

CHAPTER 1 INTRODUCTION

1.1 To many people, Hong Kong is just a small, densely populated and developed city with tall concrete skyscrapers and crowded streets. However, this image is fast changing when more and more people discover and learn to appreciate the beauty of our natural environment that bears fascinating landscapes and a diversity of wildlife. Today, Hong Kong is not only one of the world's leading business centres, but also a good place for hiking and bird watching.

1.2 Hong Kong has a varied topography and a long coastline. Scenically, it has a great deal to offer - a landscape rising from rocky foreshores and inter-tidal mudflats to woodlands, hilly areas covered by open grassland, and a variety of scenic vistas that are rarely matched despite Hong Kong's small area. The value of our natural landscape goes beyond the beautiful scenery. It provides a wide range of habitats to support a variety of animals and plants including some that were first found in and named after Hong Kong, and a few other species that are endemics. Hong Kong's strategic location at the junction of the temperate and tropical zoogeographical regions has contributed to the rich biodiversity of the territory. Moreover, as Hong Kong is located along a major pathway of migratory birds across the Arctic, Oriental, and Australian Regions, many migratory birds visit Hong Kong every year.

1.3 Our natural environment also provides vital resources for recreational, tourism and educational activities. This natural asset is increasingly important as Hong Kong becomes more and more urbanized. We need open space for relaxation. The tranquility and beauty of the natural environment can freshen our minds. Apart from serving as a living classroom for students, our natural environment also facilitates the development of eco-tourism that can both serve public education functions and generate economic values.

1.4 Protection of this valuable natural asset requires the joint efforts of all. The Government takes the lead and over the last three decades has been implementing a continuous programme of conservation with the launching of designation of country parks in 1976. In the light of the increasing development pressure in the rural areas, zoning control was later introduced to regulate land uses for better planning and development including conservation

of natural landscape and features. The Environmental Impact Assessment Ordinance, which came into operation in 1998, provides clear protection parameters for users and developers of land.

1.5 There are always competing demands for land to meet economic and social needs. Developments and the associated human activities would unavoidably have an adverse impact on the natural environment and may, in some cases, conflict with the nature conservation objective. We need to strike a proper balance to ensure that Hong Kong's development needs are met without doing unacceptable damage to the natural environment.

1.6 In recent years, there have been debates on whether a particular site really deserves conservation especially when there are plans to develop the site. There are also criticisms about the limitations of the existing nature conservation policy and measures in conserving ecologically important sites that fall under private ownership. The Government has to be responsive and it is highly appropriate that we should conduct a review on the existing nature conservation policy and measures with the objective of identifying areas for further improvement in those regards. Although nature conservation covers both terrestrial and marine habitats and species, the review is mainly focused on terrestrial conservation that is the centre of the debates and criticisms.

1.7 This document sets out the existing nature conservation policy and measures, and the results of our review. It seeks views from the public and interested bodies on -

- (a) the introduction of a scoring system for assessing, in a more objective and systematic manner, the relative ecological importance of sites with the objective of reaching a consensus within the community on the priority sites for enhanced conservation; and
- (b) practicable ways to better conserve ecologically important sites that are under private ownership within limited resources.

CHAPTER 2 REVIEW OF EXISTING POLICY AND MEASURES

Existing Policy and Measures

2.1 Our existing nature conservation policy was promulgated in the Second Review of the 1989 White Paper on “Pollution in Hong Kong – A Time to Act” published in 1993. It stated that –

“Our conservation policy has evolved over many years. In simple terms, it seeks to conserve and enhance our natural environment by protecting existing conservation areas and heritage features¹ by identifying new areas for such conservation, and by compensating for areas which merit conservation but which are inevitably lost to essential development projects.”

2.2 Under this policy, we have been implementing various measures to protect sites of high ecological importance. These measures include –

- (a) the establishment of country parks and special areas under the Country Parks Ordinance;
- (b) the designation of conservation zonings under the Town Planning Ordinance;
- (c) the establishment of restricted areas under the Wild Animals Protection Ordinance ;
- (d) the implementation of a statutory mechanism under the Environmental Impact Assessment Ordinance to ensure that potentially adverse ecological impacts caused by designated projects are avoided or mitigated;
- (e) the implementation of conservation plans for important habitats and species; and
- (f) public education and publicity.

¹ The protection of cultural heritage is under the policy portfolio of the Home Affairs Bureau.

