

For discussion on
22 February 2016

Legislative Council Panel on Environmental Affairs

**Update on the Protection of Endangered Species
and Biodiversity in Hong Kong**

PURPOSE

The paper updates Members on the Government's efforts in protecting endangered species, in particular the control of trade in elephant ivory (hereafter referred to as “ivory”) and totoaba maw and the protection of incense tree in Hong Kong, and briefs Members on the progress made in formulating the first Biodiversity Strategy and Action Plan (BSAP) for Hong Kong.

PROTECTION OF ENDANGERD SPECIES

2. The Government is committed to the protection of endangered species. Hong Kong abides by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and implements CITES through vigorous enforcement of the Protection of Endangered Species of Animals and Plants Ordinance, Cap. 586 (“the Ordinance”), which is the local legislation that gives effect to CITES. A brief introduction of the CITES and the Ordinance is at **Annex A**.

3. The Ordinance is administered by Agriculture, Fisheries and Conservation Department (AFCD) and has been enforced vigorously by both AFCD and Customs and Excise Department (C&ED). Both departments are in close collaboration in combating illegal trade in endangered species. The Ordinance provides for fines and imprisonment terms for offenders and mandatory forfeiture of goods upon conviction. The details of the Government’s efforts on the control of trade in ivory and totoaba maw and the protection of incense tree in Hong Kong are presented in the ensuing paragraphs.

4. Apart from the enforcement effort, education and publicity has always been a vital part of AFCD's ongoing efforts on endangered species protection. AFCD implements education and publicity programmes to promulgate the message of endangered species protection and their relevant controls in Hong Kong, including announcements through the media and the Internet, participation in various exhibitions, distribution of advisory leaflets to traders, tourists and the public as well as giving specific advice to traders through seminars, circular letters and regular shop visits. We will continue our efforts in enhancing public awareness on protection of endangered species through public education and publicity.

Ivory

5. The Government has put in place a strict regulatory system to control the import, re-export and domestic sale of ivory under the Ordinance, and has made much effort in the enforcement against smuggling of ivory and the control of local trade in ivory. CITES started to regulate the international trade of elephant ivory in the 1970s and has banned such trade since 1990 except the "pre-Convention ivory" which is allowed to be traded when the ivory is accompanied by a pre-Convention certificate. Given the history of Hong Kong as a trade centre of ivory in the Asian region in the 1980s, substantial amount of ivory had been imported legally and in accordance with CITES provisions into Hong Kong before the international trade ban. Such "pre-ban" ivory was registered by AFCD and is allowed to be traded locally under a Licence to Possess. Any person keeping such ivory for commercial purposes must obtain a Licence to Possess for each keeping premises. As at the end of 2015, there were some 370 licensees holding a total of about 77 tonnes of ivory for commercial purposes. Our control mechanism over the local sale of ivory is a domestic measure stricter than the requirements of CITES.

6. In recent years, there have been growing concerns over the poaching of elephants in Africa and the global smuggling of ivory. In this regard, AFCD has reviewed the regulatory regime of the ivory trade and devised a suite of new/enhanced measures to step up enforcement against smuggling of ivory and to strengthen the control of local trade in ivory in cooperation with C&ED and the Police. In addition, the enforcement agencies would regularly exchange views and share information with overseas and international bodies

such as INTERPOL with a view to assisting in the fighting of global wildlife crimes. Details of the current control and the new/ enhanced enforcement measures are at **Annex B**.

7. To further contribute to the conservation of African elephants, the Chief Executive announced in his 2016 Policy Address that the Government will initiate the legislative procedures as soon as possible to ban the import and export of elephant hunting trophies and actively explore other appropriate measures including enacting legislation to further ban the import and export of ivory and phase out local ivory trade, and imposing heavier penalties on smuggling and illegal trading of endangered species.

8. As a first and immediate step, we will step up enforcement as set out in paragraph 6 above and initiate the legislative procedures within this year to ban the import and export of elephant hunting trophies. In parallel, we are developing legislative amendment proposals with a view to banning the import and export of pre-Convention ivory to help further prevent possible laundering of illegal ivory. We are also reviewing the maximum penalties for offences involving smuggling and illegal trading of endangered species, including ivory, to reflect the seriousness of such offences and to provide a higher deterrent effect.

9. At the next stage, we will actively explore phasing out the local ivory trade in the longer run. Longer lead time is required as the formulation of an implementation plan would require detailed assessment of the legal issues and other relevant considerations involved and extensive consultation with stakeholders, and the likely implementation timetable would also depend on the time required for drafting and enactment of the relevant legislative amendments and the duration of the phasing out arrangement. The Government will proceed with examining the issues involved and consulting stakeholders. Meanwhile, we will continue to strengthen enforcement and to take vigorous actions against smuggling and illegal trade in ivory as mentioned above.

10. The Government is committed to do all we can in contributing to the concerted global effort in the conservation of elephants. We consider that the proposed action plan as set out above would go a long way in achieving this objective. However, we would require the firm support and consensus of the community for its successful implementation.

Totoaba Maw

11. Similar to other endangered species, the Government is committed to combating against illegal trade of totoaba (*Totoaba macdonaldi*). Totoaba is the largest species of croaker fish in the world and is indigenous to the Gulf of California in Mexico. Totoaba was listed on CITES Appendix I in 1976 and its international trade has been prohibited since 1977. The swim bladder of the fish is used as fish maw and the meat is also sought after for making soups.

12. Under the Ordinance, the commercial import and re-export of totoaba, including its parts and derivatives, are prohibited. Possession of the species for commercial purposes requires a Licence to Possess issued by AFCD. There has been no import, re-export or possession record of the species in Hong Kong since 1977. Details of the enforcement action taken by AFCD and C&ED are at **Annex C**.

Incense Tree

13. Incense tree (*Aquilaria sinensis*) is a native tree species found particularly abundant in fung shui woods behind rural villages in Hong Kong. AFCD and the Police have always been very concerned about illegal tree felling activities and are committed to jointly combating such illegal activities. AFCD has been keeping records of incense trees encountered in our routine vegetation surveys. Despite the illegal exploitation of this species in the past decade, smaller trees and seedlings are still commonly found in lowland areas including many country parks in Hong Kong.

14. Trees of the species *Aquilaria* produce a dark aromatic resin at wounds as a reaction against fungal infection. Sections of tree trunks or branches that contain patches of fragrant, resinous wood enter into the trade under the name “agarwood”(沉香木). Also, the resin accumulated from the wood is used as a valuable Chinese medicine called “Chen Xiang” (沉香). Good quality Chen Xiang, derived mostly from the species *Aquilaria malaccensis*, was formerly imported from the Asian tropics into the Mainland. Owing to depletion of supply of such quality products, resin from the local species of *Aquilaria* (i.e. incense tree) has been used as a substitute.

15. Incense tree was listed as “Vulnerable” in the IUCN Red List of Threatened Species, as well as the China Red List. Currently, all species of *Aquilaria* including incense tree are listed in Appendix II under CITES and their import and export require relevant licences. Details of the enforcement action taken against illegal felling of incense trees are at **Annex D**.

BIODIVERSITY STRATEGY AND ACTION PLAN

16. Biodiversity is an integral part of everyday lives. It reflects the inter-connectedness of life and embraces the variety of genes, species and ecosystems that constitute life on earth. Benefits provided by biodiversity are crucial to our well-being and health. If we want our natural assets to be passed on to our future generations, we need to find solutions that will achieve sustainable development and conserve our biodiversity. Hong Kong has extraordinary biodiversity for a densely populated city. This richness is a valuable asset and the fruit of decades of conservation efforts.

17. The “Convention on Biological Diversity” is an international treaty aiming to conserve biodiversity, utilise its components sustainably, and ensure fair and equitable sharing of the benefits of biodiversity. The Convention was extended to Hong Kong in 2011. We aim to contribute to the achievement of global efforts and China’s national BSAP according to the conditions and capabilities of Hong Kong. The Government is formulating the first city level BSAP for Hong Kong, with a view to stepping up conservation efforts and supporting sustainable development of Hong Kong. Since 2013, the Government has initiated various stakeholder engagements and conducted numerous public awareness programmes, including the first Hong Kong Biodiversity Festival involving 20 partner organisations, to take forward the development of the first BSAP for Hong Kong.

18. On 8 January 2016, the Government released a consultation document entitled “BSAP for Hong Kong” (copy at **Annex E**). Taking into account local circumstances, views collected during the various stakeholder engagements and suggestions from Government bureaux/departments, we propose a vision and a mission, and outline the following four major action areas in the consultation document:

- i) Conservation: While Hong Kong's dedicated efforts over the years have yielded positive results, we will build on this foundation and continue to implement and enhance/add to existing conservation measures.
- ii) Mainstreaming: The Government has strengthened internal mainstreaming within the administration and is incorporating biodiversity considerations into its plans, projects and programmes according to the particular situation in Hong Kong and will continue to do so.
- iii) Knowledge: To increase understanding of biodiversity, the Government will conduct surveys and studies, consolidate data, and encourage organisations to launch research to fill knowledge gaps identified.
- iv) Community involvement: To raise public awareness and understanding of biodiversity conservation, which is an important area of focus of the first BSAP for Hong Kong, the Government will engage partners in promoting public awareness, and build support and collaboration with various sectors such as the agricultural, fisheries, business and professional sectors as well as relevant non-governmental organisations (NGOs).

19. The major areas of action proposed represent the key directions for enhancing biodiversity conservation and supporting sustainable development in Hong Kong in the next five years. Specific actions under each area of action will be developed taking account of views and feedbacks collected from the public consultation and the circumstances of Hong Kong.

20. The three-month public consultation exercise started on 8 January 2016. The consultation document as well as other relevant information can be downloaded from the BSAP website (www.afcd.gov.hk/bsap). The Government will consult relevant government advisory committees and various stakeholders, including district councils, academics, environmental groups, professional bodies, commercial sectors, rural communities, agricultural and fisheries organisations, etc. Open forums will also be held for the general

public. All views received will be carefully considered before finalising the BSAP for implementation in the coming years.

ADVICE SOUGHT

21. Members are invited to note the Government's efforts in protecting endangered species, and provide comments on the new initiatives on the control of trade in ivory and the proposals set out in the consultation document on "BSAP for Hong Kong".

Environment Bureau

Agriculture, Fisheries and Conservation Department

February 2016

**The Convention on International Trade in Endangered Species
of Wild Fauna and Flora (“CITES”) and
the Protection of Endangered Species of Animals and Plants Ordinance,
Cap. 586 (“the Ordinance”)**

CITES is an international treaty that has been ratified by 182 countries (called Parties) since it is first entered into force in 1975. The aim of CITES is to prevent species from becoming endangered or extinct because of international trade¹. CITES regulates more than 35,000 animal and plant species, including their parts and products, to ensure the international trade in them does not threaten their survival. CITES regulates international trade (both commercial and non-commercial) through a system of permits and certificates in which the required permits/certificates must accompany the species in question when leaving and entering a country.

2. As for the Ordinance, it provides that no person shall import, introduce from the sea, export, re-export or possess any endangered species, whether alive, dead, its parts or derivatives, except under and in accordance with a licence issued in advance by AFCD. However, exemption from the licensing requirement has been provided for the import and possession of certain specimens of endangered species in order to facilitate international trade while strictly abiding by our obligations under CITES. Our control regime in respect of the trade in endangered species is in line with CITES and is comparable to other countries.

3. The maximum penalty for illegal import, export, re-export or possession of a scheduled species for commercial purposes is a fine of HK\$5 million and two years' imprisonment.

