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Hong Kong Biodiversity Strategy and Action Plan 2016-2021 Progress of Implementation

PURPOSE

This paper updates members on the annual progress of implementation of the Hong Kong Biodiversity Strategy and Action Plan (BSAP) 2016-2021.

OVERVIEW

2. Since the launch of the BSAP on 21 December 2016, all relevant Government bureaux and departments have been taking forward the specific actions in the BSAP under their respective purviews, in accordance with the implementation plan endorsed by the Inter-departmental Working Group on BSAP (IWGB) in April 2017. The Government has engaged the public and relevant stakeholders in implementing the BSAP and promoting the mainstreaming of biodiversity. Funding support has also been provided to take forward relevant research and education programmes for implementing the BSAP. The major achievements under each of the four key action areas are set out in the ensuing paragraphs. Detailed descriptions of the tasks and progress for each specific action are tabulated at Annex.

MAJOR ACHIEVEMENTS

Area 1 – Enhancing conservation measures

3. The Agriculture, Fisheries and Conservation Department (AFCD) has reviewed and updated the guidelines on design of wildlife crossing system, which aim to avoid fragmentation of wildlife populations as a result of linear transport infrastructures, and enhance habitat connectivity. The updated guidelines have been uploaded to AFCD website.

4. The Civil Engineering and Development Department has commenced the works for the development of the Long Valley Nature Park. The operator of the existing

Management Agreement project at Long Valley and Ho Sheung Heung Priority Site was engaged for advice on interim and future maintenance of wetlands at Long Valley.

5. To facilitate long-term conservation of areas with high ecological value at Sha Lo Tung, the Environment Bureau, Development Bureau and AFCD have been processing the non-in-situ land exchange of Sha Lo Tung with the Shuen Wan Restored Landfill (SWRL). The Environmental Impact Assessment report for the proposed golf course development at the exchange site in SWRL was approved in July 2019 and the Environment Permit was issued in September 2019.

6. The Countryside Conservation Office launched the Countryside Conservation Funding Scheme in October 2019 to provide financial support to non-profit making organisations for implementing conservation and revitalisation projects with villagers in the remote countryside. Established in July 2019, the Advisory Committee on Countryside Conservation has assessed the applications for Nature Conservation Management Agreement projects in January 2020. A total of about \$22 million has been granted for successful applications.

7. AFCD, in consultation with external experts, published the species action plan for Chinese Pangolin in December 2019 to enhance the conservation of this globally threatened species. AFCD has already started implementing these actions which include filling knowledge and data gaps, developing relevant protocols, enhancing management of conflicts due to feral dogs and capacity building.

Area 2 – Mainstreaming biodiversity

8. The Planning Department and AFCD have proposed incorporating biodiversity considerations in Chapter 10 (Conservation) of the Hong Kong Planning Standards and Guidelines. The proposal was approved by the Committee on Planning and Land Development, and the revised Chapter 10 was promulgated in March 2020.

9. The Greening, Landscape and Tree Management Section has adopted a set of Specification of Competency Standards (SCS) for the arboriculture and horticulture industry, as part of its effort to take forward the Urban Forestry Management Strategy. The SCS sets out the skills, knowledge and outcome standards required for practitioners to effectively perform tasks up to workplace requirements.

10. In addition to continuing the ongoing projects, the Drainage Services Department is undertaking new projects which adopt the concept of “blue-green infrastructure”. These include a feasibility study to explore revitalisation schemes for three river channels and three watercourses in Yuen Long South Development Area, as well as the investigation and preliminary design of revitalisation of Tai Wai Nullah and Fo Tan Nullah.

11. To provide incentives for buildings to adopt designs and measures to enhance biodiversity, AFCD also worked with the Hong Kong Green Building Council in incorporating biodiversity considerations in the revision of the BEAM Plus New Buildings manual. The BEAM Plus New Buildings V2.0 was launched in September

2019.

Area 3 – Improving our knowledge

12. AFCD has updated the species checklists of major groups of terrestrial and freshwater species, and uploaded them to AFCD website. Meanwhile, monitoring surveys for various priority marine habitats and species are underway.

