - Growth in no. of registered companies: + 13 %
 - Growth in no. of voluntary organizations: +10 to15 %
 - Growth in no. of manufacturing employers: +10 %
-
- Having space implications (demanding more space) and “frictions” with the environment.

(b) Crowding caused by the growth of vehicles is as imminent as that caused by sheer population growth. The even more rapid growth in electric motors requires the kind of attention to energy supply: reminiscent of the “energy shock” of 1973-74 and in 1979-80.

(c) There is every evidence that HK is being stimulated to undertake

extra-ordinary development. The growth of the respective “populations” as stated above could hardly be expected to stay in balance. The human population is very busy constructing and arranging a habitat convenient to itself, but in so doing must draw more heavily from the rest of the world for nourishment in the form of energy (food and fuel) and materials of construction—a development pattern highly correlated with a speeded up process of modernization. However, with all the competing cities following much the same pattern they move toward the turn of the century and beyond, the physically-limited supplies will not allow such a strategy to persist, and this will have more serious implications on HK than anywhere else.

- (d) One consequence of this agglomeration of human habitat is the increase in the number and level of associations and enterprises (reflecting, inter alia, higher levels of interaction amongst individuals) which will in turn require a larger share of living space, i.e. more office blocks and neighboring meeting space (incl. playgrounds, shops, recreation resorts) than dwelling space.
- (e) A few indicators of the localized ill-effects imposed by the high-density living environment upon its resident population are available, eg. traffic casualty, occasional diseases, escalations in crime rates and corruption; also a reflection of (a) increasing public concern in fighting these, (b) people becoming more secure against private disaster, (c) more institutionalized set-ups as such, and (d) the effects of mass media in taking up crusades against crime, accidents and pollution.
- (f) Because HK’s population densities have set the world’s record, they have caused scholars, planners, decision-makers and community leaders to search for pathological effects of high-density and overcrowding. However, it is likely that the stresses may have been internalized, so that they may later release into the ecosystem some kind of collective frenzy that could gravely injure, perhaps destroy, the urban community. On the other hand, studies have indicated that extraordinarily dense HK housing is not statistically associated with unusual levels of emotional strain, even in Government housing estates. The high adaptability of local residents to such living environments is also widely documented. Indicators of mental strain, if at all, are very sensitive rather to security of employment and to the threats of economic and political instability (eg. 1967, 1973-75).

3.3 The Search for Comparative Advantage

On the economic productivity side, prominent changes, innovations and opportunities have been occurring in HK that are also increasingly being acceptable to the workforce:

- (a) recent emphases on diversification of industry and the economy;
- (b) transformation of traditional organizational roles, entrepreneurship and productivity methods;
- (c) activities that are not contributing to the survival and maintenance of the population in the community are soon abandoned in favour of others that appear more promising (processes of competition, dominance, invasion and succession as apparent in ecological theory);
- (d) emergence and gradual predominance of white-collar, service-oriented industries/ activities in HK despite its continual reliance on manufacturing; and
- (e) installation of activities that require more energy, more machines, and better trained people to take the place of the waning activities (eg. computers/automata): an approach to some kind of climax condition will depend not only upon the discovery of a balanced, integrated set of activities but also upon the achievement of relative stability in the rest of the world.

3.4 Summary of Implications of Continued Growth

Despite the afore-mentioned evidences of the high adaptability of local population to the living, working and economic environments, it is prudent to note a continuation of present differential growth will soon exert intolerable stresses particularly in the arena of congestion, environmental strains, increasing competition of space leading directly to escalations in inflation and real estate property speculations, energy demands etc. The provision of communal facilities both in quantity and quality will be severely strained by continual population influxes/ growth. More people simply means more of everything.

Already in 1974 some of the forces that should cause this growth to level off and integrate were noticeable. The recent remarkable growth cannot continue very long in the path it has taken. However, most people in HK are still acting as if it will.

4. Towards a Resource-Conserving Strategy for HK

4.1 Goal

The fundamental environmental issue facing HK as a community is not the

relative goodness or badness at present (say high-density conditions) or even the threatened levels of pollution. It is the need to find a relatively painless path to a climax condition that exhibits zero population growth and zero energy utilization growth, together with flexible water usage and raw materials requirement. Because it is only a speck on the shoreline of China and is virtually devoid of natural resources, it has little control over its destiny, and hence pathways that offer least resistance to outside forces and generate the least disturbance from amongst the local community and the economy must be considered.

4.2 Objectives

- (a) SPACE (land) is HK's greatest remaining resources, after the talents and energies of its 5.6 million population. It must be treated as a common wealth, and as a basis for all future development. This calls for instrumenting a comprehensive land use/ spatial and socio-environmental planning policy over the total Territory: conserving the prominent resources contained therein, and balancing apparently conflicting/ competing demands amongst all users of land, whilst striving at a multiple use of land supplies and reducing unnecessary urban sprawls: closer integration and collaboration between public and private developmental efforts at provision of housing, infrastructure, industry, recreation, agriculture etc., and ensuring that suitable types of land-consuming activities are planned and placed in suitable locale under acceptable environmental constraints/conditions.