Country parks and special areas

2.3 The Country Parks Ordinance (CPO) provides for the designation, control and management of country parks and special areas in Hong Kong. The Director of Agriculture, Fisheries and Conservation is the Country and Marine Parks Authority (“the Authority”) responsible for managing these areas for nature conservation and educational purposes. Unlike special areas, country parks are designated and managed also for meeting the recreational needs of the community. Both developments and activities are strictly regulated in country parks and special areas to preserve the naturalness of the environment. The Country and Marine Parks Board is a statutory advisory body established under the CPO to advise the Authority on matters relating to the designation and management of country parks and special areas.

2.4 CPO provides that both government land and private land may be designated as country parks, while only government land can be designated as special areas. Compared to country parks, special areas are smaller in size and comprise areas of higher ecological value. Special areas are dedicated solely to nature conservation and educational uses.

Land use zoning system

2.5 The land use zoning system under the Town Planning Ordinance (TPO) aims to regulate land uses for meeting specified planning intentions of individual areas. It is also used as a conservation tool to protect ecologically sensitive sites from development and incompatible land uses. Site of Special Scientific Interest (SSSI), Conservation Area (CA) and Coastal Protection Area (CPA) are generally regarded as conservation zonings designated on statutory town plans under the TPO. Both government and private land can be zoned as SSSI, CA or CPA. Like other zoning designations, these conservation zonings are recommended by the Town Planning Board (TPB) for the approval of the Chief Executive in Council.

2.6 SSSI are designated to protect areas of scientific interest such as areas with rare fauna or flora species or representative habitats in Hong Kong. Stringent control is imposed on land zoned as SSSI where nearly all proposed land uses including agricultural activities cannot be carried out unless with TPB’s approval. CA and CPA are designated to protect the natural character

and landscape of the sites. Sometimes they are designated to protect the landscape features or other conservation values of a site instead of its ecological value. Other than agriculture and activities related to conservation such as tree planting, all other types of land uses would require TPB's approval.

2.7 Unlike country parks and special areas, the land use zoning mechanism does not involve any active management of the conserved areas by the Government. The Government's role is mainly restricted to enforcement by the Planning Department of the TPO to ensure that the land is not put to non-permitted uses.

Restricted areas

2.8 The Wild Animals Protection Ordinance (WAPO) provides for the designation of restricted areas to protect important habitats from disturbance. Access to these areas is restricted through a permit system administered by the Agriculture, Fisheries and Conservation Department (AFCD).

Environmental impact assessment

2.9 The Environmental Impact Assessment (EIA) Ordinance, which came into operation in 1998, helps to protect ecologically important areas from adverse development impact by requiring proponents of designated projects to avoid causing adverse environmental impact as far as practicable. If total avoidance is not practicable, the project proponents are required to mitigate the adverse impact to an acceptable level.

Conservation plans for important habitats and species

2.10 AFCD has been implementing conservation plans for the protection of important habitats and species found in Hong Kong to ensure that they will continue to survive and sustain. For example, the conservation management plan for the Mai Po Inner Deep Bay Ramsar Site has been implemented since 1998 to promote the conservation and wise use of the wetlands therein, and to raise public awareness about their importance.

2.11 AFCD has developed conservation plans for important species including the Chinese White Dolphin, Green Turtle and the Black-faced

Spoonbill. For the Chinese White Dolphin, AFCD has adopted a four-pronged conservation approach involving management, public education, research and cross-boundary cooperation to enable the species to continue to use Hong Kong waters as a portion of their population range in the Pearl River Estuary. Moreover, apart from designating Sham Wan Beach, Lamma Island as a restricted area under WAPO during the nesting season of Green Turtle, AFCD arranges for clearing of vegetation and rubbish at this nesting site and monitors the laying of eggs. A conservation plan has also been developed for the Black-faced Spoonbill. The plan contains prioritized actions aimed at improving the wetland habitats for the species' feeding and roosting during winter.

Public education and publicity

2.12 Public support and participation are essential to the success of our conservation efforts. AFCD has been organising a wide range of activities for different sectors of the community including tree-planting schemes, forestry work camps, guided visits, hiking festivals, etc. In addition, AFCD has been publishing leaflets, booklets and posters, and producing VCDs to introduce the attractive wildlife found in Hong Kong and to explain the need and ways to protect our precious natural environment and respect wildlife.