13. AFCD has launched several core consultancy studies to fill important information gaps, facilitate data sharing and enrich our knowledge towards biodiversity. These include the territorial mapping of terrestrial habitats using remote sensing, preliminary design of a biodiversity information hub, and the compilation of information on ecosystem services in Hong Kong.

Area 4 – Promoting community involvement

14. The Hong Kong Biodiversity Festival 2019, themed "Savouring Nature Up-close", was held from October to December 2019. Around 150 activities were organised to promote the rich biodiversity of Hong Kong, including the "Savouring Nature Exhibition". AFCD and several non-government organisations also jointly organised themed tours that demonstrated their collaborative efforts and achievements in conserving natural habitats and species.

15. AFCD has launched an interactive webpage and published a booklet on the theme "Hong Kong Marine Classroom", consolidating educational events such as seminars, eco-tours, photography competitions, etc. Copies of the booklet were distributed to all primary and secondary schools.

16. The Education Bureau (EDB), in collaboration with the Environmental Protection Department and AFCD, has arranged professional development programmes on biodiversity, eco-labelled food and green living. In addition, EDB has been organising guided visits for secondary school teachers to various sites such as rocky shore and Woodside Biodiversity Education Centre for more exposure to local biodiversity.

INTER-DEPARTMENTAL WORKING GROUP (IWGB) ON BSAP

17. The IWGB, chaired by the Secretary for the Environment, has met regularly since 2017 to discuss the progress of implementation, and will continue to meet regularly to facilitate timely monitoring of the implementation programme. The views and feedback received from the Advisory Council on the Environment and its Nature Conservation Subcommittee related to BSAP implementation have also been conveyed to the IWGB.

ADVICE SOUGHT

18. Members are invited to note and comment on the progress of implementation of the BSAP.

Agriculture, Fisheries and Conservation Department
May 2020

Implementation of Specific Actions under Hong Kong Biodiversity Strategy and Action Plan 2016-2021 (BSAP)
Progress update for Advisory Council on the Environment (ACE) – December 2019

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
1 - Maintain and enhance the management of protected areas	a) Prepare and implement biodiversity management plans, outlining the approach to biodiversity conservation in country parks, special areas, marine parks and marine reserve. Timeframe: M/L	AFCD	1(a)(i) Adoption of a biodiversity management plan for proposed Robin's Nest Country Park (RNCP) by 2019.	<ul style="list-style-type: none"> AFCD has commissioned a consultancy study on the planning, design and consultation of the proposed RNCP. The consultant has completed a baseline review and the stakeholder engagement and consultation exercises. The biodiversity management plan for the proposed RNCP is being finalised taking into account comments collected from stakeholders, and is expected to be adopted by 2020.
			1(a)(ii) Enhanced fisheries management measures within marine parks, to better achieve the conservation objectives while promoting sustainable fisheries by 2019.	<ul style="list-style-type: none"> The negative vetting procedure for the Marine Parks and Marine Reserves (Amendment) Regulation 2019 was completed in mid January 2020. The implementation of the new strategy will take effect on 1 April 2020.
	b) Carry out the Plantation Enrichment Programme (PEP) to enhance the biodiversity of plantations in country parks. Timeframe: O	AFCD	1(b)(i) PEP conducted in 50 ha of plantations in country parks in 2016-21.	<ul style="list-style-type: none"> During 2016-2019, PEP work has been carried out in a total of 45 ha of plantations in country parks with participation of seven non-governmental organisations (NGOs). A total of 13 ha new plantations have been identified for 2019/20. Searching of new sites for PEP work for 2020/21 is in progress.
	c) Review the management plan for Sites of Special Scientific Interest (SSSI) to enhance the conservation and monitoring work carried out. Timeframe: S	AFCD	1(c)(i) Management and monitoring plan of SSSI reviewed by 2018.	<ul style="list-style-type: none"> AFCD had reviewed the scientific interest of all SSSIs making reference to updated biodiversity data. The SSSI Management and Monitoring Plan had been reviewed and updated.
	d) Review the Mai Po Inner Deep Bay Ramsar Site Management Plan (RSMP). Timeframe: M	AFCD	1(d)(i) Existing RSMP reviewed and updated RSMP implemented by 2021.	<ul style="list-style-type: none"> AFCD is collecting information and contacting relevant stakeholders for updating the existing RSMP to take into account the latest developments.
	e) Enhance habitat management work in the Mai Po Nature Reserve (MPNR). Timeframe: O	AFCD	1(e)(i) Improved habitat management in accordance with the management objectives specified in the RSMP. Habitat enhancement work carried out in gei wais, mudflats and other wetland habitats.	<ul style="list-style-type: none"> AFCD has issued service contracts to the World Wide Fund for Nature Hong Kong for 2019/20 to enhance the habitat of MPNR, including desilting of ponds and gei wais, vegetation management on mudflat and gei wais, as well as removal of invasive alien species. The major capital works for 2019/20 has been completed.
f) Review and enhance the ecological monitoring and habitat management plan of the Hong Kong Wetland Park (HKWP). Timeframe: S	AFCD	1(f)(i) Ecological monitoring and habitat management plan of the HKWP reviewed and updated plan implemented by 2018.	<ul style="list-style-type: none"> AFCD has commissioned a consultancy study to review the ecological monitoring and habitat management plan of HKWP. The consultant has completed comprehensive plant surveys, reviewed the ecological survey data from 2003 to 2016, conducted visitor satisfaction surveys and provided recommendations on ecological monitoring and habitat management in HKWP. The Final Review Report is under review and expected to be completed by Q2 2020. 	