- (b) If the HK "urban field" (op. cit) is to be developed as a meaningful living environment, it is essential that manifold uses do not encroach upon each other and destroy its most valuable assets: open space, scenic attractiveness, and historical tradition. Indiscriminate metropolitan growth should be minimized; new towns/ new development areas should be selected with attention to the total pattern of land uses and the evolving distributions of population, activities, infrastructure and transportation. Cultural institutions should be so located so as to reinforce other forms of recreation. Areas for agricultural production should be set aside, not only for economic reasons but also to provide a richer territorial "grain" of visual and environmental diversity and experience to urban inhabitants. Assuring an appropriate environmental setting for each activity will involve more than the mere, judicious application of traditional land use controls (eg. zoning). It requires forthright programs of area development and resource conservation.

- (c) In Government's massive population decentralization and new-town programs, due regard must be placed upon socio-spatial equity of the decanted population (viz. their adjustment/ adaptation to new environments and convenience/ accessibility to basic necessities, work, education, recreation, and transport).
- (d) In ecological terms, the strategy must strive for survival of collective, not individual, welfare and goodwill, acknowledging the intricate balance between population, land and other resources.

4.3 The Preferred Strategy: General Guidelines

This is contingent not only upon the path of least resistance/ friction but also of least uncertainty and the most widely—socially accepted goals, as well as a continuous future from present and past community behavioral traits.

This is the kind of future that society can plan for most effectively. The most logical assertions as such would be as follows.

- (a) The simplest, most ecologically-sound program for the community presumes that the boundaries (vis-a-vis China) will remain stable.
- Whatever the future of the New Territories leases, it is anticipated that political interference from China would be minimal as long as HK continues to prove itself vital to its modernization programs and the political system within the country and world situation remain stable;
 - The boundary would become more “permeable” albeit within controlled limits (eg. repatriation of illegal immigrants back to China), as already evidenced by increasing “two-ways” interflows/linkages between the resources of both sides as in tourism, industrial and residential investments from HK across the border, etc. Discrepancies in living and environmental/ space standards would therefore be reduced;
 - Joint cooperation/ventures with Guangdong are needed in development of the latter's resources technologically and provision of energy supplies for both sides (i.e. coal, hydro-electricity, nuclear power).

(b) POPULATION CONTROL

- Immigration should be balanced by emigration
- Birth Control: continuing investments in education and family planning should enable the one-to two-child families more widely acceptable socially (at least 80 % of the total population); only unusual households would bring the reproduction up to or beyond replacement levels.
- The total population should preferably level off at about 8 million (even taking cognizance of Government's decentralization/ new town programs).

(c) AGRICULTURE

- Under climax conditions rice growing would virtually disappear, but vegetables/ market gardening should continue to proliferate to meet a substantive portion of HK's demands. Hence areas of good agricultural land must be protected from urban encroachment.
- Floating ponds should allow the recycling of human and animal wastes back to the growing size of pig and domesticated fish populations, instead of the present disposal into streams and tides. The borrowing of mariculture techniques (from Japan and Taiwan) to be applied to HK should be vigorously pursued.
- As the mountain tops would support new and more digestible grasses, fertilized to increase the rate of production, more grazing is also envisaged, but in a way that should seldom detract from the enjoyment of population on weekends and holidays since the same peak areas also very precious for recreational uses.

(d) FORESTRY & PARKS: As at present, the majority of afforested areas and water-gathering grounds highly correlated with the 21 Country Park boundaries to enhance both the conservation and recreation objectives in a tranquil, countryside environment. More tree plantations are envisaged to offset destruction by hill fires (environmental education in minimizing the latter being particularly vital) and erosion.

(e) INDUSTRY, TRADE & ENERGY: The big stationary machines—oil refineries, petrochemicals, plastics and fibre production, steel mills,

shipyards—are due to be installed in HK (it's no use denying them!). Then HK's industry will become far more vertically integrated than now, whilst at the same time diversification of industry must continue.

Many intermediate products will still be shipped out and others will be imported. Hence HK must remain a very open system with world-wide relationships. The big machines require energy, but that energy is already spent elsewhere for intermediates now used by HK, so their energy demand represents merely a displacement of “dirty industries” from Japan etc. to outlying islands around Hong Kong. There, the “dirt” is either prevented by modern design, or it is segregated so that the living populations are not much affected (eg. designating synthetic islands and floating vessels for oil storage). A higher level of energy economy should be practiced in the manufacturing processes.

(f) TRANSPORT & COMMUNICATION

- The automotive vehicle population must come under control well within a decade. As the annual increment dwindles to zero, the diversity would increase much as had already occurred in construction machines and shipping. As presently advocated by Government, private transport must be substituted by increasing patronage and fleets of public transport wherever possible and various disincentives continue to be imposed upon the former.
- Bicycle populations should vastly increase in the new towns and rural township which will contain extensive networks of segregated bike-lanes: serving a dual function of recreation provision and encouragement of short-distance, pollution-free and healthy school/work trips (again, also energy-saving).
- The universality and ubiquity of the telephone is already upon HK—perhaps advanced technology, as in America, could have enabled the popularity and use of “picture phones” and portable ones to foster more frequent and efficient communication linkages in the same way as TVs and radios do, thereby also reducing the no. of vehicle-trips particularly incurred by the business sector.