¹ According to CITES, trade means import, introduction from the sea, export or re-export.

Enforcement against Illegal Trade of Ivory

Current Control

Any person keeping pre-ban ivory for commercial purposes must obtain a Licence to Possess for each keeping premises. As at the end of 2015, there were some 370 licensees holding a total of about 77 tonnes of ivory for commercial purposes.

2. Regarding “pre-Convention ivory”² that was acquired before the CITES provisions started to apply to ivory, its international trade is allowed when it is accompanied by a pre-Convention certificate. The requirement of a Licence to Possess for pre-Convention ivory, no matter for personal or commercial purposes, is exempted under the Ordinance.

3. On the disposal of seized ivory, AFCD all along adheres strictly to the CITES principles, and the ivory was mainly donated to schools, museums and overseas organisations for conservation, scientific, education and training, or enforcement and identification purposes. With the support of the Endangered Species Advisory Committee, the Government has started to dispose of confiscated ivory in the Government stockpile by incineration since May 2014. So far a total of about 22 tonnes of ivory was destroyed. The remaining stock is planned to be destroyed within 2016.

New/Enhanced Measures

4. AFCD has reviewed the regulatory regime of ivory trade and devised a suite of new/enhanced measures to step up enforcement against smuggling of ivory and to strengthen the control of local trade in ivory, as set out below:

- (a) Comprehensive stocktaking of registered ivory is being conducted to prevent potential laundering of licensed ivory by ivory from illegal sources. It includes checking the quantity, marking (if any) and the transaction

² Pre-Convention ivory refers to ivory products which were acquired before 1975 for Asian elephants and 1976 for African elephants.

records of ivory. In addition, a new marking system with unique tamper-proof holograms and photographic records for ivory has been introduced;

- (b) Frequency of surprise inspections to licensed shops selling ivory has been increased. Those shops located in business districts and/or holding large quantity of ivory would be inspected more frequently. Inspections of other art and crafts shops would also be carried out to check if there is any illegal selling of ivory;
- (c) AFCD will employ radiocarbon dating to determine the legality of ivory and hence to assist enforcement;
- (d) To strengthen the enforcement against, and gather intelligence on, smuggling and illegal trade in ivory, a range of enhancement measures will be taken by AFCD, C&ED and Police. These include strengthening collaboration and co-ordination of efforts of the three enforcement agencies, enhancing intelligence gathering and information exchange with relevant overseas and international bodies (e.g. INTERPOL, World Customs Organization and CITES Secretariat) and strengthening liaison and cooperation with relevant NGOs;
- (e) AFCD and C&ED will step up joint operations with the support of ivory sniffer dogs to target air parcels and passengers from high risk ports at the Hong Kong International Airport, as well as north-bound passengers, vehicles and cargoes at various land boundary and railway control points. As for cases that involve organised and serious crimes under the Police and C&ED's purview, the two departments will conduct investigation and take enforcement actions as appropriate;
- (f) In order to provide a higher deterrent effect against the smuggling of endangered species and to demonstrate the commitment of Hong Kong in tackling these criminal activities, AFCD will work with the Department of Justice on how to establish and submit evidence to satisfy the courts that the offence was committed for commercial purposes so that higher penalties would be imposed; and
- (g) We will also review the maximum penalties to reflect the seriousness of

such offence with reference to the penalties stipulated in other local legislation governing the import, export or possession of controlled items as well as the penalties imposed by other jurisdictions on the smuggling and illegal trade of endangered species.

Enforcement to Combat Illegal Trade of Totoaba

Commercial fishing of totoaba began in the 1920s and stopped in 1975 when the Mexico banned commercial fishing of the species. Nowadays, individuals of totoaba are still caught, as a by-catch in fishing of other finned fish and for shrimps, and in illegal fishing activities.

2. Vaquita (*Phocoena sinus*) is a small porpoise found only in the Gulf of California, Mexico, occupying the same waters as totoaba. Some scientists and NGOs claimed that bycatch of the fishing of totoaba has caused the population of vaquita to decline at the unprecedented rate, and vaquita faces imminent danger of extinction, with fewer than 100 individuals now remaining.

3. To combat illegal trade in totoaba maw, AFCD has stepped up enforcement actions including conducting inspection to local shops from time to time. During the period from May to June 2015, about 150 dry seafood shops were inspected and two shops were found selling totoaba maw. The two shops were prosecuted and fined \$30,000 and \$80,000 respectively and the 14 pieces of totoaba maw seized were forfeited.

4. In response to a report issued by an NGO in June 2015 that totoaba maw was available for sale in Hong Kong, AFCD officers carried out undercover investigations to the retailers and wholesaler reported in the report. However, none of the shops in question was found selling totoaba.

5. Further inspections were conducted between August and November 2015 covering more than 450 dry sea food shops and revealed no irregularities. During our visits, opportunities were taken to educate the shopkeepers about the legislative control of endangered species. Monitoring of the local dry seafood shops for any illegal trade of endangered species will be continued.

6. On 10 August 2015, C&ED intercepted a transshipment express cargo containing three pieces of totoaba maw when it was in transit through Hong Kong from Mexico via USA.

7. Apart from taking enforcement actions against illegal trade in

totoaba maw, AFCD has been providing training to C&ED officers, including the identification of totoaba maw. An identification guide of totoaba maw was produced and distributed to relevant enforcement officers to strengthen their capacity in species identification.

8. Moreover, we fully recognise the importance of cooperation with the Governments of exporting / re-exporting countries. We have contacted the Mexico CITES Management Authority expressing our concern of illegal trade in totoaba maw and wish to strengthen collaboration with them in fighting against illegal trade in endangered species including prompt intelligence exchange. We are also in close contact with the CITES Management Authority of the Mainland about enforcement control of endangered species.

Enforcement against the Illegal Felling of Incense Trees

The illegal harvesting of incense tree has extended to Hong Kong in the past decade owing to the soaring demand for valuable agarwood. Illegal felling and pruning of incense tree was reported in different regions of Hong Kong, including Sai Kung, Sha Tin, Sha Tau Kok, Tai Po, Lantau Island, Lamma Island and Hong Kong Island etc.

2. Given the widespread occurrence of tree felling incidents and the potential involvement of illegal immigrants, enforcement actions against illegal felling of incense tree have been undertaken by the Police, with the assistance of AFCD. Currently, all suspected cases are reported to the Police for criminal investigation. AFCD would render assistance in inspecting the exhibits, providing expert advice and serving as expert witness in the court proceedings as necessary. Currently, offenders involved in illegal felling of incense tree were mainly prosecuted under the Theft Ordinance (Cap. 210) and, where appropriate, the Organized and Serious Crimes Ordinance (Cap. 455). Along with the sentences aggravated and other possible offences (e.g. violation of the Immigration Ordinance), the maximum penalty imposed on cases involving illegal felling of incense tree is 55 months imprisonment.

3. AFCD has also been conducting regular patrols in country parks and special areas, as well as joint operations with the Police from time to time at black spots of illegal tree felling. As for the Police, it has stepped up patrols at relevant black spots, as well as strengthened its communication with the villagers to collect intelligence on illegal tree felling and suspicious persons nearby. The Police and C&ED also exchange intelligence with their respective counterparts in the Mainland. As incense tree is listed in Appendix II of CITES, this subject was also brought to the attention of the CITES Management Authority in the Mainland.

4. To raise the awareness of the public about the offences of illegal felling of incense tree, and to encourage timely reporting of suspected cases, an episode of Police Magazine has recently been produced. AFCD has also been promulgating tree protection in its regular education and publicity programmes targeted at students and the public. A poster on “No Unauthorized Tree

Felling” has also been produced for posting at Country Parks and displaying at various District Offices.

5. In addition to protecting the existing populations, efforts are also made to enhance local propagation of incense tree. AFCD has increased the production of seedlings of incense tree in the past few years, and planted the seedlings extensively in country parks. Since 2009, an average of about 10,000 seedlings have been produced and planted each year. These measures will be continued to assist in the re-stocking of incense trees in the countryside of Hong Kong.

Biodiversity Strategy and Action Plan (BSAP) for Hong Kong

Public Consultation Document

January 2016



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Disclaimers

1. All the views expressed in this document are for the purpose of discussion and consultation only.
2. None of the proposals, aspirations or ideas raised in this consultation document (i) represent or constitute any decision made by the Government or any public officer, or (ii) shall give rise to any rights or expectations in respect of the proposals, aspirations or ideas raised herein, or (iii) shall be construed as a policy or an undertaking of the Government or any public officer, or relied upon by any person or entity against the Government or any public officer.
3. This consultation document is without prejudice to and shall not fetter or affect any powers or duties of the Government or any public officer under the current legislation, regulations, policies or contracts.

Foreword



ur natural environment makes life on earth possible. It is an invaluable resource, shared by everyone. As economies continue to develop, living places become more urbanised, and the impact of climate change becomes more apparent, we have to work harder and smarter to ensure that our city can progress toward sustainable development.

We need to change how we are treating the natural environment if we want to continue to enjoy its benefits. Countries around the world have recognised this need, and have begun to take action. China has joined this movement, and Hong Kong should not lag behind. One key determinant of the benefits and services delivered by our natural environment, or ecosystems, is biodiversity. The more different kinds of organisms and habitats, the more variation within each species, the more likely our natural environment can sustain itself as conditions change. Simply put, the more complex the ecosystem, the better. The conservation of our biodiversity resources crosses paths with many social and economic issues, and can guide our efforts in a productive direction toward sustainable development.

Thus, countries around the world—including China—have committed themselves to developing goals and plans, or adopting existing ones, to better conserve and even increase the biodiversity within their borders according to their particular conditions and capabilities. This is something every sector of the society can help with. Here in Hong Kong, the Government will shoulder its share of responsibility by committing resources to specific projects, educating the public, and providing leadership and support for independent efforts. At the same time, we need you to participate; we need you to partner with us to share knowledge, spread the message, and work together toward a common goal. We need you to look into the areas and processes you have influence or control over, with a view to looking for opportunities to conserve biodiversity and support sustainable use of natural resources.