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
2 - Conserve ecologically important habitats outside the existing protected areas	a) Designate new marine parks in the waters near The Brothers, Soko Islands and Southwest Lantau. Timeframe: S	ENB, AFCD	2(a)(i) Designation of The Brothers Marine Park in December 2016.	<ul style="list-style-type: none"> The Brothers Marine Park was designated on 30 December 2016 as the fifth marine park in Hong Kong.
			2(a)(ii) Designation of a new marine park at Southwest Lantau by 2018. Designation of a new marine park at Soko Islands and a compensatory marine park associated with the development of the Integrated Waste Management Facilities (IWMF) by 2019.	<ul style="list-style-type: none"> The designation timetable for Southwest Lantau Marine Park (SWLMP) was revised in light of the progress of the marine park fisheries management review study and latest development in the Legislative Council (LegCo). The negative vetting procedure for the Marine Parks (Designation) (Amendment) Order 2019 was completed in mid Jan 2020. The designation of the SWLMP took effect on 1 April 2020. AFCD is working with EPD to take forward the proposal of the South Lantau Marine Park (which combines the proposed marine parks at Soko Islands and the one associated with the development of the IWMF).
			2(a)(iii) Designation of a compensatory marine park associated with the Three-Runway System (3RS) by 2023/24.	<ul style="list-style-type: none"> AFCD is assisting the Airport Authority Hong Kong (AA) to take forward the marine park proposal, with an aim to completing the statutory procedure of marine park designation before the operation of the 3RS, tentatively by 2024. AA commenced stakeholder consultation in late 2018 and formulation of Specific, Measurable, Attainable, Realistic and Time-bound goals for the proposed marine park in 2019.
	b) Designate new country park at Robin's Nest, and extend country parks to cover country park enclaves at appropriate locations. Timeframe: M/L	ENB, AFCD	2(b)(i) Designation of RNCP by end of 2020.	<ul style="list-style-type: none"> AFCD has commissioned a consultancy study on the planning, design and consultation of the proposed RNCP. The consultant has completed a baseline review, and is drafting an overall management and operation plan for the proposed RNCP in consultation with various stakeholders. CMPB gave support for commencement of statutory procedure for designation of the proposed RNCP in July 2019. AFCD will consult CMPB on the draft map and explanatory statement of the proposed RNCP before gazettal of draft map under Section 9 of the Country Parks Ordinance (Cap. 208).
			2(b)(ii) Assessment of remaining enclaves and designate suitable enclaves as country parks.	<ul style="list-style-type: none"> The assessment on the suitability of the remaining enclaves for incorporation into country parks is in progress, with priority given to the Yi Tung Shan enclave on Lantau Island.
	c) Develop a nature park at Long Valley for supporting conservation and agriculture in this ecologically important area. Timeframe: M	CEDD	2(c)(i) Commencement of Long Valley Nature Park (LVNP) construction by 2020. Establishment of LVNP by CEDD and management by AFCD by 2023.	<ul style="list-style-type: none"> The Habitat Creation and Management Plan for LVNP was finalised. It provided the framework for the planning, design, implementation, maintenance and monitoring of LVNP. A meeting with the operator of the existing Management Agreement (MA) project was held in November 2019 to collect their expert advice on future maintenance of wetlands in LVNP, taking into account views gathered from the forum for green groups held in September 2018. Funding for LVNP under the First Phase of Kwu Tung North and Fanling North New Development Areas project was obtained in May 2019. The works contract for the development of LVNP commenced in mid-December 2019.
	d) Continue to implement the Management Agreement and Public-Private Partnership schemes to actively conserve ecologically important sites under private ownership, including the 12 priority sites, country park enclaves and private land in country parks through collaboration with NGOs and rural communities. Timeframe: O	ENB, DEVB, AFCD	2(d)(i) Enhanced conservation of at least six sites of high ecological value.	<ul style="list-style-type: none"> MA projects are being implemented at seven sites, viz. Fung Yuen, Long Valley, Ramsar Site, Deep Bay Wetland outside Ramsar Site, Sai Wan, Lai Chi Wo and Sha Lo Tung.
			2(d)(ii) Long-term conservation of areas with high ecological value at Sha Lo Tung.	<ul style="list-style-type: none"> The Chief Executive gave in-principle agreement to the non-in-situ land exchange for the designated private land with high ecological importance at Sha Lo Tung in June 2017 by offering the Shuen Wan Restored Landfill in Tai Po for the long-term conservation of Sha Lo Tung. The necessary procedures for the non-in-situ land exchange are underway. The Environmental Impact Assessment report for the proposed golf course development at the Shuen Wan Restored Landfill was approved with conditions in July 2019 and the Environment Permit was issued in September 2019. An NGO has been carrying out habitat management and monitoring as well as educational initiatives in collaboration with villagers in Sha Lo Tung in the form of an MA project.