Conservation Efforts and Achievements

2.13 We have adopted a "habitat approach" in pursuit of the nature conservation objective by protecting important habitats through various conservation designations including country parks, special areas and conservation zonings. We have so far designated 23 country parks and 15 special areas (11 of them are within country parks) with a total area of about 41,600 hectares. They cover over 60% of the forests, 55% of the shrub land, 40% of the grassland, all the fresh water reservoirs and most of the stream origins in the territory, and the fauna and flora associated with these habitats. These areas are under the active management of AFCD, which enables the in-situ conservation of the wildlife there. Moreover, we have designated another 6,600 hectares of land as SSSI, CA and CPA to protect them from development threats. We have also designated three important habitats that are already zoned as SSSI as restricted areas under WAPO, viz. Mai Po Marshes/Inner Deep Bay (bird sanctuary), Yim Tso Ha Egretty (nesting site of

egrets) and Sham Wan Beach (nesting site of endangered Green Turtles), to further protect the areas from human disturbance.

2.14 To signify the importance of the wetlands in Mai Po, we have listed the Mai Po Inner Deep Bay area as a Ramsar Site (i.e. a Wetland of International Importance) under the Ramsar Convention since 1995. The area has now become a renowned paradise for birds, in particular migratory birds including endangered species such as the Dalmatian Pelican and the Black-faced Spoonbill. AFCD is providing subventions to the World Wide Fund for Nature Hong Kong, a non-governmental organisation (NGO), for daily habitat management of the Mai Po Nature Reserve.

2.15 We have evaluated the effectiveness of the existing conservation measures in achieving the objective of protecting the important habitats and species. We have attained very positive results both in terms of the share of areas protected for nature conservation purpose and the level of biodiversity in Hong Kong.

2.16 So far, about 48,200 hectares, or 43% of Hong Kong's land area are put under the current protected areas system, i.e. designated as country parks, special areas or put under conservation zonings, and protected for nature conservation purpose. This compares favourably with other cities/places at a similar stage of economic development. Moreover, despite its small size and rapid developments over the years, Hong Kong still enjoys a rich biodiversity. A wide variety of plants and animals can be found here including over 3,100 species of vascular plants, some 50 species of mammals, 450 species of birds, 80 species of reptiles, more than 20 species of amphibians and 140 species of freshwater fish. Insect diversity is also very high with more than 230 species of butterflies and 100 species of dragonflies. Most of the wildlife is already represented in our protected areas.

2.17 The areas currently put under various conservation designations not only offer a sanctuary for wildlife, but also facilitate informed planning by developers who can avoid ecological sensitive areas at the early planning stage. Country parks also serve important educational and recreational functions. On the one hand, they harbour a diversity of wildlife that provides valuable resources for promoting conservation education and related scientific researches/studies. On the other hand, there are many scenic sites with

spectacular landscapes within the 23 country parks. Many country parks are located at the urban fringe and are easily accessible by the public. They are great venues for outdoor recreational activities such as hiking, camping, barbecue and picnic, and for eco-tourism. Every year, the country parks attract over 10 million visitors.

2.18 The natural environment that we have preserved is a valuable asset belonging to the people of Hong Kong and their future generations. It provides a green backdrop that enhances our city's landscape and living environment, and improves the quality of life by providing easy and free access to the tranquillity of the nature, fresh air and scenic views. This natural asset has also become one of the attractions of Hong Kong to overseas visitors and investors.

Limitations

2.19 Although the existing conservation measures have contributed to the protection of significant areas of ecological value and rich biodiversity in the territory, they are not without limitations. From time to time, there are debates on whether a site should be conserved especially when the nature conservation objective conflicts with development proposals. There are also criticisms about the inadequacy of the existing measures in conserving ecologically important sites under private ownership.

2.20 Nature conservation, in its broad term, is essentially the conservation of biodiversity. It includes protection, maintenance, sustainable utilization, restoration and enhancement of the natural environment. To ensure the sustainable development of Hong Kong, we have to strike a balance among economic, social and environmental needs. We need ways to identify sites that deserve conservation, and decide the appropriate conservation measures as well as the priority for action. Yet, currently we do not have a system for evaluating the ecological value of individual sites in an objective and systematic manner.

2.21 Different people may have different views on what should constitute an ecologically important site. There are no easy answers to the questions of whether a particular site is worthy of protection for nature conservation purpose and what sort of protection it should be accorded with. For instance, it is difficult to decide whether we should regard a site with a plant species that is rare in Hong Kong but abundant in the Mainland one of high ecological

importance. We cannot compare the ecological importance of a site with a very rare butterfly species with one that supports a rich diversity of frog species. All these give rise to debates from time to time on whether and, if so, what sort of nature conservation efforts and priority for action should be accorded to particular sites. These debates may in turn affect planning of development projects.

