



第三章 Chapter 3

改善建議

IMPROVEMENT PROPOSALS

採用計分制評估個別地點的生態價值

3.1 我們會繼續透過採用現行的保育工具、就個別生境及物種推行保育計劃，以及適當地加強現行保育地區的管理，以達致自然保育的目的。為了進一步提高保育工作的成效，我們的首要工作是建立一套可靠及廣為人所接受的制度，用以評估個別地點的生態價值，以期與社會各界就須優先加強保育的地點達成共識。我們參考過國際慣例後，擬訂了載於表1的計分制，根據個別地點的獨特生境和生物多樣性，評估其生態價值。這套建議計分制旨在提供一個較為客觀和更有系統的機制，用以評估不同地點在生態方面的相對重要性，以便挑選值得加強保護的地點，以及釐定有關保育工作的優先次序。制定須優先加強保育的地點清單不但可以讓我們日後能

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

集中資源，用於最值得保護的地區，而且為策劃發展項目的人士提供有用的資料，讓他們在早期的策劃階段便能顧及對生態的潛在影響。

3.2 漁護署現正進行一項全港調查計劃，蒐集生態基線資料，以期在二零零五年年底或之前分階段建立一個全面的生態資料庫。生態調查的範圍會包括不同的生境；約100個植物群落的地點、狀態和組合；以及約1,000種動物的分布和數量。生態調查的結果會補充從以往的研究和調查得來的現有生態資料。(這些研究和調查包括香港大學在一九九六至九七年進行的生物多樣性調查。) 最重要的是，調查結果會為建議計分制提供有用的資料，可用來擬訂須優先加強保育的地點清單。

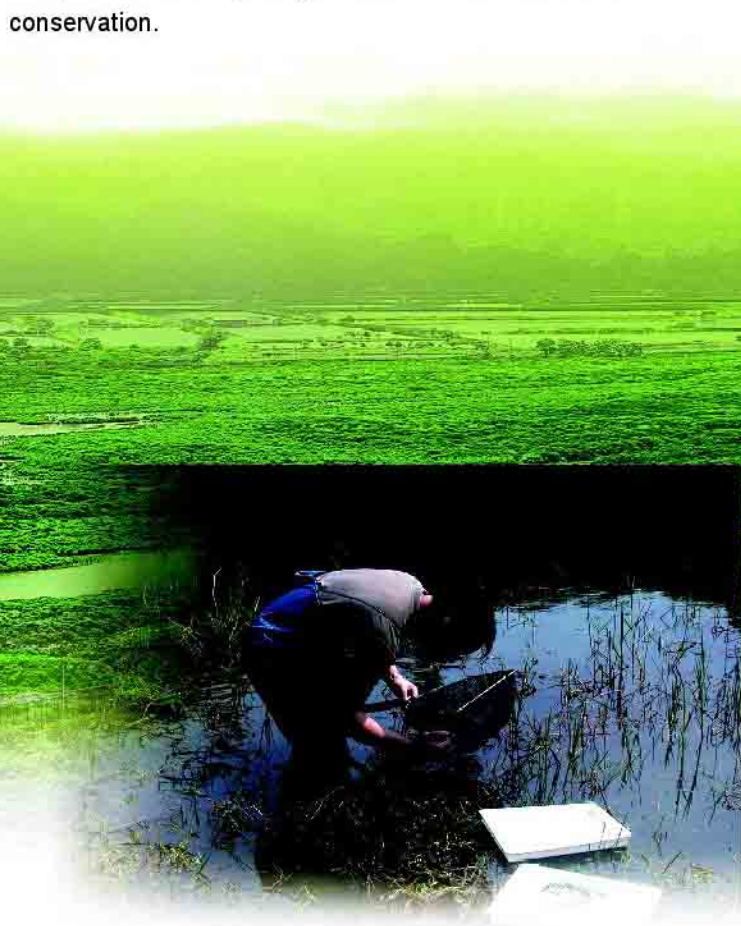
that deserve better protection and their relative priorities for action. The priority list will help us focus our future efforts on the most deserving areas. It will also provide useful information for planners of development projects who can take into account the possible ecological impact at the early 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.