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	e) Explore innovative methods to enhance, support and promote the conservation of rural areas with high ecological value. Timeframe: O	ENB, AFCD	2(e)(i) Revitalisation projects implemented at Lai Chi Wo.	<ul style="list-style-type: none"> Projects funded through private funding sources (Hong Kong Jockey Club Charities Trust and HSBC) are conserving and renovating a group of village houses to develop a Hakka life experiential learning programme with visitor accommodation, and promoting the sustainable development of Lai Chi Wo and nearby areas through social innovation and cross-sector cooperation. An MA project is being implemented to engage the local farming community to rehabilitate the farmlands and enhance the ecological value at Lai Chi Wo (see also Specific Action 2d).
		ENB	2(e)(ii) Countryside revitalisation and ecological conservation projects at key remote countryside areas.	<ul style="list-style-type: none"> The Countryside Conservation Office (CCO) was established in end July 2018 to coordinate conservation projects that promote sustainable development of remote countryside. The Advisory Committee on Countryside Conservation (ACCC) comprising non-official members was established in July 2019 to advise on the priorities for the conservation and revitalisation works proposals to be carried out by CCO; and to advise on the policy and matters relating to the overall administration, operation and funding approach of the Countryside Conservation Funding Scheme (CCFS). The CCFS was launched on 18 October 2019 and the first round application for MA projects under CCFS was closed on 18 November 2019. The ACCC will meet in January 2020 to discuss the applications for approval.
		DEVB, CEDD, EPD	2(e)(iii) Rural conservation pilot projects to be implemented in areas such as Tai O, Shui Hau and Pui O, to underpin the sustainable development and conservation of Lantau.	<ul style="list-style-type: none"> CEDD commenced a consultancy study titled "Ecological Study for Pui O, Shui Hau, Tai O and Neighbouring Areas – Feasibility Study" in December 2017. The 12-month ecological survey was completed. The consultants are evaluating the existing ecological threats to these priority sites and will explore feasible conservation measures at a later stage of the Study. A total of 11 Environmental Education and Community Action (EE&CA) projects were approved in 2017/18 and 2018/19 to take forward community engagement and education activities on conservation in South Lantau. All projects are in progress. CEDD is preparing to set up a \$1 billion Lantau Conservation Fund for conservation and related projects as well as minor local improvement works in rural Lantau. Priority will be given to those conservation and related projects concerning Tai O, Shui Hau and Pui O.
3 - Enhance conservation of natural streams	a) Conduct ecological surveys and compile ecological database on natural streams, especially Ecologically Important Streams (EIS). Timeframe: M	AFCD	3(a)(i) List of EIS updated by 2019.	<ul style="list-style-type: none"> AFCD has been reviewing data and conducting field verification since May 2018. Data for 28 sites had been reviewed and verified. The List of EIS is expected to be updated by Q4 2020.
	b) Improve practices in minor maintenance and hygiene works in natural streams and catchwaters, with a view to minimising ecological impacts arising from these works. Timeframe: S/M	WSD, AFCD	3(b)(i) Pilot projects on adopting ecologically friendly design for catchwaters.	<ul style="list-style-type: none"> In collaboration with several green groups, WSD has commenced a trial to discharge part of the yield at catchwaters in Lantau with a view to revitalising freshwater habitats downstream. WSD has commissioned consultancy studies on the baseline ecology of irrigation reservoirs and on ecological enhancement of Hung Shui Hang Irrigation Reservoir through ecological floating platforms. Both consultancy studies are in progress.
		DSD	3(b)(ii) Planting at selected engineered river channels and water bodies to re-introduce riparian and in-stream habitats with a view to increasing spatial heterogeneity and species richness.	<ul style="list-style-type: none"> Monitoring for trial eco-enhancement works at various channel sections including Ma Wat River, Lower Lam Tsuen River, and Hung Shui Kiu, is in progress. Initial observations for the ongoing trials and the completed one at Yuen Long Bypass Floodway (YLBF) have shown signs of improvements in biodiversity. Other trials and structural designs are being arranged/implemented for the YLBF Engineered Wetland, Ma Tso Lung Drainage Channel near Shun Yee San Tsuen, Lam Tsuen River near Mui Shue Hang Playground and Ma On Kong Secondary Channel KT13. Eco-hydraulics Study on Green Channel - Stage 3 is in progress.