(g) UTILITIES & SERVICES

- The automata in this strategy would be largely invisible and embedded

in the newest industries and services, incorporating sophisticated automatic control systems in the decades to come. Their introduction could save 20-40% of the energy and materials required per unit of output.

- The price structure for utility services, such as water and power supplies, must be made still more variable and flexible so that real economies can be achieved during periods of regional world scarcity. It is much more economical for HK to invest in flexibility than in large buffer stocks.

(h) **ENVIRONMENT:** The constructed physical environment must keep on growing much longer than the populations. In larger part, this is due to the unfulfilled demand for construction in this metropolis, but it is also needed to add flexibility to the economy, allowing it to adjust quickly to exigencies and opportunities in world trade. Thus a population of 8 million is likely to demand living space for itself and its organizations at least 3 times the floor and road areas as in 1974 and perhaps 5 times the enclosed living spaces. One of the significant reasons for the growing body size of the resident Chinese that is attributed mainly to improved diet and continuing emphases upon recreation and physical fitness as exhibited in various sports. The new structures/ buildings must be designed for minimal air conditioning and maximal natural ventilation and maximal utilization of solar energy where feasible in order to conserve energy and gain flexibility of use under varying conditions of world supply. Henceforth, the emphasis everywhere must be on improved fit between the respective populations and the constructed physical environment. It is crucial that the body and the auxiliary equipment should be increasingly adapted to the function it serves.

(i) **COMMUNAL/ SOCIAL SERVICES & FACILITIES:** The quality of these should continue to improve, in response to increasingly public demands generated by welfare and voluntary agencies and consonant with an improved quality of life societal needs (eg. child care, family & health planning, children facilities/welfare in public and private housing areas, education, care for the elderly)—the prospect should be more promising upon evidences of slackening of population pressures.

5. Specific Recommendations within the Strategy

5.1 **Housing, Land Market and Living Environment**

(a) **TARGET:** to provide for all households of all income groups satisfactory accommodation in acceptable living and working environments, via (a) avoiding overcrowding in homes through provision of self-contained living quarters for each family, (b) supply of adequate community and recreational facilities and sufficient employment opportunities in the neighborhood, and (c) improvement or replacement of old, unsatisfactory residential areas thru' urban renewal schemes of slums, redevelopment of selected resettlement estates, etc.

(b) **STRATEGY:**

- ❖ Greater integration, collaboration and involvement of housing market in both the public and private sectors (eg. “Urban Improvement Schemes” of Housing Society; private-sector participation homeownership schemes).
- ❖ Give priority to improving existing poor environments first (in both public and private housing), whilst keeping geographical relocation of households to a minimum, so that the original families have good opportunities to be able to move back to their original area after redevelopment.
- ❖ Earlier utilization of potentials in main (primary) urban areas, including planned residential development sites and future ones (eg. Redevelopment of Kai Tak after relocation of the airport to Lantau).
- ❖ Promote home ownership in the middle and lower income brackets (eg. Reconsider possibility of selling accommodation units in subsidized Govt. rental housing estates): to foster a greater sense of belonging of residents, community identity, reduce internal mobility of labour supply, thereby also contributing to more efficient transport and industrial planning in HK (see below).

- ❖ Permit greater building volumes on sites where appropriate and environmentally desirable in urban areas, hence encouraging multi-usage in acceptable environments, and conserving scarce land resources thru' reduction in wastage.
- ❖ Control flat prices via legislation, curbing and eliminating altogether property and speculations in the housing and land market at the expense of the less well-to-do (unbalanced redistribution of real income), thereby creating a housing “filtering-down” effect of bridging the gap between supply and demand of housing stock & land.
- ❖ Discourage the proliferation of high-class, luxury housing schemes and “second-home” weekend resorts (eg. pools of semi-detacheds) as reminiscent of sprawling cities/suburbs, thereby also reducing depletion of scenic countryside resources.
- ❖ Mandatory management in private housing areas, improving the quality of living environment, again via legislation – also making it mandatory for each tenant/owner to pay for the management in order to foster a greater sense of responsibility and care for their own living environment.
- ❖ Enhance environmental education especially in high-density housing environments: behaviours, values, responsibilities, etc.

5.2 Provision of Industrial Land & Employment

(a) **TARGET:** provision of suitable industrial sites with respect to location, land area, supply of labour nearby, etc. and of the required infrastructure facilities and services (water, sewage treatment, power supply etc.).

(b) **STRATEGY:**

- ❖ Maximize use of potentials in main urban areas (planned industrial sites to be developed first rather than remaining idle or occupied by temporary uses): more factories built at greater

proximity to labour pools (eg. Kowloon Bay, Yau Tong, Ap Lei Chau, Kai Tak): environmentally-permitting, of course.