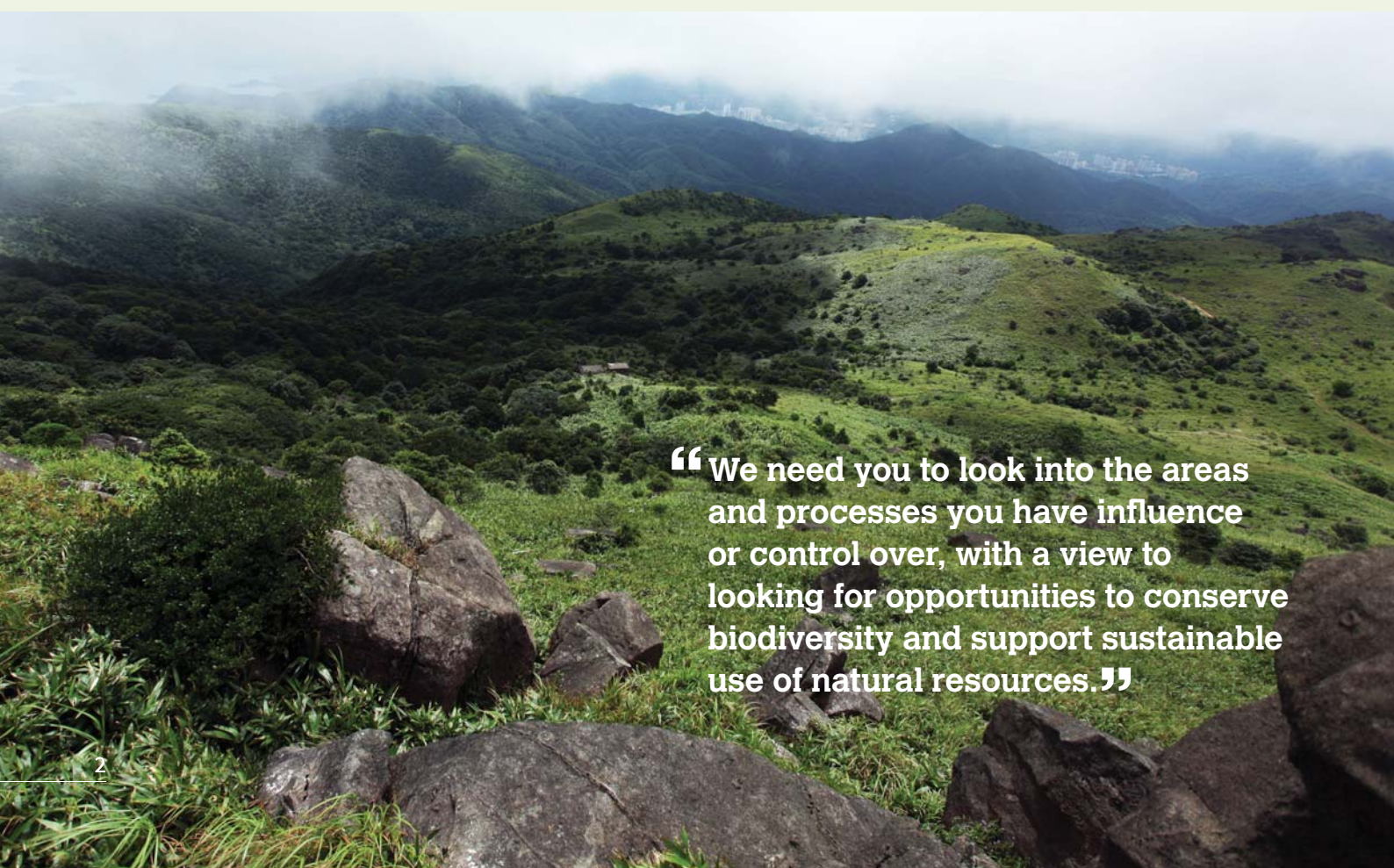
The first step from the Government is to create a five-year Biodiversity Strategy and Action Plan (BSAP) for Hong Kong. We have already been working on this for more than two years. We formed advisory committees to take forward the BSAP and to achieve the best outcomes. Various public events have been held, including the first-ever Biodiversity Festival to draw input from the public.

Any such plan will be most effective when everyone in the community, with our various capacities and expertise, participates. We now need your views in order to map out a BSAP that can be effectively implemented. We will then need your efforts to make it work.

This document sets out four proposed major areas of action. It suggests what specific actions could be taken within these areas over the next five years to support biodiversity and sustainable development. We now ask for your opinions and suggestions.

Please read this document carefully, and respond.

Let's do our part for biodiversity—for the planet—for our home—together.



“We need you to look into the areas and processes you have influence or control over, with a view to looking for opportunities to conserve biodiversity and support sustainable use of natural resources.”

For Readers' Attention

We ask readers to be mindful of the following when reading this document:

1

This is the consultation document for the first BSAP of Hong Kong. This BSAP would guide the conservation of local biodiversity and support the sustainable development of Hong Kong in the next five years.

2

In formulating the BSAP, we are seeking maximum contribution and participation from all stakeholders.

3

We shall seek consensus on the major areas of action wherever possible. We shall carefully select and focus on priority areas, while being mindful of contingent issues and other areas of concern.

4

We shall base the BSAP on sound science and feasible practices. When developing the strategy and actions, the local context and the prevalent circumstances of the society will be taken into account, and all relevant stakeholders will be invited to help develop a practical and prioritised plan.

5

The Hong Kong's first BSAP outlined in Chapter 3 of this document is proposed by the Government taking into account the views received so far and the local circumstances. The content therein is prepared for facilitating this consultation, and should not be construed as final, as they are subject to modifications and revisions by the Government after taking into account the views received, the prevalent circumstances in Hong Kong as well as any further deliberation within the Government.

6

The major areas of action proposed represent the suggested strategic direction for enhancing biodiversity conservation and supporting sustainable development in Hong Kong in the next five years. Specific actions under each area of action will be developed. In developing the specific actions, the Government will further consider proposals arising from the consultation and public engagement activities together with the ideas raised by the BSAP Steering Committee, Working Groups and Focus Groups.



Executive Summary

Background

Biodiversity refers to different plants, animals and microorganisms that make up a variety of ecosystems. It also refers to the genetic diversity of each of these organisms, and the differences in the ecosystems themselves. Biodiversity is important because it is a measure of how stable our ecosystems are. It reflects the interconnectedness of life, and in that sense is about people and our need for food, air, water, shelter as well as our appreciation of natural beauty. People around the world are concerned that we are tipping the balance and impacting our biodiversity as our economies develop. In particular, Hong Kong faces great challenges as it has to balance the increasing needs for land, food, consumables and the need to protect our magnificent natural assets.

In 1992, world leaders signed the “Convention on Biological Diversity (CBD)”, promising to take steps to conserve biodiversity and fairly share the benefits of biodiversity among people. China joined the CBD in 1993, and extended the CBD to Hong Kong in 2011. After 18 months of stakeholder engagement and deliberation, including public exhibitions and programmes, the Government has recommended four areas for action over the next five years. These proposals are described here; the next step is to receive public views.

Our Efforts, Achievements and Challenges

Much work has been done on managing our natural resources for conservation through decades of habitat and species protection. New partnerships between the Government, landowners and non-governmental organisations (NGOs) are coming to fruition and biodiversity is enhanced on the sites protected or managed for conservation. However, urbanisation impacts biodiversity. Economic growth and development demand land and resources. We must balance these needs with their impact on biodiversity. We need to find ways to support the sustainable use of biological resources in our long-term growth as a society.

Creating a Biodiversity Strategy and Action Plan (BSAP) for Hong Kong

Our Biodiversity Strategy and Action Plan (BSAP) will describe the priorities identified and actions to conserve our biodiversity. The plan will evolve, and it will involve everyone in our society. In the next five years, we propose to focus on the following four areas -

AREA 1

Conservation

continue to implement and enhance existing conservation measures



AREA 2

Mainstreaming

incorporate biodiversity considerations into planning and decision-making to achieve sustainable development



AREA 3

Knowledge

conduct biodiversity surveys and studies to fill knowledge gaps



AREA 4

Community Involvement

promote public awareness and knowledge of biodiversity among stakeholders and the public



Invitation for Comments

We wish to explore with all who have a stake in this city ways to take forward biodiversity conservation in Hong Kong for the benefit of the present and future generations. Your views on the proposed areas of action would be particularly important in making our first BSAP effective and achievable.



1 | Background

1.1 What is biodiversity?

“Biodiversity” is a word created from two words, “biological”, meaning living, and “diversity”, meaning variation. Biodiversity embraces the variety of genes, species and ecosystems that constitute life on earth. In summary, we use this word, “biodiversity”, to refer to different plants, animals and microorganisms, genetic information they contain and ecosystems they form.

Biodiversity is usually explored at three levels - genetic diversity, species diversity and ecosystem diversity. These three levels work together to create the complexity of life in the biosphere on earth.

BOX 1

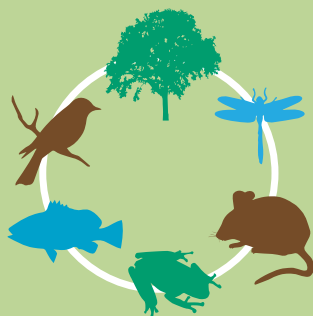
Three levels of biodiversity

1 Genetic diversity refers to the variety present at the level of genes. Genes carry the DNA of an organism. DNA determines all the physical characteristics of an organism, including how well it can live under different conditions. During reproduction, genes combine in different ways creating slight variation in the characteristics of the offspring. Thus, genetic diversity represents the ability of a species to adapt to changes in the environment over

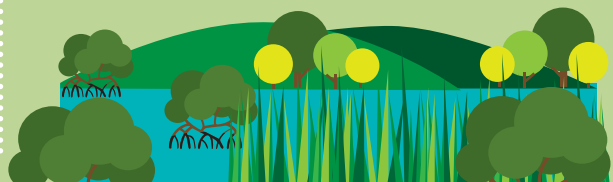
generations. If there are more slightly different combinations of genes in individuals of a species, then it is more likely that one of those combinations may adapt to the change, survive and reproduce. In other words, greater genetic diversity means greater chance of survival for the species when physical conditions change.



2 Species diversity means the number of different organisms in a habitat or a region. It includes every kind of plant and animal, from microbes in the soil to human beings. These species are related to each other in often complex relationships. They depend on each other for food, protection and shelter, making use of and contributing to nutrient, oxygen and water cycles.



3 Ecosystem diversity refers to the number of different communities of organisms and their interacting physical environments within a given area. Forest, grassland, seaside, mangrove—even urban area— all are different ecosystems. They have a specific physical environment, sea water, fresh water, hard rock or soft soil for example; and specific communities of plants and animals that interact with these environments and survive.



What are “ecosystems”?

“Ecosystem” refers to all the organisms and the physical and chemical environment of a particular place, and it embodies all the interactions of the living organisms with each other and with their surrounding environment. An ecosystem could cover a large area, such as a woodland, or a small area, such as a log. Thus, the meaning of the word is also dependent on the context: we may say there are ecosystems within ecosystems, just as a log is also part of a woodland.

1.2 Why is biodiversity important?

Biodiversity is important because it is a measure of how stable ecosystems are, particularly when physical conditions change. At the same time, biodiversity is more than plants, animals, microorganisms and their ecosystems – it is about people and our need for food security, medicines, fresh air and water, shelter, and a clean and healthy environment in which to live. This might not be immediately apparent. For example, the death of honeybees due to excessive use of chemicals on crops might not seem important or even relevant to city dwellers, until they realise that if bee colonies are collapsing and there are not enough pollinators to support food production, then they might not get any crops. Our health and wellbeing is completely dependent on the health and wellbeing of our ecosystems. Biological diversity underpins ecosystem functioning and every species in an ecosystem has a function, with their relationships complex yet delicate.

1.3 Why are we talking about this now?

People around the world are concerned about biodiversity because scientists notice an alarming deterioration in natural environments. They know how important biodiversity is to the health of life on our planet. People in Hong Kong are concerned about biodiversity because we have exceptionally attractive natural assets that we need to conserve, even as we continue to develop economically.

Today, Hong Kong is valued not only as a financial, commercial and logistics centre, but also as a place with magnificent natural assets and ample outdoor enjoyment opportunities, just a remarkably short distance from urban centres. We have extraordinary biodiversity for a city of this population size. This richness is a valuable asset and the fruit of decades of hard work (described more fully in Chapter 2). But, our biodiversity is facing great challenges today too. There is a tremendous need for land and financial resources to meet the housing aspirations of our citizens and to provide the infrastructure necessary for a global financial and commercial hub. We have a huge demand for food and consumables. We also have a significant ecological footprint like other major cities. If we want our magnificent natural assets to be passed on to our future generations and if we want those generations to have an even better life than we do now, we need to find pragmatic solutions that will achieve sustainable development and conserve our biodiversity.

“If we want our future generations to have an even better life than we do now, we need to find pragmatic solutions that will achieve sustainable development and conserve our biodiversity.”