2.22 Moreover, the ecological information currently available is not extensive enough in respect of areas covered and details of information collected. We need a comprehensive ecological database that can facilitate the formulation and implementation of nature conservation policy and measures as well as planning of development projects.

2.23 Conservation of ecologically important habitats under private ownership is another major concern. With the existing conservation measures, the Government can protect these sites from development threats by regulating the land use through zonings. However, so long as the land use complies with the zoning control, due to their private land status, the Government cannot prohibit human activities carried out on the land even if they may not be compatible with the conservation objective or may cause adverse impact on the habitats, e.g. change of agricultural practices, war games and use of off-road vehicles. The CPO does contain provisions that restrict the conduct of incompatible activities in country parks. However, most, if not all, of the landowners nowadays would strongly resist any proposal to designate their land as country parks or, generally, for nature conservation purpose because, in their view, this would affect the potential of future development of their land. This is despite the fact that most of these sites are under agricultural leases and therefore by virtue of these land leases, the landowners have no development right in terms of erecting buildings or structures on their land except with the approval of the Government.

2.24 To better achieve the nature conservation objective, apart from continuing the existing efforts in protection of important habitats and species, we need to explore whether there are other practicable measures to address the limitations mentioned above. Since resources are limited, it is imperative to establish in the first instance a system that provides clear and objective guidelines for selecting priority sites for enhanced conservation. It is evident that conservation of important habitats involving private land would not succeed

without the support and cooperation of the landowners concerned and other stakeholders. It is therefore necessary to examine new ways to enhance partnership with them in pursuing the nature conservation objective. In this regard, we need to strike a balance between the rights of landowners over the use of their land on the one hand and the right and desire of the community to enjoy a pleasant natural environment on the other hand.

CHAPTER 3 IMPROVEMENT PROPOSALS

Introduction of a Scoring Scheme for Assessing Ecological Value of Sites

3.1 We will continue to pursue the nature conservation objective through the existing conservation tools, implementation of conservation programmes for individual habitats and species, and enhancement of the management of the existing conserved areas as appropriate. In seeking to further enhance the effectiveness of the conservation efforts, the foremost task is to establish a reliable and widely acceptable system for evaluating the ecological value of individual sites with the objective of reaching a consensus within the community on a list of priority sites for enhanced conservation. After drawing reference from international practices, we have worked out a scoring system at Table 1 for assessing the ecological value of individual sites by taking account of the value of their peculiar habitat and biodiversity. The proposed scoring system seeks to provide a more objective and systematic mechanism for assessing the relative ecological importance of different sites, and to facilitate the identification of sites that deserve better protection and their relative priorities for action. The priority list will help us focus our future efforts on the most deserving areas. It will also provide useful information for planners of development projects who can take into account the possible ecological impact at the early planning stage.

3.2 AFCD is now collating baseline ecological information through the conduct of a territory-wide survey programme with a view to establishing a comprehensive ecological database in phases by 2005. The survey programme will cover different habitats; the location, status and composition of about 100 plant communities; and the distribution and abundance of about 1 000 animal species. The findings of the ecological surveys will supplement existing ecological information available from previous studies and surveys (including the Biodiversity Survey conducted by the University of Hong Kong in 1996-97). Above all, the findings will provide useful input to the proposed scoring system for the compilation of the priority list of sites for enhanced conservation.

Table 1 Proposed Scoring System for the Assessment of Ecological Value of Sites

Criteria	Weighting	Description	Score	Description
Habitat	(60%)			
Naturalness	15%	Habitats that are natural or with least modification by human activities in the past history will have higher conservation value. Truly natural habitats (i.e. not modified by man) are usually highly valued. However, most areas of the territory have been modified. Generally, those habitats less modified will tend to be rated higher.	0	Built-up or highly degraded areas with little conservation value.
			1	Man-made or intensively modified by human, e.g. agricultural land.
			2	Semi-natural or moderately modified, e.g. disturbed woodland.
			3	Truly natural or relatively free from human modification, e.g. natural woodland.
Habitat diversity	15%	Generally, the greater the number of major habitats, the greater the overall importance of the site as a whole. Major habitat types include woodland, inter-tidal mudflat, mangrove stand, natural stream course, freshwater marsh, etc.	0	Containing no major natural habitats or habitats which are highly degraded.
			1	Containing only one major habitat type.
			2	Containing two to three major habitat types.
			3	Containing four or more major habitat types.
Size	10%	Larger sites shall be more valuable than smaller ones, all else being equal.	0	Minute-sized: 1 ha.
			1	Small-sized: 1 ha < size 10 ha.
			2	Medium-sized: 10 ha < size 100 ha.
			3	Large-sized: >100 ha.