- ❖ Proximity of industrial development to population also contributing to solution of transport/congestion problems by reducing journeys to work of large sections of the working population, hence substantial reductions on the traffic load. Being mostly light manufacturing industrial establishments, they could co-exist with residential development without much detrimental effects (viz. multi-story flatted factories) if they are well designed to minimize their physical, visual and pollution impacts on residents of adjacent areas to meet specified performance standards.
- ❖ Government assistance to small industries that could not afford the high costs of space in private flatter factories: provision of low-rent spaces in specially-designed Govt flatted factories at appropriate locations in urban areas. Again close to labour pool; thereby also striving to minimize illegal squatter huts or converted domestic premises for these purposes which would otherwise be more environmentally disturbing with greater fire risks as well. Small industries do continue to play an important role in HK's industrial economy.
- ❖ Special land-intensive and/or environmentally-obnoxious industries located in specially-designed areas in relative remote localities from major population concentrations.
- ❖ Promote growth of pollution-free industries, or modifying the processes of these industries to meet the requirements specified for certain desired environment standards.
- ❖ Promote industries capable of maximizing, returns from minimum inputs.

5.3 Balanced Provision of Recreation Facilities

(a) TARGET: recognition of public-oriented recreation provision as a

basic human need consonant with increasing demands both in quantity and quality in the HK 'urban field'. Minimize resources (capital, etc.) spent on these facilities but maximize their utility by maximum nos. of users and contribute to HK's general welfare. Maximum convenience and accessibility by public important.

(b) Clear distinction between TYPES OF RECREATION FACILITIES:

A. User-oriented facilities at local/district geographical level: indoor/outdoor mostly for intensive use (active/passive rec.).

B. Resource-oriented at district/Territorial level: indoor/outdoor for both periodically-intensive (eg. stadium, racecourse) and non-intensive/passive recreation (eg. Country Parks).

(C) STRATEGY:

1 All indoor facilities should be provided within multi-level, multi-purpose buildings where possible, possibly integrated with commercial/residential buildings. All resource-oriented facilities must be conveniently linked by public transport to population centers, to ensure their maximum use and also relieve pressure on the user-oriented facilities.

2 Promote water sports, making use of HK's many scenic and indented coastlines.

C. Protect beaches from destruction by unnecessary/private development along them: providing appropriate facilities and an efficient public transport link.

D. More use of already-designated Country Parks.

E. Scenic spots for passive recreation, utilizing the former's tranquil environments (eg. Fish ponds sea inlets islands monasteries, walking trails, areas around reservoirs)

F. Making use of abandoned/dormant villages of historical/cultural interest, say converting them into museums or hostels rather than leaving them deteriorate and unattended. Both these heritage could then be saved, and might be more economically viable too.

5.4 Provision of Community Facilities & Utility Services

(a) **TARGET:** Correlate these with provision of housing, industry/employment, recreation and transport facilities, amenities and an improved living/working environment leading to improved quality of life and contributing to decreases in social illnesses. Recognizing community facilities as basic citizens' needs especially in dense urban areas, their adequate, efficient and equitable provisions are crucial.

(b) **STRATEGY**

- ❖ diversification of provision base to suit various age and social group.
- ❖ all facilities which could be accommodated in multi-purpose, multi-level buildings should not be provided with separate sites that would otherwise mean a wasteful use of scarce land in HK. They should rather be accommodated as such, resulting in maximal use of land and more intensive use of the facility concerned, also reducing the need to travel afar, thereby maximizing use of public transport and pedestrianization. This will also ultimately reduce the total nos. of such facilities to be provided Territory-wide, hence reduce land-takes therefrom. Facilities provided in multi-purpose buildings should also be integrated with other facilities such as recreation.
- ❖ Enhance maximum accessibility to the facilities (maximum location advantage, utilization and management, transport links, etc.). Greater returns can also be extracted from investments in these facilities; and better accessibility also helps to extend the catchment area of each facility served: hence resource-conserving.

- ❖ More facilities to be provided in the countryside, especially to cater for rural/suburban inhabitants, minimizing their need to travel to urban areas in search for these.

5.5 Transportation and Land Use Planning

(a) **TARGET:** provide the maximum convenience (for the city to function efficiently) at minimum aggregated cost (incl. financial, energy, etc. resources), moving maximum nos. of people at any time in between areas whilst minimizing environmental “nuisances” (congestion, pollution, accidents), mis-management of all transport infrastructure, and curbing “control by monopoly”. Minimize “unproductive” and unnecessary/redundant mobilities/trips, as well as less-efficient modes (i.e. cars, taxi.....) with respect to economy in use of road space.

(b) **PRINCIPLES:**

- ❖ Good linkage between home, work/recreation/community facilities (As per paras. 5.1-5.4)/ centers and external transport facilities; and in-between residential areas (“social trips).
- ❖ Integrate transport planning with land use/town planning at the very beginning of the planning process, without either predominating over the other.
- ❖ Better traffic management is just as vital as devising huge, complex and expensive road networks and mass transit etc to solve HK’s congestion problems using existing road to their design capacities, promoting more intensive and frequent use of more efficient transport modes by greater proportions of the population; reduce on-street parking; reduce traffic/pedestrian conflicts via education to all road-users and enhance segregated traffic/pedestrian systems (i.e. footbridge networks, subways etc.); control & regulate traffic leading into/through heavy conglomerations like C. B. D.s etc. (e.g. road pricing feasibility).