紅外線相機調查
Camera Trapping



水獭
Chinese Otter



生態調查
Ecological Survey



表 1：評估個別地點生態價值的建議計分制

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

準則 Criteria	比重 Weighting	說明 Description	分數 Score	說明 Description
生境 Habitat				
(60%)				
天然程度 Naturalness	15%	<p>天然生境或以往因人類的活動而改動最少的生境，會有較高的保育價值。真正天然的生境(即未經人為改動的生境)通常具高度價值。不過，本港大多數地區都曾被改動。一般來說，改動較少的生境得分會較高。</p> <p>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.</p>	0	已建設或嚴重退化而保育價值極低。 Built-up or highly degraded areas with little conservation value.
			1	人造或經人類大幅改動(例如農地)。 Man-made or intensively modified by human, e.g. agricultural land.
			2	半天然或經輕微改動(例如受干擾的林地)。 Semi-natural or moderately modified, e.g. disturbed woodland.
			3	真正天然或大致上未經人為改動(例如天然林地)。 Truly natural or relatively free from human modification, e.g. natural woodland.
生境多樣性 Habitat diversity	15%	<p>一般來說，某個地點的主要生境數目越多，其整體重要性越大。主要生境類別包括林地、潮間帶泥灘、紅樹林、天然溪澗和淡水沼澤等。</p> <p>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.</p>	0	沒有主要天然生境或生境已嚴重退化。 Containing no major natural habitats or habitats which are highly degraded.
			1	只有一類主要生境。 Containing only one major habitat type.
			2	有兩至三類主要生境。 Containing two to three major habitat types.
			3	有四類或更多主要生境。 Containing four or more major habitat types.
面積 Size	10%	<p>如其他情況相同，面積較大的地點比面積較小的地點更具價值。</p> <p>Larger sites shall be more valuable than smaller ones, all else being equal.</p>	0	微型：1公頃或以下 Minute-sized: ≤ 1 ha.
			1	小型：大於1公頃但不超過10公頃 Small-sized: 1 ha < size ≤ 10 ha.
			2	中型：大於10公頃但不超過100公頃 Medium-sized: 10 ha < size ≤ 100 ha.
			3	大型：大於100公頃 Large-sized: >100 ha.



準則 Criteria	比重 Weighting	說明 Description	分數 Score	說明 Description
重新建立的難度 Non-recreatability	10%	難以重新建立的生境具較高價值。這項準則評估生境類別的複雜程度、重新建立生態系統所需的時間和工夫，以及重新建立生境的不穩定性。 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 1 2 3	容易重新建立，但重新建立的生境保育價值很低(例如園景美化地區)。 Easy to recreate, but recreated habitats would have little conservation value e.g. landscaped areas. 容易重新建立(例如魚塘和荒廢的農地)。 Easy to recreate, e.g. fishponds, abandoned agricultural land. 有可能重新建立，但要花很多時間和工夫(例如次生林地)。 Possible to recreate but it takes much time and effort, e.g. secondary forests. 無論花多少時間和工夫，都很難或甚至不能重新建立(例如潮間帶泥灘、天然林地和河澗)。 Very difficult or impossible to recreate regardless of time and effort, e.g. inter-tidal mudflats, natural woodlands, streams.
受干擾程度 Degree of disturbance	10%	受人類的活動、發展和污染干擾的地區，其保育價值較低。 Disturbance from human activities, development and pollution will lower the conservation value.	0 1 2 3	受極大干擾(例如都市化地區或嚴重污染的河道)。 Extreme level of disturbance e.g. urbanized area or highly polluted stream courses. 受高度干擾。 High level of disturbance. 受中度干擾。 Medium level of disturbance. 受輕度干擾或不受干擾。 Low or free from disturbance.