Non-recreatability	10%	Habitats which are difficult to be recreated are valued higher. This evaluates the complexity of the habitat types, the time and effort needed to recreate the ecosystem and the degree of uncertainty in recreating the habitats.	0	Easy to recreate, but recreated habitats would have little conservation value e.g. landscaped areas.
			1	Easy to recreate, e.g. fishponds, abandoned agricultural land.
			2	Possible to recreate but it takes much time and effort, e.g. secondary forests.
			3	Very difficult or impossible to recreate regardless of time and effort, e.g. inter-tidal mudflats, natural woodlands, streams.
Degree of disturbance	10%	Disturbance from human activities, development and pollution will lower the conservation value.	0	Extreme level of disturbance e.g. urbanized area or highly polluted stream courses.
			1	High level of disturbance.
			2	Medium level of disturbance.
			3	Low or free from disturbance.
Biodiversity	(40%)			
Species diversity & richness	20%	The more diverse the species assemblages and communities of a site, the higher is its conservation value.	0	Insignificant diversity (as a reference, 5% of total number of recorded species in HK of a particular taxa group) for all taxa groups.
			1	Low diversity (5% < diversity 20%) of at least one taxa group.
			2	Moderate diversity (20% < diversity 50%) of at least one taxa group.
			3	High diversity (>50%) of a particular taxa group or moderate diversity of at least three taxa groups.

Species rarity / endemism	20%	The more rare / endemic species the site supports, the higher is its conservation value.	0	Not known to support any population of rare or endemic species.
			1	Support populations of rare species of at least one taxa group.
			2	Support a population of endemic species, or populations of rare species of two to three taxa groups.
			3	Support a population of extremely rare species or rare endemic species, or populations of rare or endemic species of more than three taxa groups.

Options to Better Conserve Ecologically Important Sites under Private Ownership

3.3 In the light of the limitations of the existing conservation measures mentioned in Chapter 2, it is expected that most of the priority sites identified for enhanced conservation will involve land under private ownership. We have examined a number of options and consider that the most practicable ones to better conserve these sites are through partnerships with key stakeholders including landowners and NGOs in the pursuit of the nature conservation objective. We consider that the options of management agreements with landowners and private-public partnership are more practicable and worthy of further examination for application to the priority sites to be identified.

Management agreements with landowners

3.4 Under this option, NGOs will be encouraged to enter into management agreements with the landowners concerned either with government subsidies or their own funding. Through the management agreement, the landowner is required to undertake specified activities or allow the conduct of these activities by the NGO on his land for the purpose of better conserving the habitat concerned. The terms of the agreement will be drawn up by the NGO in negotiation with the landowner, and the NGO shall monitor and ensure the proper implementation of the agreement to meet the conservation objectives of the site concerned. The amount of funding to be made available for application by the NGOs and other implementation details including the mechanism governing the allocation and usage of the subsidies will have to be further looked into if this option is to be pursued.

3.5 The management agreements will constitute a form of partnership among the Government, NGOs and the landowners in conserving individual habitats. Since the management agreements are negotiated on a case-by-case basis, this option will provide the flexibility for programmes that best suit the needs of individual sites to be drawn up. This option will incur recurrent cost on the Government if subsidies are provided to NGOs for entering into management agreements with the landowners. The cost will vary depending on the terms of the agreement.

3.6 The effectiveness of this option will depend on the willingness of the landowners and NGOs to participate in this type of management agreements, their commitment to fulfil the obligations under the agreements and the implementation of

an effective monitoring and audit system for checking that the recurrent resources are well spent on the intended objectives. We consider this option most suitable for habitats the sustainability of which depends on the type of human activities that take place in them.