- ❖ Promote travels on foot in high-density, multi-level and compact urban areas: segregated pedestrian areas/plazas/malls (shopping & business, entertainment, etc.); integrated pedestrian network of bridge, subways, etc.
- ❖ Improve existing public transport system incentives for higher patronage (both in quantity and quality), esp. better management of all services & increasing fleets/networks to residential areas now lacking or suffering from inadequate services.
- ❖ Continuing disincentives to private-car users e.g. higher licenses, fees, road pricing, higher parking charges, freeze on Govt, multi-storey car parking provisions, etc. Private cars consume too much petrol. HK can ill afford to cope with future energy crisis.
- ❖ Enhance more energy and capacity-efficient modes, incl. bicycles (in New Territories); bulk transit-carriers like MTR, LRTS. etc
- ❖ Encourage use of ferries/water transport, making full use of HK's water resources serving as strategic transport linkage points.
- ❖ Public transport priority roads must be designated (esp. bus and tram priority lanes) in promoting more efficient and intensive public transport usage in urban areas, esp during peak commuting hours
- ❖ Promote efficient school-bus and freight transport systems to reduce near-capacity traffic loads off main roads, esp during rush hours.
- ❖ Staggered working hours/flexitime: feasibility & social acceptance should continue to be pursued, with Govt Dept. taking the lead. (an efficient form of "social administration" to help solve congestion problems, as widely practiced in USA

and Australia)

5.6 Urban Form

(a) From the foregoing recommendation it is obvious that a compact, multi-level, multi-purpose and multi-nodal urban structure will fit most appropriately into resource-conserving strategy for HK. Not only will it result in the most economic use of scarce land resources but the high degree of accessibility it offers will also promote travel on foot or by public transport (that will be more financially viable!) reducing the amount of financial, land, time and other resources which would otherwise have to be spent on building more roads, buying more energy and transport vehicles and increase traveling between points of activities. The resultant “frictions” of space and of the environment must be efficiently and equitably controlled via legislative sanctions and proper, careful management of all parties, public and private inclusive.

(b) Whilst Government’s massive population/housing/employment decentralization programs from main urban areas to new towns/new development areas are generally acknowledged, their pace and magnitudes (including fiscal, institutional etc resources spent) should be sequentially monitored

(i) to integrate functionally (economically , socially, communally etc.) with existing urban areas by efficient transport/communications networks, etc; (ii) to allocate such resources most equitably in balancing development trends in all urban centers in the Territory, consonant with the “urban field” concept; and (iii) to continue to tap development potentials in existing urban areas and achieve a much more efficient land use pattern through curbing of “idle” development sites which are otherwise uneconomic and non-resource-conserving, as discussed above.

6. Public Participation

6.1 TARGET: Encourage and extend channels/networks for greater public participation in the planning and decision/policy-making processes both

within government machinery and amongst voluntary or other agencies, particularly in matters of great concern to residents and workers etc. and in general welfare as per the strategies outlined above, utilizing the multitude and diversity of the phenomenal pool of human resources in HK. Citizen participation/involvement conceived as the forefront and momentum of any societal “movement” and action. Better societal guidance through greater and more equitable public access to decision-making.

6.2 Strategy

- (a) Decentralization: from central Govt. to all administrative districts (eg. Living environment, local town planning, clean-up campaigns, cultural events, amenity and communal-facility improvement programs).
- (b) Re-centralization: from district, feedback to Govt. Depts. and central Govt. (Secretariat) – on policy matter; citizen representatives on strategic Govt. policy-making groups/committees, etc.
- (c) Higher levels of public awareness via both formal and informal education as diffused thru’ mass media (eg. environmental and heritage conservation); fostering also awareness through action
- (d) Greater public involvement in voluntary and Government-sponsored organization eg. CA, HK Council of Social Services; various professional and academic institutes, both expressed in opinions/comments and concrete actions initiated both by these organizations and the general public.

7. Concluding Remarks

The above are only selected facets within the broad spectrum of a resource-conserving strategy for HK under the “urban ecosystems” approach. The implementation of this recommended strategy through legislation, Government/private sector/other agency collaborations, carefully monitored and controlled development programs and development controls in all sectors, and greater public participation, amongst other channels, should well be staged concurrently with this strategy.

HONG KONG CONSERVATION STRATEGY

Conceptualisation

Hong Kong is conceived of as an open system the sustenance of which is dependent on processes and activities carried on in other systems. The conservation of this system is thus dependent on that of other systems, which this system itself is unable to affect. However, within the domain of this system, conservation as an integrated endeavour is still needed to enable itself to occupy a more desirable relative position in the total system embracing it, and to give the system a greater survival margin in case the total system supporting it should break down due to war, catastrophe or otherwise.