1.4 What is being done: Convention on Biological Diversity

Nations around the world recognise the importance of biodiversity. At the “Earth Summit” in 1992 (Rio de Janeiro, Brazil), many countries signed the CBD. The Convention has three objectives: conservation of biological diversity, sustainable use of the components of biological diversity, and fair and equitable sharing of benefits arising out of the utilisation of genetic resources. It provides overall goals and general obligations to guide countries to implement the CBD. For example, Article 6 of the CBD provides that countries that have ratified the CBD should develop national strategies, plans or programmes for conservation and sustainable use of biodiversity or equivalent measures, or adapt existing ones for this purpose, according to their particular conditions and capabilities. To date, 196 countries and organisations have ratified or accepted the CBD, and become “Parties to the CBD”.

In 2010, Parties to the CBD adopted a *Strategic Plan for Biodiversity 2011-2020* with the aim of inspiring action in support of biodiversity over the next decade by all countries and stakeholders. The Strategic Plan is a ten-year framework consisting of a shared vision and mission, five general goals and 20 specific global targets. Each country was to, based on its conditions and what is feasible in the country, set goals and take actions to contribute to global efforts in halting the loss of biodiversity.

1.5 What is being done: China’s national BSAP 2011 – 2030

The People’s Republic of China joined the CBD in 1993. It updated its national BSAP in 2010 to identify strategic goals, tasks and priority areas for biodiversity conservation in China for the next two decades. It has also published five annual reports on its progress. The 200-page Fifth National Report was published in March 2014¹.

The Central People’s Government extended the CBD to the Hong Kong Special Administrative Region (HKSAR) in 2011.

1. Available through the CBD website: www.cbd.int

1.6 What is being done: A city-level BSAP for Hong Kong

While Hong Kong is not itself a Party to the CBD, as a world city and a part of China, we want to contribute to the achievement of global targets and China's national BSAP according to the particular conditions and capabilities of Hong Kong. We will also assist the Central People's Government in fulfilling its obligations under the CBD. At the same time, we are aware of other aspirations of the society to develop the city and to remain globally competitive.

It is against this background that the work on formulating the first city-level BSAP for Hong Kong began in 2013. By formulating a BSAP and re-visiting it after the first period of implementation, we aim at taking reasonable steps at a time to bring different minds in the society to better understand biodiversity conservation and how people can participate. In this way, the society as a whole can make wise choices to step up biodiversity conservation and support sustainable development.

We formed a steering committee on formulating the BSAP. Committee members have diverse backgrounds and expertise, including biodiversity experts, academics and representatives from professional bodies, rural communities, public and private sectors and relevant government departments.

The committee has made a set of recommendations for the Government to consider after 18 months of stakeholder engagement and deliberation (described more fully in Chapter 3). Based on these recommendations, views collected during public engagement activities held in the past two years, experiences of other city-level BSAPs and local circumstances, we have identified four areas for action in the next five years under the BSAP. These areas are: to conserve biodiversity; to bring considerations for biodiversity into planning and decision-making; to enhance knowledge about biodiversity and its importance; and to engage the public in implementing changes.

The next step is to receive public views on the proposals described herein. The Government's aim is to finalise the BSAP for Hong Kong as soon as practicable, for implementation in the next five years.

An aerial photograph of a large, winding reservoir, likely a dam, surrounded by dense green forest and mountains. The water is a vibrant turquoise color, and the surrounding land is covered in lush green trees. The reservoir has several small islands and peninsulas, creating a complex, meandering shape. The background shows more forested mountains under a clear blue sky.

2 | Our Efforts and Achievements

The Government, together with many individuals, societies and organisations in the community, has already achieved much in preserving Hong Kong's natural environment. These efforts lay a solid foundation for ongoing biodiversity conservation.

2.1 Efforts

The Government's past conservation work falls into ten categories, as described below.

2.1.1 Protection of natural landscapes and habitats

The Government works toward conservation objectives with a "habitat approach"; that is, it identifies valuable habitats and then protects them by law (parks and reserves) or by zoning (Sites of Special Scientific Interest).

Country parks and special areas: Since the 1970s the total area designated as country parks and/or special areas has nearly doubled. Today we have 24 country parks and 22 special areas, totalling 44 300 hectares, or about 40% of Hong Kong's total land area. About two-thirds of forests in Hong Kong are inside country parks. These forests include some with exceptionally high ecological and scientific value. Within these parks and areas, habitats are managed in a way to enhance their ecological and landscape value. Systematic thinning and enrichment planting are used to gradually replace aging exotic trees with native ones. Native species provide better habitats for native wildlife, and encourage a more diverse and stable ecosystem.

Marine parks and reserves: At present there are four marine parks and one marine reserve actively managed for conservation, education, research and/or recreation. These parks represent a total of 2 430 hectares of ecologically important marine habitats.

Hong Kong Global Geopark of China: Added to the UNESCO's Global Geoparks Network in 2011, the Geopark is a single entity composed of geo-areas and neighbourhood areas. The eight geo-areas of around 5 000 hectares are located in the Sai Kung Volcanic Rock Region and the Northeast New Territories Sedimentary Rock Region.



BOX 3

The New Nature Conservation Policy

Announced in 2004, the New Nature Conservation Policy (NNCP) sets out the current nature conservation policy framework in Hong Kong. The NNCP aims at “regulating, protecting and managing natural resources that are important for the conservation of biological diversity of Hong Kong in a sustainable manner, taking into account social and economic considerations, for the benefit and enjoyment of the present and future generations of the community.”

In 2015, the Chief Executive announced in his Policy Address that the Government is formulating the first BSAP for Hong Kong, to guide our actions in stepping up nature conservation and supporting sustainable development in the next five years.

Restricted areas: Human access to three ecologically important wildlife habitats is strictly controlled to minimise disturbance. These habitats are the Yim Tso Ha Egrettry, an important nesting site of egrets and herons; the Sham Wan Beach on Lamma Island, the only regular nesting site of the endangered Green Turtles known in Hong Kong; and the Mai Po Marshes, an important over-wintering and refuelling site for migratory water birds.

Sites of Special Scientific Interest (SSSIs): In general, SSSIs are important and representative examples of specific habitats in Hong Kong. To date, 67 sites are listed in this category. The listing is an administrative measure to ensure government departments would consider conservation carefully when development is proposed within or near these sites. Some legislation refers to this list, which protect SSSIs. For example, the Environmental Impact Assessment Ordinance provides that any major development to be carried out within or near any existing or planned SSSI would potentially be a “designated project” and will have to meet a set of statutory requirements.





BOX 4

Mai Po Marshes and the Inner Deep Bay region

The Mai Po Marshes, together with the Inner Deep Bay region, have been listed since 1995 as a Ramsar Site, i.e. a Wetland of International Importance. Every year, this piece of 1 500-hectare wetland serves as an important over-wintering and refuelling station for 50 000 to 80 000 migratory water birds including 49 globally-threatened species. The site is divided into four management zones, each with specific management objectives. In addition, the use and development of areas in and around this Ramsar Site is restricted by law to protect its ecological integrity. The Government has also covered this and the nearby area with statutory plans and Town Planning Board Guideline has been issued to further ensure that any development of the surrounding area is compatible with the conservation of the wetland habitats.

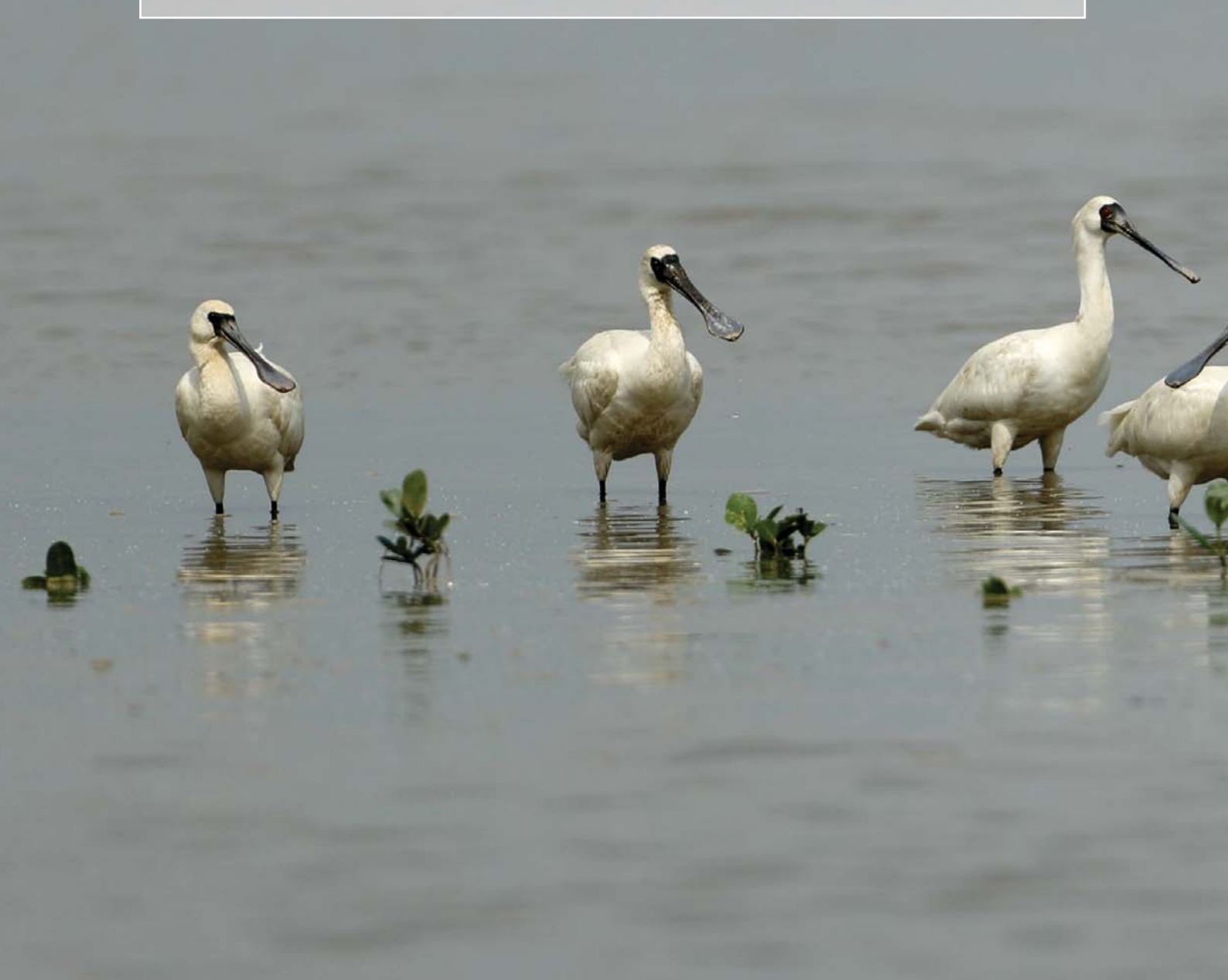
BOX 5

Black-faced Spoonbill (*Platalea minor*) Species Action Plan

With a world population of only about 3 000, the Black-faced Spoonbill (BFS) is classified as “Endangered”. Endemic to East Asia, it is a migratory species that utilises mudflats, marshes, fishponds and mangroves. Hong Kong’s Deep Bay area has been one of its major over-wintering grounds.