準則 Criteria	比重 Weighting	說明 Description	分數 Score	說明 Description
生物多樣性 Biodiversity (40%)				
物種多樣性及豐富程度 Species diversity & richness	20%	某個地點的物種群聚和群落越多樣化，保育價值越高。 The more diverse the species assemblages and communities of a site, the higher is its conservation value.	0	所有生物分類群的多樣性均甚低(參考值為某個生物分類群佔在本港錄得的物種總數不超過 5%)。 Insignificant diversity (as a reference, $\leq 5\%$ of total number of recorded species in HK of a particular taxa group) for all taxa groups.
			1	至少一個生物分類群的多樣性屬低水平(高於 5%但不超過 20%)。 Low diversity ($5\% < \text{diversity} \leq 20\%$) of at least one taxa group.
			2	至少一個生物分類群的多樣性屬中等水平(高於 20%但不超過 50%)。 Moderate diversity ($20\% < \text{diversity} \leq 50\%$) of at least one taxa group.
			3	某個生物分類群的多樣性屬高水平(高於50%)或至少三個生物分類群的多樣性屬中等水平。 High diversity ($>50\%$) of a particular taxa group or moderate diversity of at least three taxa groups.
物種稀有程度 / 獨特性 Species rarity / endemism	20%	某地點越多稀有 / 本地特有物種棲息或生長，保育價值越高。 The more rare / endemic species the site supports, the higher is its conservation value.	0	未發現有任何稀有或本地特有物種居群。 Not known to support any population of rare or endemic species.
			1	有至少一個生物分類群的稀有物種居群。 Support populations of rare species of at least one taxa group.
			2	有一個本地特有物種居群，或兩至三個生物分類群的稀有物種居群。 Support a population of endemic species, or populations of rare species of two to three taxa groups.
			3	有一個極稀有物種居群或稀有的本地特有物種居群，或多於三個生物分類群的稀有或本地特有物種居群。 Support a population of extremely rare species or rare endemic species, or populations of rare or endemic species of more than three taxa groups.



加強保育私人土地上具重要生態價值的地點的方案

3.3 正如第二章所述，現行的保育措施就保育涉及私人土地的生境有其不足之處。我們因此預料大多數確定須優先加強保育的地點會位於私人土地上。我們研究過多個方案後，認為如要加強保育這些地點，最切實可行的方案是與主要利益相關者（包括土地擁有人和非政府機構）合作，力求達到自然保育的目的。我們認為與土地擁有人簽訂管理協議和公私營機構合作這兩個方案較切實可行，因此值得詳細研究，探討如何把這兩個方案應用於日後確定須優先加強保育的地點。

與土地擁有人簽訂管理協議

3.4 按照這個方案，政府會鼓勵非政府機構利用政府的資助或本身的經費，與土地擁有人簽訂管理協議。根據管理協議，土地擁有人須承諾進行指定的工作或容許非政府機構在其名下土地上進行這些工作，藉此加強保育有關的生境。協議條款會由非政府機構與土地擁有人議定。而非政府機構須進行監察，確保協議得以妥善執

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



穿山甲
Chinese Pangolin



香港茶
Hong Kong Camellia



行，達到保育有關地點的目的。如決定採用這個方案，政府須詳細研究供非政府機構申請的撥款金額及其他細節安排，包括決定這些資助款項的分配和用途的機制。

3.5 這些管理協議可讓政府、非政府機構和土地擁有人三方在保育個別生境上建立伙伴關係，共同合力保育獨特生境。由於管理協議按個別情況議定，這個方案給予協議各方更大的彈性，讓他們根據個別地點的需要訂定最適當的計劃。如政府資助非政府機構與土地擁有人簽訂管理協議，這個方案會為政府帶來經常開支，數額則視乎協議的條款而定。

3.6 這個方案能否奏效，取決於以下因素：土地擁有人和非政府機構是否願意簽訂這類管理協議；他們會否承諾履行協議所訂的責任；以及是否有一套有效的監察和審核制度，確保經常開支用得其所，能達到原訂目的。我們認為這個方案最適宜用於須倚賴某些人類活動才能維持的生境。

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.