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		DSD	3(b)(iii) Adopting green channels design principles in appropriate drainage projects to promote connectivity for freshwater life within the drainage basin.	<ul style="list-style-type: none"> DSD has been adopting sustainable drainage management principles, including the incorporation of environmentally friendly features into drainage projects, that promote the conservation of biodiversity in drainage basins. DSD has actively promoted, through various channels, public awareness on sustainable drainage management principles: <ul style="list-style-type: none"> Launched the “EcoDMS” website in June 2018 for introducing ecological and water quality conditions of selected river sections. Organised over 370 visits to DSD project sites including YLBF wetland, San Tin Polder, Tai Hang Tung Stormwater Storage Scheme, Happy Valley Underground Stormwater Storage Scheme, etc., in 2019, involving more than 10 000 visitors. Co-organised a talk/workshop on preservation of fireflies in river channels and two guided tours to YLBF in October and December 2019 with AFCD. Assisted Jockey Club-Water Initiative on Sustainability and Engagement in organising the International Symposium on Water Sustainability from 11-13 July 2019.
			3(b)(iv) Reviewing current guidelines, and seeking improvements and refining techniques in enhancing biodiversity in river channels and water bodies.	<ul style="list-style-type: none"> R&D studies on wet floodplain technique, floating planters/platforms, channel side planting, flow deflectors, habitat enhancement for macro-invertebrates, propagation of native plants and eco-landscape design are being conducted with a view to developing further techniques and design criteria suitable for the local context to promote ecosystem services and biodiversity. Site trials for the design approach of eco-landscape, including a 12-month post-project monitoring, was completed. Data analysis are in progress to establish the effectiveness of the approach. DSD is reviewing the current practice note on Environmental and Ecological Considerations for River Channel Design to incorporate the findings from the study on revitalisation of water bodies.
		FEHD, AFCD	3(b)(v) Guidelines for best practices in malaria prevention and control programmes on natural streams prepared by 2018.	<ul style="list-style-type: none"> AFCD and FEHD are working on the incorporation of some conservation principles into FEHD’s internal technical circular on malaria control work in streams with a view to finalising it by Q1 2020.
	c) Control discharge of effluents from unsewered areas and its adverse impacts on streams. Timeframe: L	EPD	3(c)(i) Provision of sewerage system to unsewered village areas	<ul style="list-style-type: none"> The sewerage construction works for 90% of the targeted unsewered villages / areas are completed to date. In 2018, EPD obtained funding to provide village sewerage to 13 villages in Sha Tau Kok, Peng Chau, Lei Yue Mun and Lantau Island and commenced the construction works. In addition, EPD planned to seek funding from LegCo to initiate 10 projects to provide village sewerage to 41 villages in Sai Kung, Tai Po, Sha Tin, Fanling, Tseung Kwan O, Tuen Mun, Lantau Island and Lamma Island as soon as possible. EPD conducted a review of the environmental conditions of rivers in unsewered areas where public sewerage would not be available in the near future. Based on the findings, a preliminary action plan for providing appropriate sewerage facilities for the unsewered areas in the catchment of the Yuen Long Creek and Kam Tin River was prepared in consultation with DSD. EPD and DSD will take the action plan forward and consult the local community in due course.
4 - Maintain habitat connectivity for wildlife	a) Enhance habitat connectivity and establish ecological corridors across the boundary. Timeframe: O	EPD, AFCD	4(a)(i) Enhanced function of the ecological corridor between Shenzhen and Hong Kong through the protection and management of Robin’s Nest as country park.	<ul style="list-style-type: none"> AFCD has been liaising with Shenzhen Urban Management Authority on the cooperation and collaboration for the ecological corridor between Wutongshan and the proposed RNCP since November 2018. AFCD met with Shenzhen Futian National Nature Reserve in January 2019, and will continue to maintain dialogue to enhance the conservation management of the Deep Bay wetlands.
	b) Review and update guidelines on design of wildlife crossings. Timeframe: S	AFCD	4(b)(i) Guidelines on design of wildlife crossings updated by 2018.	<ul style="list-style-type: none"> AFCD had reviewed international practices in wildlife crossings and revised the guidelines. The updated guidelines were uploaded onto AFCD website in Q1 2019.