The conservation plan for BFS comprises law enforcement, monitoring, habitat management and protection and education. The AFCD provides

financial support to the World Wide Fund for Nature Hong Kong to manage the wetland habitats in the core area of the Ramsar Site where the species roosts and feeds. During the winter, the AFCD monitors and assesses the BFS population, and participates in the annual global census of the species. The Hong Kong Wetland Park offers awareness and education programmes to let the public learn about this remarkable and beautiful species.





2.1.2 Species conservation

Protection of individual species directly contributes to biodiversity conservation. The Agriculture, Fisheries and Conservation Department (AFCD) seeks to conserve and protect wild plants and animals—particularly native species through laws, monitoring, species recovery programmes, and control of invasive alien species.

Legislation:

1	Forests and Countryside Ordinance prohibits destruction of trees and plants in forests and plantations on government land, and possession of listed plant species.
2	Wild Animals Protection Ordinance prohibits hunting, possession of hunting appliances and possession of listed protected wild animals taken in Hong Kong.
3	Protection of Endangered Species of Animals and Plants Ordinance regulates the import, export, possession and control of endangered species of animals and plants or their parts and derivatives through licensing and enforcement.
4	Genetically Modified Organisms Ordinance controls the release of genetically modified organisms within Hong Kong's borders and their trans-boundary movement.

Practices:

1	Species monitoring The AFCD has been operating a territory-wide long-term Biodiversity Survey Programme since 2002, covering different habitats, monitoring the conditions of important plant communities and more than 1 200 species of animals. The data collected are analysed and used to identify priority areas and species that may need conservation.
2	Species-specific action plans A multi-pronged approach, including on-site/off-site measures, monitoring, research and education, is used to support the survival of targeted species or species of conservation concern.
3	Control of invasive alien species Foreign, non-native species of both plants and animals can become invasive, threatening to take over a habitat. They can endanger the survival of native species and/or pose public health concern. Hence, the Government has implemented an integrated suite of measures to control their import and, in particular, to prevent them from invading ecologically sensitive areas.



BOX 6

MA Scheme in Long Valley and Ho Sheung Heung Priority Site

The Conservancy Association and the Hong Kong Bird Watching Society have been managing this 15-hectare site since 2005 under the MA Scheme. They have adaptively managed the site with respect to the specific habitats present, and have also worked with local villagers and farmers to organise workshops and eco-tours, educating both the public and local people about wetland conservation.

2.1.3 Partnerships with public and private organisations

Together with the announcement of the New Nature Conservation Policy in 2004, the Government has identified 12 **Priority Sites for enhanced conservation**, and adopted the following measures to enhance conservation on these Sites while respecting landowners' property rights:

Public-Private Partnership (PPP) Scheme: Under this Scheme, a private party is allowed to develop an ecologically less sensitive portion of one of these Priority Sites if they agree to conserve and manage the remainder of the site, on a long-term basis.

Management Agreement (MA) Scheme: Under the MA Scheme, a non-profit-making organisation can apply for funding from the Environmental Conservation Fund (ECF), make use of the fund to enter into agreements with landowners and take up the management right of a Priority Site for the purposes of enhancing conservation and education. So far, four sites are being managed under this arrangement.



BOX 7

Conservation education at Hong Kong Wetland Park

The 61-hectare Hong Kong Wetland Park has a wide range of habitats, such as mangroves, inter-tidal brackish mud flats, freshwater marshes, reed beds and woodlands, connected by footpaths and boardwalks for visitors to experience the habitats themselves.

In addition, the Park's 10 000 m² Visitor Centre features thematic, interactive exhibits showing the values and characteristics of wetlands, their functions, cultural importance, as well as threats and challenges.





2.1.4 Communication, education and public awareness

Successful conservation depends on community support. Thus, the Government has continuously invested in educating the public, particularly within schools, and raising public awareness.

Communication, Education, Participation and Awareness (CEPA) programmes offer educational programmes and materials that promote the understanding of the importance of biodiversity conservation and complement the local secondary school curriculum. The AFCD has produced ready-for-use educational kits for teachers and students.

Educational facilities: The AFCD has created informative and interactive educational facilities within country parks. In addition, it organises projects and activities to educate the public and engage the community in conservation work.

Wetland Link International (WLI): Hong Kong has actively participated in WLI² to enhance exchange of knowledge and develop educational and public awareness programmes.

2. Find out more about Wetland Link International: <http://wli.wwt.org.uk/>

2.1.5 Sustainable fisheries and agriculture

The Government has been taking measures to facilitate development of sustainable fisheries and agriculture according to the particular circumstances in Hong Kong.

Fisheries: The overall goal is to promote sustainable fisheries and aquaculture while protecting fisheries resources under the prevalent circumstances. The efforts have been three-pronged. First, the **Fisheries Protection Ordinance** bans fishing practices that may cause irrevocable damages to the marine ecosystem, such as fishing with explosives, toxic substances, and electricity as well as trawling, dredging and using suction devices. Second, **artificial reefs** have been deployed in suitable habitats. These reefs are proven attractive to over 220 species of fish including groupers, snappers and sweetlips. Finally, in 2012, the AFCD introduced a host of measures including a **ban on trawling** in Hong Kong waters and a cap on the overall number and engine power of fishing vessels in Hong Kong with a view to addressing the overfishing problem and facilitating the recovery of local stock of fish. Preliminary surveys indicate signs of recovery of fisheries resources in certain parts of Hong Kong waters.





Agriculture: The AFCD has been providing support to local agriculture sector to develop modern and environmental-friendly farming technologies with emphasis on preservation of natural resources and the agricultural ecology. For instance, the AFCD has been assisting farmers in switching to organic farming by setting up independent certification services and providing technical and marketing support. At the end of 2015, there are 266 organic farms in Hong Kong, supplying 6 tonnes of organic produce daily. Other environmental-friendly agricultural practices are also promoted to reduce the sector's impacts on the environment/biodiversity.

2.1.6 Land use planning and planning control and environmental impact assessment

The “Hong Kong 2030: Planning Vision and Strategy”, promulgated in 2007, provides for a broad land use planning framework for our city to grow sustainably. In this territorial development strategy, areas with conservation value were identified to be protected from intrusion of urban development, while other areas with development potential avoiding areas of higher conservation value are identified to accommodate Hong Kong's sustainable growth. The Government regulates development through legislation and administrative measures. The Town Planning Ordinance provides for the designation of ecologically sensitive areas as conservation zones on statutory plans in order to protect them against

incompatible developments, and it empowers the planning authority to take enforcement actions against unauthorised developments. The Environmental Impact Assessment Ordinance provides a mechanism for ensuring that the potential ecological impact of designated projects are avoided or mitigated at the project planning stage. In addition, there are administrative ways to address potential ecological concerns due to minor works or projects.

2.1.7 Sustainable development

The Government is committed to working in partnership with the community to create a society that thrives, both today and in the future, and that respects its neighbours' ability to do the same, having regard to local circumstances. Such concept is sustainable development. In 1999, the Chief Executive said that, for Hong Kong, sustainable development meant finding ways to:

- i) increase prosperity and improve the quality of life while reducing overall pollution and waste;
- ii) meet our own needs and aspirations without damaging the prospects of future generations; and
- iii) reduce environmental burdens on our neighbours and help preserve common resources.

Since 2001, all governmental bureaux and departments have been assessing, at the planning stages of new strategic initiatives or major programmes, the impact that the proposed initiatives or programmes would have on environmental, social and economic conditions of Hong Kong. Through these assessments, sensitive areas are being identified, and related issues are being addressed.

2.1.8 “Greening” urban ecosystems

Through plans, projects, technical guidelines and assessment tools, government departments are gradually restoring green spaces to the urban landscape throughout Hong Kong. These efforts are not only improving environmental quality, but will progressively improve habitats and enhance the biodiversity of our city spaces.

The Civil Engineering and Development Department (CEDD) has been implementing **Greening Master Plans (GMPs)** for all urban areas. These Plans, unique for each district, guide planting along infrastructures or premises, for example, roadsides, footbridges, flyovers and promenades.

In the planning of New Development Areas, various greening initiatives would be introduced to enhance biodiversity. Opportunities would be taken in revitalisation of water bodies, and creation of **blue-green infrastructure**.

The CEDD also uses **native species** in accordance with the guidelines stipulated in the Geotechnical Engineering Office Publication No. 1/2011 for providing vegetation covers on man-made slopes and natural hillsides that are dealt with under the Landslip Prevention and Mitigation Programme. Native vegetation species provide habitats for birds and insects, which in turn enhance biodiversity, natural succession and sustainability of slope vegetation covers.

The Drainage Services Department (DSD) has been proactively and creatively **enhancing drainage works** with wildlife-friendly designs and appropriate plantings to restore habitats for wildlife. They have created wildlife-friendly

A photograph of a well-maintained urban park. In the foreground, there is a large, circular, low-lying green bush. Behind it, a variety of trees with dense green foliage are visible. A paved path curves through the lower right corner. The overall scene is bright and verdant, representing a green space in an urban environment.

“Government departments are gradually restoring green spaces to the urban landscape throughout Hong Kong to improve environmental quality and habitats, and enhance the biodiversity of our city spaces.”



BOX 8

DSD plants mangroves along Kam Tin River

Mangroves are planted along the bank of Kam Tin River to make them compatible with and to enable them integrate into the surrounding natural environment. They even become habitats to Great Egrets and many other water birds.

features in drainage channels such as in-stream refugia and fish ladders. In 2012-13, the DSD planted more than 3 300 trees and 560 000 shrubs, and provided an additional 3 200 m² of green roofs for pumping stations and sewage treatment plants.

Technical guidelines and assessment tools have been created to ensure new building projects will support biodiversity.

- **Sustainable Building Design (SBD) Guidelines:** to foster a quality and sustainable built environment in Hong Kong, since 2011, compliance with the SBD Guidelines and requirements on building separation, building setback and site coverage of greenery³ to facilitate ventilation and mitigate heat island effect has become part of the prerequisites for new private building developments to be eligible for gross floor area concessions for green and amenity features or non-mandatory and non-essential plant rooms and services.

3. The Guidelines requires new building developments with site areas of 1 000 m² or more to provide 20% (or 30% for larger sites) minimum site coverage of greenery at the pedestrian zone, communal podium roof / flat roof / main roof, slope and retaining structure, etc.

- **BEAM Plus certification:** in addition, satisfactory project registration and submission of final BEAM Plus certification results are also required for new private building developments to be eligible for gross floor area concessions stated above. BEAM Plus is a green building certification mechanism in Hong Kong that assesses a structure using a set of criteria specifying how it should be designed, constructed and operated to make it sustainable. The BEAM Plus certification assesses, among other issues, the impact of development on freshwater and groundwater systems and potential change to green space on the site.

The **Zero Carbon Building**, built in 2012, is one of the recent projects aiming at operating with zero carbon footprint and raising awareness on low-carbon living⁴. The Building has a 2 000 m² urban native forest, comprising approximately 13% of the site area. More than 220 native trees of 40 species were planted in a way to mimic a native woodland. The urban native forest has already reduced the building's heat island effect and is expected to establish a vibrant and natural ecosystem.

2.1.9 Pollution Control

To safeguard water quality in Hong Kong's freshwater and marine habitats, the Government is concerned with four aspects: sewerage, chemical waste, improper discharge and marine refuse.

Sewerage: About 93% of the population is now served by the public sewerage system ensuring raw sewage is collected for proper treatment before being discharged to the marine environment. The Government also has plans to extend the sewerage system to other unsewered villages.

Chemical waste: The implementation of a "cradle-to-grave" chemical waste control scheme under the Waste Disposal Ordinance, together with the changes in industrial activities in the past decades have significantly reduced the amount of potentially toxic substances released into the freshwater and marine environment.