Private-public partnership

3.7 Under this option, a private developer with an ecologically important site, which development will otherwise be difficult because of the likely environmental impacts, will be allowed to develop a less sensitive section of his site provided that he undertakes long-term obligations to manage and conserve the remaining part of the site. A similar approach has been adopted in promoting private-sector initiatives in enhancing conservation of wetlands (mainly fishponds) in the Deep Bay area. In order to enhance the flexibility, proposals involving non in-situ land exchange for development with full justifications may also be considered on an exceptional basis. Each of the proposals will have to be examined on a case-by-case basis by the authorities concerned. The pre-requisite will be that the developer has to demonstrate that there is a feasible and acceptable conservation plan that can ensure the long-term conservation management of the ecologically important site concerned.

3.8 The practicability of this option will depend on the private sector's initiative to submit proposals. Whether a particular proposal is feasible will have to be assessed on a case-by-case basis having regard to a number of factors including site constraints, ecological conditions, accessibility of the area, land use compatibility, infrastructural capacity, etc. The financial viability of the management plan proposed by the developer for the long-term conservation of the habitats concerned is one of the key considerations. One possibility will be the establishment of a trust by the developer to finance the long-term management of the conserved area with a capital injection adequate to support the recurrent expenditure of the trust. In all cases, an effective monitoring, audit and enforcement system will be required to ensure the proper management of the conserved area.

3.9 This option will encourage the private sector, landowners, developers and NGOs alike, to draw up proposals that, if successfully implemented, can satisfy both nature conservation and development needs. It can also help promote greater private-sector participation in nature conservation work that is essential to its success in the long run.

Other options

3.10 The other options that we have examined in the review include tightening of the existing conservation measures, land resumption, land exchange, off-site mitigation and transfer of development rights. However, they involve huge financial and land resources implications, or implementation complexities and difficulties that will more than balance out the conservation objective that they can achieve. These options are not considered practicable and will not be pursued. A summary of the considerations given to these options is at Annex.

Sustainability implications

3.11 A preliminary sustainability assessment has been carried out on all the options examined in this review. The results show that options including private-public partnership, management agreements with landowners and off-site mitigation, though applicable only on a case-by-case basis, can strike a better balance between the economic and biodiversity considerations. Private-public partnership also records a positive return in the cost-benefit analysis. There are however operational difficulties and uncertainties relating to the implementation of the off-site mitigation option, which cast strong doubts on its practicability. Application of the options of land resumption and land exchange would not be financially sustainable due to their immense financial and land implications. The option of transfer of development rights is a non-starter because landowners have no development rights under agricultural leases. The remaining option, i.e. tightening the existing conservation measures by removing land uses on statutory town plans that are incompatible with nature conservation will not impose additional costs on the Government but will have only limited impact since no active management is involved.

3.12 A more detailed sustainability assessment on new improvement options to be adopted would be carried out at a later stage taking into account comments received during the public consultation exercise.

CHAPTER 4 PUBLIC SUPPORT AND CONSULTATION

4.1 The review has reassured us that the implementation of the existing nature conservation policy and measures over the past years is effective in protecting our natural heritage and has been yielding significant benefits for the community. Our natural heritage is a valuable asset important to the maintenance of ecological balance and improvement of the well-being of the community. It enriches our living environment and provides resources for compatible economic, recreational and educational uses. Every member of the community has the right to enjoy the benefits generated from this valuable asset. At the same time, all of us have the obligation to protect it from threat or disturbance.

4.2 With an increasing population and the pressure for development, we need the support and active participation of every member of the community in protecting the natural environment so as to sustain the efforts in nature conservation. The Government's effort alone is inadequate. All members of the community must become owners of this worthy cause and play a due part in it. Only if all of us share the same commitment will our future generations and we be able to continue to enjoy the beauty of our natural environment.

4.3 This document has briefly set out the efforts that the Government has been making in protecting the important habitats and species in Hong Kong. It has summarized the results of our review, including the effectiveness of the existing policy and measures, their shortcomings and proposals for further improving the measures that can enable all of us to better achieve the nature conservation objective.

4.4 Nature conservation is not a pure science. It is impossible to make a quantitative assessment on the ecological value of different habitats or species in an absolutely objective way. The proposed scoring system in Chapter 3 aims to provide a mechanism that can assess the relative ecological importance of different sites by taking into account the characteristics of the habitats and species found there in a more systematic and objective manner. As resources are not unlimited, we need to firstly devise a system that is generally acceptable to the community for assessing the ecological importance of different sites with the objective of identifying priority sites for enhanced conservation.