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5 - Step up enforcement against wildlife crime	a) Maintain high vigilance and enhance enforcement against illegal poaching or collection of local species and raise public awareness. Timeframe: O	AFCD, HKPF, C&ED	5(a)(i) Inter-departmental and cross-border cooperation, monitoring, education and community involvement to be continued.	<ul style="list-style-type: none"> AFCD has arranged regular patrol and trap search operations, including joint operations with the Society for the Prevention of Cruelty to Animals and HKPF, to combat illegal poaching of local wild animals. For enhancing enforcement on illegal harvesting of Incense Trees, AFCD has set up a task force to conduct targeted patrol. AFCD has also provided training to frontline staff of HKPF and C&ED to identify agarwood and detect illegal activities, as well as conducted joint operations with HKPF at black spots. Arrangement was also made with the Mainland authority to facilitate cross-boundary knowledge/intelligence exchange on agarwood-related issues. Publicity and education programme on the protection of Incense Tree was conducted, including the Botany STEM programme organised by the Shiu-Ying Hu Herbarium of the Chinese University of Hong Kong for primary schools.
	b) Establish an inter-departmental task force on wildlife crime, to strengthen collaboration and intelligence exchange. Timeframe: O	AFCD, ENB, HKPF, C&ED	5(b)(i) Regular meetings between the enforcement agencies and green groups. Joint enforcement operations organised according to the trend of wildlife crime.	<ul style="list-style-type: none"> An inter-departmental Wildlife Crime Task Force, established in 2016, conducts regular meetings to discuss the enforcement matters related to wildlife crime.
	c) Strengthen enforcement and legislative measures to combat illegal trade in ivory. Timeframe: O/M/L	ENB, AFCD	5(c)(i) Local trade in ivory (except antique ivory) phased out by end of 2021. Introduction of indictable offences under the Protection of Animals and Plants Ordinance (Cap. 586) by 2018. Increased maximum penalty by 2018.	<ul style="list-style-type: none"> The Protection of Endangered Species of Animals and Plants (Amendment) Ordinance 2018 was enacted by the LegCo on 31 January 2018. Step 1 of the ivory phase-out plan and the increased penalty commenced on 1 May 2018. Step 2 of the plan to ban import and re-export of pre-Convention ivory commenced on 1 August 2018, and Step 3 of the ivory phase-out plan will commence on 31 December 2021.
6 - Implement conservation action plans for priority species	a) Establish a standardised mechanism for formulating species action plans (SAPs). Timeframe: S	AFCD	6(a)(i) Guidelines for formulation of SAP produced by mid-2018.	<ul style="list-style-type: none"> The technical guidelines on the standardised formulation mechanism and format of SAPs were published and uploaded onto AFCD website in March 2018.
	b) Formulate action plans for species that require immediate conservation actions. Timeframe: S/M	AFCD	6(b)(i) Chinese Pangolin SAP formulated and implemented by 2018.	<ul style="list-style-type: none"> In 2018, AFCD reviewed existing data obtained from camera trap surveys and other sources, and identified information gaps for the drafting of the SAP. An advisory group involving external experts was formed to provide advice on the drafting of the SAP and met thrice in 2018 and 2019. After consulting all key stakeholders, the SAP was finalised in December 2019. Actions under the SAP include filling knowledge and data gaps, developing a dedicated rescue, rehabilitation, release and post-release monitoring protocol, identifying and managing areas with high threat of feral dogs, building capacity and raising public awareness.
			6(b)(ii) Incense Tree SAP formulated and implemented by 2018.	<ul style="list-style-type: none"> After consulting HKPF, C&ED and relevant NGOs, AFCD published and uploaded the SAP onto AFCD website in June 2018. AFCD is implementing the SAP. Major actions include risk-based patrols, monitoring using infrared camera traps at trial stations, pilot scheme of engaging quarantine detector dogs, protecting large specimens using metallic tree guards and mesh fences, restoring damaged populations and establishing new populations, and providing funding support for relevant research studies and education programmes.
		6(b)(iii) Big-headed Turtle SAP formulated and implemented by 2020.	<ul style="list-style-type: none"> AFCD is drafting the SAP for discussion with expert group. AFCD has commissioned a pilot study to monitor trapping activity in key turtle sites using surveillance cameras. 	