The Hong Kong system and activities carried on within it are conceived of as follows:

CULTURAL SUPERSTRUCTURE

1. Heritage
2. Cultural specification

SOCIAL ORGANISATION:

1. Legislation
2. Environmental movement
3. Town planning

COLLECTIVE CONSUMPTION

1. Transport
2. Housing
3. Recreation
4. Education

INFRASTRUCTURE PRODUCTION

1. Agriculture and fisheries
2. Offensive industries
3. Pollution control
4. Environmental services
5. Utilities
6. Industrial safety

BASE

1. Energy
2. Flora and fauna
3. Air
4. Water
5. Material resources
6. Population
7. Food

BASE

1. Energy

Problem

Dependence on Foreign system for supply of resources; mismanagement and mal-distribution amongst consumers; waste; environmental threats.

Principle

Save energy, to minimize dependence on others in case of contingency. Nuclear power should be discarded for the possibility of causing immense hazard in the event of an accident. Coal should be preferred to petroleum on account of its more steady supply, but petroleum has the advantage of being cleaner. Institutional support for conservation of energy should be provided. Self-production of energy, e.g. solar energy, wind energy, should be encouraged.

Strategy

Establish an Energy Commission to formulate and implement energy policies towards sustainable energy management.

2. Flora & fauna

Problem

The threat on decreasing genetic diversity as a result of destruction of flora and

fauna.

Principle

Despite being an open system not supportable by ecological processes based on existing genetic diversity, conservation of existing gene pool is indicator of the population's ability to sustain itself in the event of contingency.

Strategy

A set of priorities for the preservation of different habitats should be worked out, based on (1) the extent of genetic diversity of the habitats, (2) the value of these habitats in relation to others, (3) the significance of the species existing therein, (4) the potential of the habitat to develop into one of valuable niches. A system of land capability classification should be worked out based on these.

3.Air

Problem

Immuning air from pollution without hurting industry.

Principle

Air bears direct physical relationship by contact with man and with other species in the ecosystem. Immuning the air from pollution is not only important in protecting people from air pollution hazards, but also significant in conserving many species in the ecosystem.

Strategy

Establish standards for air quality control, implemented with a system of subsidy and penalty, and backed by legislation.

4.Water

Problem

Immuning water from pollution, both inland and coastal.

Principle

Clean water for human consumption should be ensured. Water itself as a habitat needs to be conserved. Pollution of water not only harmed the species existing therein, but also affect human health through the food chain by biological concentration of pollutants.

Strategy

Establish standards of water quality control, implemented with a system of subsidy and penalty, and backed by legislation. Set up marine reserves (reminiscent of the County Parks Programme) in waters of high conservational and recreational value (e.g. the waters off Tolo Harbour with the accompanying outlying islands).

5. Material Resources

Problem

Resources like minerals, paper and pulp, wood, etc. are lacking in Hong Kong. Thus heavy dependence on importing resources.

Principle

Conservation of resources, to prepare for crisis situation when resources can no longer be imported. Mechanisms for rapid recycling of resources are needed in cases of contingency.

Strategy

Encourage establishment of recycling industry through subsidy. Import technology on multiple-usage, e.g. through the Hong Kong Productivity Centre.

6. Population

Problem

Too many people from immigration and natural increase, making social and societal

planning difficult

Principle

Too many people from natural increase burdens the population as a whole by imposing on it a high dependence ratio. Too many people from immigration, whether young or old, belabours society's economic mechanism by providing de novo idle human resources that need to be accommodated. It also increases society's dependence on other systems.

Strategy

Expanding the family planning services with legislative support. More provision of welfare to the lower class and heavier (social) penalty on large families. Radical change in immigration law, giving no allowance for illegal immigrants.

7.Food

Problem

Dependence on foreign supply.

Principle

Though never capable of providing food for itself, Hong Kong's capability for food production should be encouraged to ensure greater margin of survival in cases of contingency.

Strategy

Expand Hong Kong's potential for food reserve by conserving all lands classified as suitable for agriculture and preventing them from being developed otherwise.

INFRASTRUCTURE PRODUCTION

1. Agriculture and Fisheries

Problem

To sustain these productive activities in the face of the decreasing economic importance socially attached to them.

Principle

These activities are actually basic and primary to the sustenance of any human population. Often development necessitates valuable agricultural & fishery grounds to be transformed irreversibly (e.g. the decision to fill up all fish ponds in Tin Shui Wai for development of private new town), but such should be slowed only when further expansion of the agricultural hinterland (into China) is ensured.

Strategy

Institutional support to these productive activities, e.g. providing better welfare to farmers and fishermen and giving them improved technical (as well as fiscal) support. Negotiation with Guangdong Government to confirm status of agricultural hinterland in Guangdong Province.

2. Offensive Industries

Problem

Heavy pollution by these industries; the difficulty in assessing the social cost of these pollution and comparing it with their economic contribution.

Principle

To extract maximum productivity from these industries with least environmental consequence.

Strategy

Classify existing offensive industries on a scale of their economic desirability in the light of the overall economy of Hong Kong. Discourage establishment of those which rank low through legislation, e.g. by heavy fiscal control. For

those which rank high, i.e. that are essential to the economy, apply environmental control through segregation from main residential areas and through legislative control on pollution.

3. Pollution Control

Problem

Lack of economic incentive for industrialists to implement pollution control.
Lack of manufactured products in pollution monitoring.