4.5 We are fully aware of the limitations of the existing measures in providing full protection of ecologically important sites that are under private ownership, and the potential controversy as it involves how the balance should be struck between the right of the landowners on the use of their land on one hand and the right and desire of the community to protect the natural asset and to enjoy a pleasant natural environment on the other hand. Identifying practicable measures to better conserve these sites is a highly controversial and complex issue involving many different stakeholders and diverse considerations including financial implications, cost-effectiveness, land use planning, implementation difficulties, etc. Your views will help us map out a more comprehensive nature conservation policy and measures that will enable us to better achieve our nature conservation objective.

4.6 The natural environment belongs to every member of the community and all of us have a responsibility to protect it. Please take this important step in actively participating in nature conservation work by sending us your views and comments on the following –

- (a) the introduction of the proposed scoring system detailed in Chapter 3 for assessing, in a more objective and systematic manner, the relative ecological importance of sites with the objective of reaching a consensus within the community on the priority sites for enhanced conservation; and
- (b) practicable ways to better conserve ecologically important sites that are under private ownership within limited resources.

Please send your views by letter, facsimile or e-mail to the Environment, Transport and Works Bureau, Government Secretariat at the following address on or before 18 October 2003 –

10/F Citibank Tower
3 Garden Road
Hong Kong

Facsimile: 21363321

E-mail address: nature_views@etwb.gov.hk

Enquiry telephone no. : 2150 7144

Copies of the report can also be downloaded from the homepage of the Environment, Transport and Works Bureau (<http://www.etwb.gov.hk>) or the Agriculture, Fisheries and Conservation Department (<http://www.afcd.gov.hk>).

4.7 We will take full account of the views received in finalising the way forward.

Options Considered Impracticable

Land Resumption

Application

By means of land resumption, the Government exercises statutory power to compulsorily take over ownership of private land for achieving a public purpose. The Government has resorted to land resumption on many occasions in the past for purposes other than nature conservation. For instance, private land has been resumed for developing new towns and building major infrastructure. Ex-gratia compensation calculated according to the established formula has been paid to the affected landowners and occupants. However, according to legal advice, whether nature conservation can be justified as a public purpose for triggering land resumption needs to be determined on a case-by-case basis.

2. Adopting land resumption as a conservation tool demands a majority consensus in the community, as considerable manpower and financial resources are required in completing the resumption procedures and providing compensation to the eligible parties. The financial implication for the Government is also an important issue that needs to be taken into account.

Merits

3. Land resumption will allow the Government to gain complete control of a site and manage it for nature conservation purpose. The site may also be made available for a number of uses that can generate benefits for the public provided that they will not adversely affect the ecological value of the area, e.g. promotion of conservation education, nature appreciation, other forms of passive recreation, eco-tourism, etc.

Feasibility

4. The financial implications of this option are tremendous. We have conducted a rough assessment on the potential resumption and clearance costs involved in the acquisition of about 10 ecologically important sites of private

land that are identified based on the available ecological information. The costs estimated according to the existing compensation rates are in the order of \$20 billion for a total area of about 1,000 hectares of private land involved. That has not included the recurrent costs for managing the resumed sites. Notwithstanding the potential benefits in relation to nature conservation to be gained from the resumption of a site, the huge financial implications arising are definitely a concern and affect its practicability. Since with the existing measures many important habitats in Hong Kong including some on private land have already been conserved, there are reservations over the cost effectiveness of spending huge resources on enhancing conservation of a few additional sites under private ownership.

5. This option is considered neither feasible nor sustainable.

Land Exchange

Application

This option will involve the Government granting developable government land to a landowner in exchange for his surrender of his agricultural lot of high ecological importance. It is a non-insitu land exchange that is not supported by existing land policy, since it involves a direct grant of government land by way of private treaty and is against our long established principle of open competition on land resources.

Merits

2. Similar to land resumption, this option will allow the Government to gain complete control of a site and protect it against incompatible activities and uses. The conserved site can also be made available for public uses that are compatible with the conservation objective.

Feasibility

3. Based on past experience, any land exchange is expected to take years to complete, as negotiations with the landowners over the terms of exchange are likely to be protracted. Acquisition of the private land concerned also cannot be guaranteed. Besides, the Government's position in the negotiations may be severely undermined by the proclaimed desire to acquire the land. Multiple landownership particularly in respect of land in the New Territories will also give rise to complicated problems. Most importantly, there will not be enough government land in the land reserve for implementing this option.