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress	
			6(b)(iv) Finless Porpoise SAP formulated and implemented by end of 2018.	<ul style="list-style-type: none"> A 12-month study on Passive Acoustic Monitoring (PAM) to look into the diurnal distribution pattern of Finless Porpoise was completed in mid-2019. Another 12-month PAM study commenced in mid-2019 to collect more data to ascertain their temporal trends. AFCD is preparing the SAP for stakeholders' comments with a view to incorporating the findings of the PAM study. The SAP is expected to be finalised by 2021. 	
			6(b)(v) Horseshoe Crab SAP formulated and implemented by 2019.	<ul style="list-style-type: none"> Surveys at hotspot sites including Pak Nai, Tung Chung, Shui Hau and Yi O were conducted during June to September 2018; juveniles were recorded at all sites. A 12-month study on field trial of horseshoe crab monitoring in Hong Kong using environmental DNA technique commenced in July 2018. Another study commenced in August 2019 to collect further field data to examine the occurrence trends of juvenile horseshoe crabs in Hong Kong. The SAP is being prepared taking into account the new data obtained, and is expected to be finalised by 2021. 	
			6(b)(vi) Coral SAP formulated and implemented by 2019.	<ul style="list-style-type: none"> AFCD has completed a coral restoration study to restore bioeroded brain corals in Hoi Ha Wan Marine Park and reported to the Marine Parks Committee in 2019. A consultancy study on species diversity, coral coverage and distribution will be completed in early 2020, and the SAP is expected to be finalised by 2021. 	
	c) Review and strengthen existing species action plans. Timeframe: M	AFCD	6(c)(i) Chinese White Dolphin SAP updated by 2020.	<ul style="list-style-type: none"> A 12-month study on PAM to look into the diurnal distribution pattern of Chinese White Dolphin was completed in mid-2019. Another 12-month PAM study was commenced in mid-2019 to collect more acoustic data of Chinese White Dolphin to ascertain their temporal trends. 	
			6(c)(ii) Romer's Tree Frog SAP updated by end of 2019.	<ul style="list-style-type: none"> AFCD has reviewed the existing SAP and prepared the first draft of the revised SAP in 2019. The SAP is expected to be updated by 2020 after consulting external stakeholders. . 	
			6(c)(iii) Three-banded Box Turtle SAP updated by 2020.	<ul style="list-style-type: none"> AFCD completed a study to elucidate the genetic affinity of the Three-banded Box Turtles under the captive breeding programme. AFCD completed a consultancy survey in key turtle sites to assess the intensity of trapping activity. The patrol operation against turtle trapping is under review. AFCD has commissioned a pilot study to monitor trapping activity in key turtle sites using surveillance cameras. 	
			6(c)(iv) Black-faced Spoonbill SAP updated by 2021.	<ul style="list-style-type: none"> The consultancy studies on the habitat use and diet composition of Black-faced Spoonbill have commenced in October 2018. 	
			6(c)(v) Green Turtle SAP updated by 2019.	<ul style="list-style-type: none"> AFCD has completed a survey of ghost nets and removed these nets in the bay area of Sham Wan; deployed a remote monitoring system to enhance surveillance; and commissioned dive surveys in the bay to monitor turtle occurrence and habitat conditions. AFCD is undertaking preparatory work for expanding the Sham Wan Restricted Area to enhance the protection of Green Turtle. The SAP is being prepared and is expected to be finalised by 2020. 	
	7 - Improve management of invasive alien species	a) Build up capacity for the management of invasive alien species. Timeframe: M	AFCD	7(a)(i) An inventory of alien species prepared by 2020. High-risk invasive alien species identified, with management measures formulated and implemented, by 2021.	<ul style="list-style-type: none"> AFCD has conducted a review of international practices for management of invasive alien species and risk assessment protocols. The consultancy study to formulate a protocol for management of invasive alien species in Hong Kong and to assess the risks of alien herpetofauna commenced in November 2018. The assessment of the risks of alien herpetofauna using the newly developed protocol is nearly completed. Various management options are currently under review.
		b) Enhance the monitoring, management and control plans for target invasive alien species.	AFCD	7(b)(i) Effective control of Sonneratia in Inner Deep Bay by 2021.	<ul style="list-style-type: none"> In 2019, 4 100 Sonneratia trees were removed from Inner Deep Bay.