4. Built in 2012 in the Kowloon Bay district by the Hong Kong Development Bureaux in partnership with the Construction Industry Council, it is the first building in Hong Kong that completely offset its carbon footprint using renewable energy.

Improper discharge: Discharge of polluted matters is subject to enforcement control under the Water Pollution Control Ordinance, the Waste Disposal Ordinance and the Dumping at Sea Ordinance, ensuring all discharges or deposits are properly made in accordance with the specified requirements.

Marine refuse: The Government is also concerned with keeping the shorelines clean. An Inter-departmental Working Group on Clean Shorelines was set up in November 2012 to coordinate the efforts made by government departments to tackle marine refuse issues through closer collaboration as well as joint Government and community efforts. In light of the findings of a Marine Refuse Study published in April 2015, the Working Group member departments are implementing enhanced measures to improve shoreline cleanliness.

2.1.10 Reducing greenhouse gases and climate adaptation

Climate change leads to serious consequences including higher frequency of extreme weather events, which threaten lives and damage infrastructure. Climate change mitigation will help protect us and our biodiversity. One way to do so is to cut down our greenhouse gas emissions. In this regard, the Government is taking steps to reduce carbon intensity by 50% to 60% by 2020 when compared with the 2005 level. To cut back its greenhouse gas emissions, Hong Kong has also set a target to reduce energy intensity by 40% by 2025 as compared to 2005 level. The Government is considering setting new climate change related targets. The Government has already taken considerable actions on climate adaptation, such as flood and landslide prevention, and used bio-remedial methods where appropriate⁵.

5. Find out more about climate adaptation in Hong Kong:
<http://www.enb.gov.hk/sites/default/files/pdf/ClimateChangeEng.pdf>

2.2 Our achievements

Our continuous dedication in nature conservation has yielded encouraging results—particularly in terms of biodiversity.

Today, about **40%** of land in Hong Kong is under statutory protection for nature conservation and countryside recreation.



>98% of local terrestrial wildlife is represented in our protected areas.

Species found in China are recorded in Hong Kong:



35%
birds



20%
reptiles



15%
freshwater fish



15%
dragonflies



11%
butterflies

More species are found in Priority Sites managed under the MA Scheme.

Since 2005:

The total number of bird species recorded around Long Valley has



>35%



The total number of butterfly species recorded in Fung Yuen SSSI has:



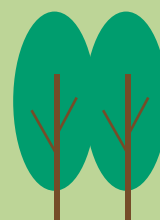
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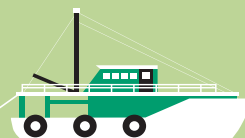
Spending a day in a country park is regarded by many as one of the best recreational choices, Country Parks received

>11 million

visitors every year in the last decade.



The ban on trawling in Hong Kong waters and a suite of management measures have come into effect starting from 2012, thereby stopping damage to seabed by fisheries activities and conserving fisheries resources.





3 | The Proposed Hong Kong's First Biodiversity Strategy and Action Plan (BSAP)

3.1 Background

What it is: Our Biodiversity Strategy and Action Plan (BSAP) will create strategies and set out actions to conserve our biodiversity and support sustainable development in the next five years. The plan will evolve. Changing conditions and experiences gained will be taken into account when the plan is updated after five years. The plan will involve everyone in our society: the Government, the commercial sector, non-profit-making organisations, interested groups, youth and adult groups, and schools from primary to university level. All of us have a stake in preserving our natural environment that sustains our life and brings us beauty and pleasure.

Collecting inputs across Hong Kong: Work on a city-level BSAP began in 2013 when the Government created a three-tier advisory committee (Figure 1). The committee includes biodiversity experts and academics, as well as representatives from NGOs, professional bodies, universities, rural communities,



private and public sectors, and relevant government bureaux and departments. The committee has identified priority issues and makes recommendations on the terrestrial and marine biodiversity in Hong Kong, as well as on raising awareness and mainstreaming biodiversity across the society. Public views and participation are also actively sought.



Two invited discussion sessions (7 and 14 June 2014) were held, attended by

117 participants from
48 organisations



A website⁶, a YouTube channel and a Facebook page have been set up.

A series of **10** public lectures was held in the Hong Kong Science Museum and other venues, and was well attended.

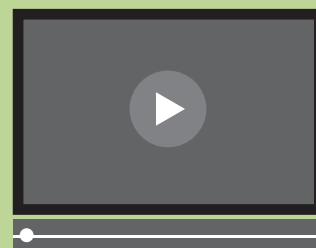


A three-month Hong Kong Biodiversity Festival was organised in August 2015 involving 20 partner organisations including NGOs and universities. The first Biodiversity Carnival was held in Kowloon Park to showcase biodiversity in the centre of the city. Over

160 000 persons joined the workshops, eco-tours, seminars and exhibitions.



Promotional short videos were publicly broadcasted, and roving exhibitions were placed throughout the city.



6. The BSAP webpage is at <http://www.afcd.gov.hk/bsap>



At the same time, government bureaux and departments continue to explore ways for further collaboration among themselves to foster biodiversity conservation for sustainable development.

After 18 months of thorough discussion, the committee has made a set of recommendations on the first BSAP of Hong Kong. The full set of the committee's recommendations can be found at www.afcd.gov.hk/bsap.

3.2 The proposed Hong Kong's first Biodiversity Strategy and Action Plan

Preamble

The Government is committed to developing a city-level BSAP with a view to stepping up conservation efforts and supporting the sustainable development of Hong Kong in the next five years. The first BSAP will facilitate the implementation of the CBD, enhance nature conservation and help achieve sustainable development of our city.

The Government has carefully and thoroughly considered the steering committee's recommendations, views collected during public engagement in the past two years, experiences of other city-level BSAPs and Hong Kong's needs and priorities. Taking into account the prevalent circumstances in Hong Kong and the fact that it is a city-level BSAP, the Government believes that under the BSAP, our efforts should focus on enhancing our existing strengths, mainstreaming biodiversity, increasing the understanding and engaging different sectors in the dialogue and actions. Being the first BSAP created for Hong Kong, we consider that the top priority should be to focus on mainstreaming biodiversity so as to cultivate an enabling environment. To this end, we do not intend to initiate major changes at this stage, such as changing existing policies and legislation. By proceeding progressively and deliberately, we can build up the necessary public support and understanding of biodiversity so as to ensure that our efforts will be effective and efficient in the long term.

The primary objective of Hong Kong's first BSAP is to:

- a) **Contribute to the Global Effort on Biological Diversity:** being an international city and part of the global and regional ecosystem, Hong Kong has a role to play in global efforts on biodiversity. Though there is no obligation under the CBD for the HKSAR to formulate a city-level BSAP⁷, the Government wishes to develop Hong Kong's first city-level BSAP according to Hong Kong's own conditions and capabilities with a view to contributing to global efforts on biological diversity. The Secretariat of the CBD has advised that the city-level BSAP should be practical, so that people will see results and are willing to support.

7. Under the CBD, it is up to the Party to the CBD to consider as appropriate the development and implementation of subnational and local biodiversity strategies and action plans in support of national strategies and action plans.

BOX 9

China's National BSAP

China announced its first National BSAP in 1994 after joining the CBD in 1993. In 2010 it published an update to its national BSAP for the next two decades in China's National Biodiversity Strategy and Action Plan (2011-2030). The 100-page document sets forth four foci: biodiversity conservation, sustainable use of biological resources, public participation, and the fair and equitable sharing of benefits arising from the use of genetic resources and traditional knowledge.



- b) Contribute to China's National BSAP:** Article 6 (a) of the CBD provides, inter alia, that each Party to the CBD shall, in accordance with its particular conditions and capabilities, develop national strategies, plans or programmes for conservation and sustainable use of biological diversity. The HKSAR is not a Party to the CBD on its own. That said, with the CBD being extended by the Central People's Government to the HKSAR, the HKSAR Government has to assist the Central People's Government in fulfilling its obligations under the CBD insofar as the HKSAR is concerned. The China's National BSAP (see Box 9) provides strategic guidance for conservation of biodiversity in China. As part of China, Hong Kong will take into account its local needs and priorities and formulate its BSAP to contribute to national efforts on biological diversity.

In formulating the Hong Kong's first BSAP, the Government has taken into account the objectives and principles of the CBD and local needs, economic and social priorities as well as aspirations of the people. We will emphasise conservation of specific species and habitats in major government policies.

We appreciate the importance of ecosystem functioning, ecological connectivity and the provision of ecosystem services. We also appreciate Hong Kong's rich biodiversity and the importance of proper planning, designation and management for biodiversity conservation. We believe that education and public awareness is the cornerstone of conservation and sustainable use of biodiversity. We recognise the contributions of various stakeholders from different sectors to the development and implementation of the Hong Kong's BSAP.

Proposed Vision and Mission

Taking account of the committee's recommendations and in accordance with the particular conditions of Hong Kong, we propose the following vision and mission for the Hong Kong's BSAP:

Vision

“The rich biodiversity of Hong Kong is valued, conserved, restored, sustainably managed and wisely used, thereby maintaining essential ecosystem services, sustaining a healthy and liveable place and delivering benefits for all people.”

Mission

“Our mission is to value, conserve and restore the rich biodiversity of Hong Kong, to ensure that it is sustainably managed and wisely used, and to promote the mainstreaming of biodiversity issues and values across all sectors of the society, with social and economic aspects duly considered and balanced, so that ecosystems are resilient and continue to provide essential services, and the precious environment that supports and enriches the life of Hong Kong people is passed on to future generations.”

A photograph of a small, spotted piglet standing in a grassy field. The piglet has brown and white stripes and is looking towards the right. The background is a soft-focus green field.

“The rich biodiversity of Hong Kong is valued, conserved, restored, sustainably managed and wisely used, thereby maintaining essential ecosystem services, sustaining a healthy and liveable place and delivering benefits for all people.”

“Our mission is to value, conserve and restore the rich biodiversity of Hong Kong...so that the precious environment that supports and enriches the life of Hong Kong people is passed on to future generations.”



Proposed Action Areas

Following the CBD's guidance and taking into consideration the recommendations of the committee, stakeholders' views and local circumstances, we propose four major areas to be considered as a framework for our first BSAP. These areas are:

AREA 1 **Conservation**

continue to implement and enhance existing conservation measures



AREA 2 **Mainstreaming**

incorporate biodiversity considerations into planning and decision-making to achieve sustainable development



AREA 3 **Knowledge**

conduct biodiversity surveys and studies to fill knowledge gaps



AREA 4 **Community Involvement**

promote public awareness and knowledge of biodiversity among stakeholders and the public



3.3



Action Area 1 Conservation

Intention

Continue to implement and enhance existing conservation measures that maintain and support biodiversity.

Rationale

Among cities in Asia with a similar size and level of development, our dedicated efforts through the years have yielded very positive results both in terms of the share of areas protected for nature conservation as well as the level of biodiversity. To keep up our existing conservation measures would mean that we would continue to evolve in response to changing environmental and other challenges.