4. This option is considered not practicable.

Tightening of the Existing Conservation Measures

Application

Under this option, protection of habitats under conservation zonings on town plans will be strengthened by tightening the uses permitted within those zonings.

2. Under the TPO, zonings are designated for regulating land uses at specific sites to meet pre-defined planning objectives such as residential development, commercial use, nature conservation, etc. As explained in Chapter 2, SSSI, CA and CPA are commonly regarded as conservation zonings since they all share the common objective of protecting the natural features of an area concerned. The notes to a town plan would specify for each zoning a list of uses that are always permitted and a list of uses that would require approval by the Town Planning Board (TPB) before they are allowed to proceed. For protection purpose, the number of uses that are permitted within conservation zonings is fairly limited.

3. The Planning Department has recently completed a review and considers that, inter alia, there are rooms for further tightening of the permitted uses for enhancing conservation of important habitats. For example, TPB has recently agreed to tighten the control over SSSI by restricting the scope of the “always permitted uses” to cover mainly country park and wild animals protection area.

Merits

4. This option will enhance the conservation function of the conservation zonings. Implementation will be relatively simple since there are established procedures for making changes to statutory town plans under the TPO.

Feasibility

5. The land use zoning system is primarily a planning tool for controlling land uses, and human activities are beyond its ambit. It therefore cannot protect a site from incompatible activities provided that they do not constitute any changes to the land uses allowable under the respective zonings. It does not provide any incentives to the landowners to carry out activities that will better

conserve the site either. On the other hand, policing and enforcement against illegal land uses require tremendous resources. In addition, it is impossible to prohibit land uses that may not conform with the conservation zonings if they were already in existence before the land use zoning was imposed.

6. This option cannot tackle the main problems relating to conservation of private land of high ecological importance and hence its effectiveness is very limited.

Off-site Mitigation

Application

Under this option, proponents of designated projects under the EIA Ordinance will be allowed to compensate for the adverse ecological impacts arising from their projects by putting money into a Fund instead of implementing on-site mitigation measures.

2. The EIA Ordinance requires proponents of designated projects to avoid causing adverse environmental impact as far as practicable, and if total avoidance is not practicable, to mitigate the adverse impact to an acceptable level. As stipulated under the Technical Memorandum to the EIA Ordinance, mitigation measures should be conducted on-site. Off-site mitigation may only be considered after the potential for implementing on-site mitigation has been exhausted. However, in some cases on-site mitigation measures implemented for individual projects are small in scale and piece-meal in nature. In these cases, it may better serve the nature conservation purpose if project proponents are allowed the alternative of putting monetary compensation into a Fund. The Fund can then be used for resuming selected sites of high ecological importance for active conservation management to compensate for the ecological functions lost.

Merits

3. This option can enable the Government to acquire ecologically important sites under private ownership without drawing on public money and will also provide proponents of designated projects under EIA Ordinance with more flexibility in drawing up mitigation measures. It could be used for projects where substantive on-site mitigation is not practicable because of, for example, site constraints, and for cases where it is considered that the money to be spent on on-site mitigation could be better used to protect other sites of higher ecological importance.

Feasibility

4. Amendment of the EIA Ordinance and its Technical Memorandum to change the existing requirements regarding mitigation of possible ecological

impacts will be required for implementing this option. For example, provisions need to be made for payment of money by developers into the Fund instead of conducting on-site mitigation, allowing the adoption of off-site mitigation not on a “like for like” and “last resort” basis, relaxing the current “no-net-loss” principle in calculating ecological compensation, and so on. The need to revise these well-established mitigation / compensation principles under the existing EIA mechanism would have huge implications, and the overall merits from the nature conservation perspective are uncertain.

5. Besides, it could be very difficult, if not impossible, to draw up clear and widely acceptable criteria for deciding on the designated projects to which this option could be applied and the amount of money developers are to pay into the Fund in lieu of on-site mitigation. The decisions are likely to be politically controversial, and lengthy debates or negotiations are expected. The gap between the time when the ecological impacts surface and the time when the off-site mitigation to compensate for the ecological functions lost will be implemented is also a concern.

6. The practical difficulties and uncertainties associated with this option are immense.

Transfer of Development Rights

Application

Under this option, the Government will grant development rights to a landowner on another piece of land in exchange for surrendering his development rights at the site to be protected for nature conservation purpose. This option is considered not applicable in Hong Kong, since the private land where important habitats are found are usually held under agricultural leases under which the landowners are not entitled to any development rights for transfer.