沙羅洞
Sha Lo Tung



公私營界別合作

3.7 按照這個方案，私人發展商如擁有具有重要生態價值的地點，但由於極有可能對環境造成影響，因此很難加以發展，政府會容許發展商在該地點中生態較不易受破壞的部分進行發展，條件是發展商須負責長期管理和保育該地點的其餘部分。政府曾採用類似的模式，鼓勵私營界別參予加強保育后海灣地區的濕地（主要是魚塘）。為了使這個方案更具彈性，政府也會在特殊情況下考慮涉及非原址換地以供發展的建議，但這類建議須有充分理由支持。每項建議會交由各有關當局按個別情況考慮，而先決條件是發展商須證明已訂有可行和可以接受的保育計劃，確保會在具重要生態價值的有關地點長期進行保育管理工作。

3.8 這個方案是否切實可行，將視乎私營界別是否主動提交建議而定。當局評估每項建議的可行性時，須考慮個別情況和多個因素，包括實際環境的限制、生態狀況、有關地區是否易於到達、土地用途是否協調，以及基礎設施的容量等。發展商就長期保育有關生境提出的

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



建議管理計劃在財政上是否可行，是其中一個主要的考慮因素。由發展商成立信託基金以提供長期管理有關保育地點所需的款項，是一個可行的方法，但發展商注入的資本須足以支付信託基金的經常開支。無論如何，當局都必須實施一套有效的監察、審核和執行制度，確保發展商妥善管理有關保育地點。

3.9 這個方案會鼓勵私營界別（不論是土地擁有人、發展商和非政府機構）制訂建議。這些建議如能成功實行，既可滿足自然保育的需要，又可符合發展需求。這個方案也有助鼓勵私營界別參與自然保育工作，而長遠來說，自然保育的工作能否取得成效，私營界別的參與是一個關鍵因素。

其他方案

3.10 在這次檢討中，我們也研究過其他方案，包括收緊現有保育措施、收地、換地、在工程場地之外採取緩解措施及轉移發展權益。然而，這些方案所涉及的龐大財政和土地資源，或者實行起來的複雜性和困難度，已超越因達到保育目的而帶來的裨益。我們認為這些方案都不可行，因此不會再予考慮。我們探討這些方案時曾考慮的因素現概列於附件。



紅樹林
Mangrove stand

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.



溪神蜻蜓
Blue Chaser

對可持續發展的影響

3.11 我們已就今次檢討中所有考慮過的方案進行初步的可持續發展評估。評估結果顯示，雖然其中三個方案，即公私營界別合作、與土地擁有人簽訂管理協議及在工程場地之外採取緩解措施，只可以按個別情況而採用，但卻可在經濟與生物多樣性兩者考慮因素之間取得較佳的平衡。公私營界別合作方案就成本效益來說更會帶來正面的影響。然而，由於在工程場地之外採取緩解措施這方案實行起來困難重重，而且不明朗因素很多，因此我們對這個方案是否切實可行甚表懷疑。收地和換地方案涉及大量財政和土地資源，因此在財政方面的承擔是不能持續的。轉移發展權益的方案完全不可行，因為根據農地租約批租的土地的擁有人並沒有任何發展權益。餘下的一個方案是收緊現行的自然保育措施，把與保育目的不協調的土地用途從法定規劃圖則中剔除。這個方案不會增加政府的開支，但由於沒有涉及積極管理有關地點的措施，因此成效不大。

3.12 我們將考慮公眾諮詢中所收集到的意見，在稍後階段就將予以採用的改善方案進行詳細的可持續發展評估。

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.