Possible actions

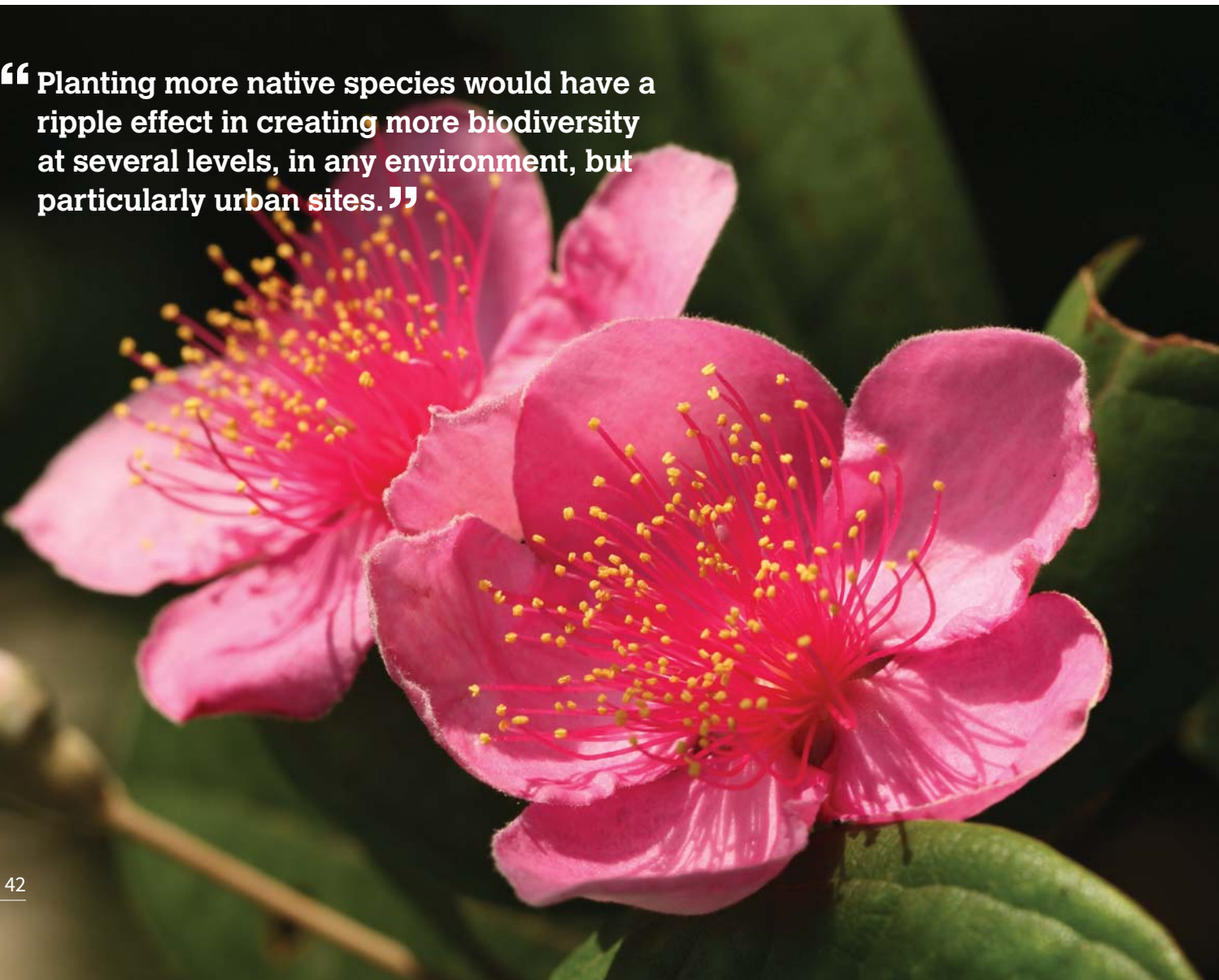
Habitat protection: Protection of specific geographical areas is a well-recognised method for safeguarding biodiversity, and it has been successfully used in Hong Kong, for example, in the designation of country and marine parks.

- While maintaining existing protected areas, we are planning to pursue new country/marine parks, including the Brothers Marine Park, the Soko Islands Marine Park, the Southwest Lantau Marine Park and the Robin's Nest Country Park, as well as a nature park at Long Valley under the Kwu Tung North and Fanling North New Development Areas project.
- We would designate fisheries protection areas to protect important fish spawning and nursery grounds, as well as to manage fisheries resources in an effective and sustainable way.
- We would enhance our management of protected areas through developing/reviewing management plans. We would also enhance conservation of ecologically important sites, in particular natural streams and rivers.

Species protection: We would continue to use the existing administrative and legislative approaches to ensure our local biodiversity is conserved. We would also implement ongoing species conservation measures and species action plans, such as those for Black-faced Spoonbill (see Box 5), Romer's Tree Frog, and Chinese White Dolphin. In addition, we would seek to protect more species of conservation concern, especially those that are highly endangered or of particular ecological value.

Planting native species: Since native plant species are generally more adapted to the local environment and more valuable within the ecosystem, as sources of food and habitats for wildlife, we would plant more native species in urban areas as well as in the countryside and country parks. This would have a ripple effect in creating more biodiversity at several levels, in any environment, but particularly urban sites.

“Planting more native species would have a ripple effect in creating more biodiversity at several levels, in any environment, but particularly urban sites.”



3.4



Action Area 2 Mainstreaming

Intention

Incorporate biodiversity considerations into planning and decision-making across the society, in public and private sectors, to achieve sustainable development.

Rationale

To “mainstream biodiversity” means to include conservation as a consideration in plans made at every level and, in every sector of society. It is not about creating parallel or artificial processes and systems. It is about integrating biodiversity into existing structures, processes and systems. It is a long-term and complex process that requires sustained efforts on several fronts. The Government plays a role, but participation of organisations and individuals is even more important. Under the first BSAP, the Government would continue to incorporate biodiversity considerations into its plans, projects and programmes according to the particular situations in Hong Kong. At the same time it would aim to cultivate an enabling environment for effective mainstreaming and to share lessons learnt with other sectors.

Possible actions

Planning and decision-making: As described in Chapter 2, the Government has been taking biodiversity into consideration in its decision-making and operation. We would continue these efforts.

- **HK2030+: Towards a Planning Vision and Strategy Transcending 2030:** We would incorporate biodiversity considerations in updating the territorial development strategy, which examines the strategies and feasible options for overall spatial planning as well as land and infrastructure development for Hong Kong beyond 2030.
- **Hong Kong Planning Standards and Guidelines (HKPSG):** Biodiversity considerations will be considered for inclusion in the HKPSG, which is a government manual of criteria for determining the scale, location and site requirements of various land uses and facilities, as appropriate. The HKPSG applies to planning studies, and preparation/revision of town plans and development projects.

Works implementation: On the technical front, we would increase consideration of biodiversity in works projects particularly those involving freshwater areas.

- In carrying out large-scale drainage improvement works and drainage planning for new development areas, we would adopt the concept of revitalising water bodies to promote biodiversity and habitat at river channels; and use ecologically friendly measures.
- In New Development Areas, greening and conservation initiatives would be implemented in tandem with infrastructure works. Consideration would also be given on revitalisation of water bodies and creation of blue-green infrastructure to enhance the environment and biodiversity.
- To enhance the integration of biodiversity into environmental hygiene works at rivers and streams, we would prepare/revise guidelines on these works with a view to minimising the ecological impacts.
- Together with the Water Supplies Department, we would explore feasible designs and maintenance measures for irrigation reservoirs and water catchment channels that are more wildlife friendly.

“Connector” education: We would encourage professional bodies or frontrunners of various sectors of the economy to introduce to their partners the linkages between sustainable development and biodiversity, and to share knowledge about how sustainable operation that can lead to better economic performance, social responsibility and environmental benefit. For example, in landscaping, there is a great opportunity to include native species in their projects, thereby enhancing biodiversity. The Zero Carbon Building (see Chapter 2) demonstrates how native biodiversity can be incorporated into a building project.

Public awareness: Measures described under Action Area 4 – Community Involvement will help mainstream biodiversity. The more people in Hong Kong understand what biodiversity means to them, to Hong Kong, and to the planet, the more quickly, easily, efficiently and creatively will biodiversity considerations become an integral part of planning and decision making in every sector.



Action Area 3 Knowledge

Intention

Conduct biodiversity surveys to monitor the status of local biodiversity and studies to increase our understanding.

Rationale

Knowledge is critical to good decision-making. It ensures right decisions are made at the right time, and our resources are effectively used to bring the outcomes we want. Surveys will tell us what the situation is; studies will probe the correlations and help reveal the causes and effects. Evidence and logical arguments will help us communicate effectively and act appropriately.

Possible actions

Monitoring: Long-term surveys are necessary to track status and trends of species and habitats. We would continue to conduct territory-wide biodiversity surveys on target groups of plants and animals.

Public database: We would endeavour to consolidate the data that is currently scattered — collected and held by different parties and organisations — and make it widely available in a publicly accessible database or platform.

New initiatives: We believe that the consolidated information will suggest new initiatives. For example, the data may point out species or habitats that need conservation, or reveal the distribution of valuable sites within a geographical area. Or it may give information on invasive alien species that should be controlled.

Research gaps: In working on the BSAP, we have identified major gaps in our knowledge. These relate to ecosystem services, keystone or functionally important species, fisheries resources and fishing activities as well as traditional knowledge. We would encourage relevant institutions to begin commissioning research on these important topics.

BOX 10

Existing funding support

Environment and Conservation Fund (ECF):

Established in 1994, it is one of the Government's long-term commitments to environmental protection and conservation. It has supported over 4 000 education, research, and projects run by local NGOs. The Government will continue to support studies related to biodiversity conservation through ECF funding. In fact, "Biodiversity Studies and Conservation" is already one of the priority research themes for the ECF.

Sustainable Development Fund (SDF):

In 2003, the Government set up a \$100 million SDF to provide financial support for initiatives that will help enhance public awareness of sustainable development and encourage sustainable practices. As at end of 2015, a total of \$63.9 million was approved for 63 projects with the objectives of, inter alia, building a sustainable community, promoting sustainable lifestyle or practice and encouraging sustainability reporting.

Ad hoc studies commissioned by the

Government: Various government departments have commissioned ad hoc studies on conservation and sustainable use of biological resources by academic researchers, consulting firms and appropriate NGOs on an as-needed basis. These studies collect the baseline status and information

on the distribution of habitats and species, analyse the appropriate monitoring and management strategies targeting environmental stressors, and investigate the feasibility or effectiveness of habitat enhancement measures.

University Grants Committee (UGC):

The UGC is a non-statutory advisory committee responsible for advising the Government on the development and funding needs of higher education institutions in Hong Kong. Other than providing block grants to UGC-funded institutions, it supports academic research through supporting research postgraduate places at an annual cost of \$1.4 billion. In addition, the Research Grants Council operating under the UGC, with an annual earmarked allocation of about \$770 million per year, invites and approves funding applications for academic researches submitted by UGC-funded institutions.

Philanthropic Foundations: Hong Kong has a large number of private grant-making bodies which have a significant role in the social life of the society. Some of these have longstanding interest to fund both formal education projects, as well as general public education campaigns. Some foundations have provided generous support to NGOs to conduct environmental and conservation work.

Coordinate research and funding: At present, a number of local NGOs and academics are conducting studies and research on topics related to biodiversity. At the same time, there are funding sources relevant to biodiversity that could be, but may not have been, tapped (see Box 10). We would explore ways both to coordinate research and to connect funding sources with projects so that limited resources can be directed to the highest priority areas.

3.6



Action Area 4 Community Involvement

Intention

Promote public awareness and knowledge of biodiversity so as to gain public support and involvement at every level, in every sector.

Rationale

Appreciation of the importance of biodiversity generates the will to conserve it. Knowledge then informs action, guiding people to take appropriate actions that conserve biodiversity. Raising public awareness and understanding is an important area of focus in our first BSAP. Every sector of society can contribute. A person, or an organisation, or a business's success can encourage others to do the same. Thus, we expect to develop community involvement on a long-term and collaborative process.