Principle

Pollution control means additional cost in the manufacturing process, thus is not welcomed by industrialists. However, it is necessary because by not doing so, the cost is only transferred to the general public through pollution.

Strategy

Industrialists can be given the incentive to install pollution control equipment by developing technically more efficient production system that employ pollution control as its integral part. They can also be given the disincentive not to install them by imposing legislative requirement. Local manufacturing industry on pollution control equipment should also be established, probably through subsidy, to lower the cost of installing such equipment that will otherwise have to be imported

4. Environmental Services

Problem

Underdevelopment of institutionalized environmental service industry.

Principle

Tertiary production (services) are vital to increasing the productivity of any industry. Environmental service industry, e.g. consultancy, design, feasibility study, environmental impact assessment, etc. should be developed to support

and meet the demands of the primary and secondary production sectors.

Strategy

Develop local-based environmental service industry by training local people, thus relieving Hong Kong from dependence on foreign expertise on such services. Establish institutional support for these services, e.g. legislative support through law on environmental impact assessment.

5. Utilities

Problem

Improving the quality of life at the minimum exploitation of resources.

Principle

Utilities like gas, electricity, telephone, are necessary to maintaining the quality of life. However, mismanagement and a short-sighted commitment to profit-making often lead to unjustifiable waste of resources, ultimately putting Hong Kong into a more crisis-contingent situation. The allocation and distribution of these goods should thus be carefully planned the light of overall societal development.

Strategy

Fiscal control on energy wasters, e.g. by imposing higher rate on additional unit of energy spent, as opposed to a cheaper rate at bulk purchase (this should apply only to individual consumption; consumption in productive process, i.e. industry, necessitates the usual practice of cheaper rate at bulk purchase). Details can be monitored by the previously suggested Energy Commission.

6. Industrial Safety

Problem

Vulnerability of workers to industrial accidents, threatening, individually, the worker's life, and collectively, industrial health.

Principle

The extent of industrial safety often reflects the level of technology of a society. Our increasing higher level of technology should thus be accompanied by a corresponding progress in industrial safety measures. Often industrial health is threatened by mis-management, poor machinery and undesirable working environment. These should thus be coped with accordingly.

Strategy

Legislative control of production equipments to protect the worker. Provide free or cheap medical scheme to workers. Re-define the range of industrial diseases, and set up a fund by taxing produces to compensate workers for all proven industrial diseases. Establish advisory committee on industrial health, comprising health experts and worker representatives.

COLLECTIVE CONSUMPTION

1. Transport

Problem

To provide fast, efficient and energy-saving transport to move the maximum number of people, and to curb all congestion, pollution and mis-management existing at present.

Principle

Transportation is not an actively of primary production, but is a crucial supportive activity of such. The ultimate solution to the problem of transport thus lies in eliminating unnecessary and hence unproductive mobility, i.e. by careful town planning. At present, the main problem is to identify unnecessary mobilities, e.g. transporting workers to work is necessary mobility, while taking people to the Jockey Club is not.

Strategy

Give priority to mass transit, especially between major residential & commercial areas. Graver restriction on less efficient forms of transport. Continual pursuance of Bus Only Lanes and the Mass Transit scheme on the Island Corridor Expand the power of the Transport Advisory Council, encouraging control-by-public rather than control-by-monopoly.

2. Housing

Problem

Not enough houses of reasonable quality for people. Thus accompanying problems of misery, crime, poor hygiene, etc.

Principle

Housing being an essential to human living, the housing cake should be more equally shared. Ultimately the housing problem lies in too many people and too many building resources directed to non-essential activities (such as building luxury holiday flats). Their activity of generating income from land (by speculation) is non-productive and exploitative and hence should be further discouraged.

Strategy

Curb speculation by a combination of consumer education and price control. Discourage establishment of luxury flats, the premium collected thereof being directed to subsidise public housing. In the transition when slumps cannot be cleared at once, environmental improvement measures should be provided subsidized. Public housing should be aimed at housing needy people as soon as possible instead of securing immediate economic returns.

3. Recreation (Outdoor)

Problem

Lack of recreation space in urban area, mis-management of recreational space in the countryside.

Principle

Recreation is necessary to enable the worker to reproduce labour power. Outdoor recreation should thus cater for the mass of average population instead of just for a few who can gain access because of their affluence.

Strategy

Encourage recreation by the mass and discourage private ownership of natural recreational assets. Classify natural environment into areas of different recreational values; those which rank high (e.g. Cheung Sha Beach in Lantau) should be developed for public recreation and protected against private ownership.

4. Education

Problem

Absence of environmental education at lower level, and environmental researches at higher levels. Community-wise, lack of information resources for the public.

Principle

Environmental education should be organized and integrated from primary to tertiary education. Organized environmental education, both formal and informal, are vital to society's developing high rationality and hence adaptability to establish environmentally related institutions.

Strategy

Further to the environmental education programmes introduced today, add nature-oriented subjects at primary level, introduce practical projects at secondary level, and continue pursuance of developing tertiary environmental education in the Universities and Polytechnic. Voluntary organizations like the Conservancy Association should organize more public-oriented courses on adult environmental education. For higher-level researches, the establishment of an institute by scientists can be pursued. Meanwhile, it is mandatory that an

information or documentation centre be established for use by the public.