Possible actions

Biodiversity education network: In 2015, the Environment Bureau and the AFCD, in partnership with 20 organisations including universities and NGOs, launched a three-month festival that brought biodiversity to people's attention through exhibitions, guided tours, workshops and online promotions. We would build on this network and engage more partners in promoting biodiversity to the public.

Museum exhibition: In bringing the topic of biodiversity and conservation into city centres and "closer" to the public, the Government would set up and curate a permanent exhibition on biodiversity in the Hong Kong Science Museum.

Agriculture and fisheries support: Agricultural and fisheries practices could have significant impact on the ecosystem and hence have a key role in biodiversity conservation. We would work to promote environmental-friendly practices in both sectors through education and ongoing support for local farmers and fishermen.

BOX 11

Sustainable consumption of biological resources

Sustainable consumption of biological resources is one of the key aspects of sustainable development. To this end there is worldwide recognition that promoting sustainable procurement and consumption practices is an effective policy tool. The Council for Sustainable Development is planning a public engagement on promotion of sustainable use of biological resources. This will provide a bottom-up, stakeholder-led platform to raise public awareness as well as to solicit views from the community to promote sustainable use of biological resources.







“Raising our children with awareness and appreciation of the beauty and importance of nature will ensure that future generations will have the will and knowledge to carry on our conservation efforts.”

School programmes: Raising our children with awareness and appreciation of the beauty and importance of nature will ensure that future generations will have the will and knowledge to carry on our conservation efforts. While biodiversity is included in a number of school curricula in General Studies, Geography, Science (Secondary One to Three) and Biology, we would explore with a view to continuously incorporating the concept of biodiversity into the formal school curriculum at both primary and secondary levels with equal importance accorded to knowledge, skills, values and attitudes, and providing capacity building opportunities for teachers. We would encourage and create opportunities for experiential learning, guided field trips and volunteer work in outdoor settings.

Business and professional sectors support: We need partners in the business and professional sectors. In our initial communication with representatives from these sectors when developing BSAP, we learned that they want to contribute but don't quite know what to do or how to do it. In light of this, we would develop and create ways to provide the knowledge they need and to collaborate in designing and implementing programmes.

4 | Invitation for Comments



Hong Kong's BSAP would touch upon a very wide range of issues. It is relevant to every citizen. Your participation is essential to biodiversity conservation. Your views and suggestions are essential for creating a BSAP that you will participate in.

Chapter 3 sets out the directions proposed to be included in the first BSAP for Hong Kong. This BSAP will be in effect for five years. After the five-year period, we would assess how well it has worked, and then update the BSAP as appropriate for moving forward.

What do you think?

Here are some specific questions to consider:

1	How important do you think biodiversity is, in comparison with other concerns facing our society?
2	How should we balance the needs of people (for example, adequate housing, job opportunities or food) with the needs of the ecosystem?
3	In relation to proposed Action Area 1 (Conservation): Conservation measures in Hong Kong have yielded some positive results. With regard to our programme so far launched, what do you think are its strengths? How could it be improved?
4	In relation to proposed Action Area 2 (Mainstreaming): The Government currently tries to incorporate biodiversity considerations into its plans and policies. Under this BSAP, it would try to encourage other sectors to do the same. Which sectors are more ready to do this? Which sectors need the most support in adopting biodiversity considerations in their work?
5	With reference to proposed Action Area 3 (Knowledge): We have identified various gaps in our knowledge of biodiversity in Hong Kong. We need to fill them to facilitate stakeholders in making informed decisions. In your opinion, which of these gaps should we focus on in the coming five years?
6	With reference to proposed Action Area 4 (Community Involvement): The Government and non-governmental organisations have taken a number of initiatives to promote biodiversity and nature conservation. In your opinion, which of these have been most successful? Can you suggest how we could improve them? Do you have other ideas?

Confidentiality

We would want to refer to and attribute views submitted in response to this consultation. However,

- i) **you may request** that we treat all or any part of your submission in confidence;
- ii) if **no such request** is received, we will assume that your responses are not intended to be confidential. In this case, we may refer to contributors' views and names as appropriate.

Submissions

Please send us your views on or before 7 April 2016 either:



by email to
bsap@afcd.gov.hk

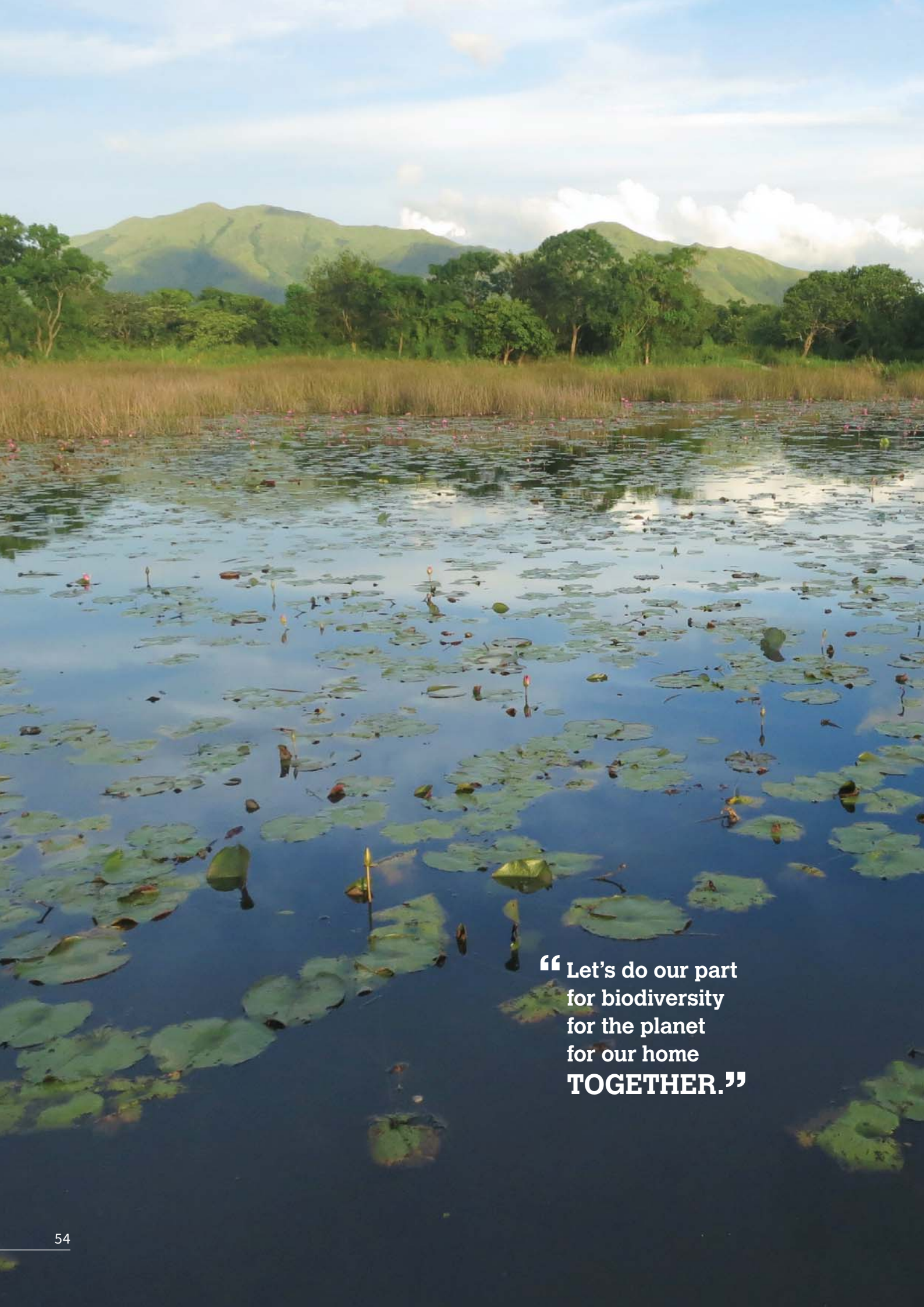


by facsimile to
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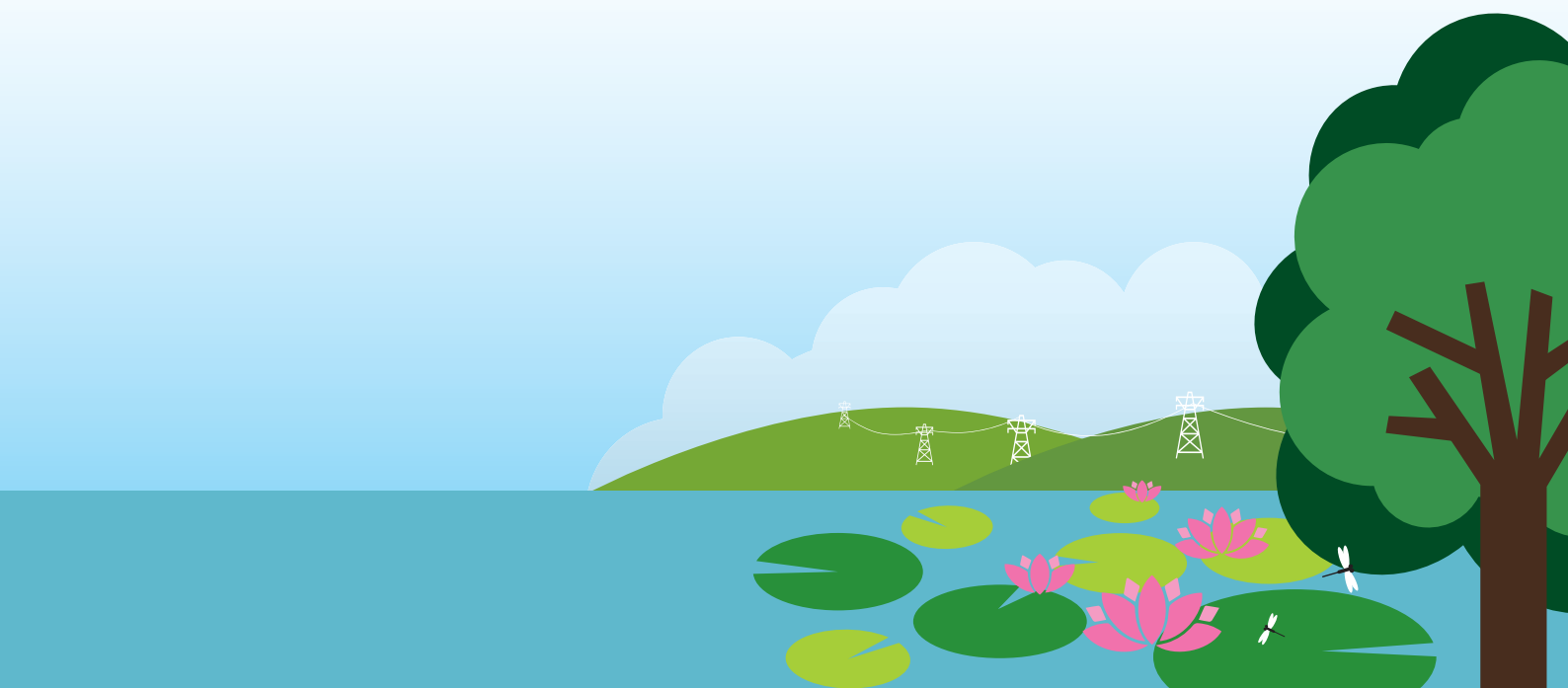


by postal mail to

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**“ Let’s do our part
for biodiversity
for the planet
for our home
TOGETHER.”**



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