SOCIAL ORGANISATION

1. Legislation

Problem

Inadequate environmental laws backed by more inadequate manpower and resources for implementation.

Principle

For a piece of law to be adequate, the law makers should consult different groups of related persons ranging from the knowledged professionals to the experienced public. Enforcement of the law necessitates cooperation by the public who are affected, hence the public should in the first place be allowed participated in law making.

Strategy

Continually expand the Environmental Protection Unit into a scientifically sophisticated group giving the techno-scientific guideline to laws. Expand the Advisory Committee on Environmental Protection to include representatives from workers and from the general public. Encourage monitoring-by-complaints as a compromise solution to the inadequate manpower in enforcing legislation.

2. Environmental Movement

Problem

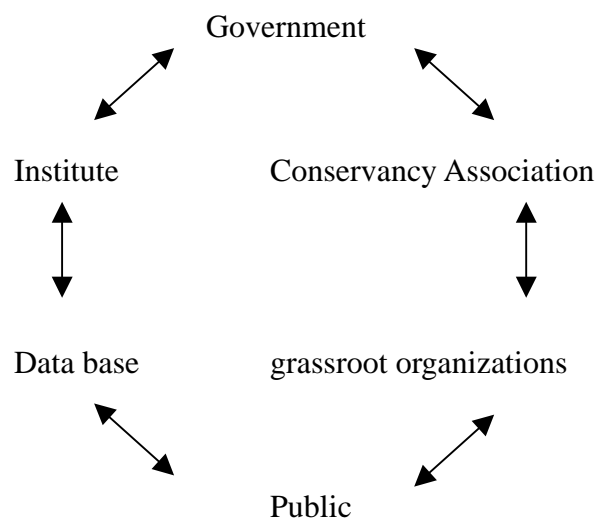
Lack of public awareness in environmental issues, weak public opinion in related matters, hence lack of public participation in environmental policy making.

Principle

As environment relates to everybody, environmental improvement should entail participation by all sectors in society. The apparent expansion of Government concern should thus call for a corresponding rise in public consciousness, without which the institutional balance needed in any social movements will be disturbed and environmental improvement seriously hampered. Institutionalization should be societal instead of one-sided and pathological.

Strategy

Establish environmentally-related sub-committees in the District Boards to be set up. Decentralise environmental policy making into District level (maintaining integration at the top), allowing the future District Management Committees more power to decide upon minor environmental decisions. Encourage community education and organization through voluntary agencies, organizing the public from the grassroots. The public should thus be linked upwards through existing community organizations, to the Conservancy Association, ultimately to Government's top management. In parallel to the Conservancy Association and voluntary grassroots organizations can be established an institute for more advanced researches, and an information data base to provide resource support.



3. Town Planning

Problem

Lack of integration in both spatial and social planning, leading to problems of collective consumption and production mentioned above.

Principle

The integrated philosophy of planning for the long term often runs into conflict with the belief in non-interventionism which is so widely accepted as the mechanism that keeps Hong Kong going. However, planning is a must in an open system which cannot sustain itself but has to depend on processes going on from without. Without planning the system will be more liable to contingency and to the evils of whatever may arise as a result of a change in the processes of external systems.

Strategy

Encourage social as well as spatial planning, especially in urban areas, where spatial expansion is no longer advisable. Establish a Lands Department independent of the PWD to undertake all urban and rural planning and to evaluate related work undertaken by the Transport Department, the Agriculture and Fisheries Department and the Urban Services Department. Private development should be conditional upon development of whole territory, and should be justified only when the overall public's interest is proven not threatened. Specifically, the coming development of Tin Shui Wai should be closely monitored not just as a private development but as part of the whole territory's planning, by the new department as well as by public opinion.

CULTURAL SUPERSTRUCTURE

1. Heritage

Problem

The demolition of historical heritage in the interest of economic development, leading to irreversible loss of the symbols of cultural specification.

Principle

The extent to which a society can preserve remnants of the past is indicative of its ability to contain cultural specifications, which in turn reflects the system's ability to sustain itself. Preservation of cultural heritage like monuments, buildings, ancient remains are thus important in contributing to overall conservation of the system.

Strategy

Protect items of historical interest from destruction by declaring them monuments. If possible, develop them into structures that can be consumed by the public, e.g. as museums, libraries. Set up a trust fund to fight for preservation of these sites in the event that the preservationist and the developer's interest should clash.

2. Cultural Specification

Problem

No unique culture-specifying features except combinations of eastern and western influences in society. Lack of sense of belonging to the system.

Principle

Any system should at any time be specific to itself as a cultural entity. Without such, the system is liable to collapse in the event of a change in the running of the system, which in an open system like Hong Kong may be caused by a change in external processes carried on without the system, e.g. changes in political climate in China.

Strategy

More active negotiation with China and English. Experience of the public must be expressed through the building up of a public social force. Sense of belonging should be established by all the strategies described hereabove.