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
	Timeframe: O		7(b)(ii) Enhanced control of Mikania.	<ul style="list-style-type: none"> AFCD has taken stock of the current programme of Mikania removal to maintain/enhance the ecological value of SSSIs, and will continue to review the need to extend Mikania control work, taking into consideration such as the updated scientific interest under Specific Action 1c.
	c) Conduct education programmes to raise awareness and to discourage release of alien species to the wild. Timeframe: O	AFCD	7(c)(i) Publicity materials on mercy release produced and distributed, and education programmes including seminars organised.	<ul style="list-style-type: none"> Since 2017, AFCD produced posters about mercy release, and distributed them to relevant organisations and displayed them at various locations (e.g. government venues, wet markets, ferry piers). AFCD also disseminated messages to discourage mercy release through advertisements on outdoor media, relevant publications, social media, mini-movies and public seminars.
8 - Control the environmental release of genetically modified organisms	a) Continue to control the environmental release of genetically modified organisms (GMOs), monitor the development of related technology and expand screening programme. Timeframe: O	AFCD	8(a)(i) Implementation of control measures on GMOs in accordance with requirements of Cartagena Protocol on Biosafety.	<ul style="list-style-type: none"> AFCD is conducting regular inspection at border control points and market surveys on the prevalence of GMOs in local markets and farms, and distributing leaflets to educate and remind stakeholders about requirements under the Genetically Modified Organism (Control of Release) Ordinance (Cap. 607). AFCD is keeping in view the development of GMOs through review of international practices and dialogue with relevant sectors.
9 - Incorporate biodiversity considerations in planning and development process	a) Update the Sustainability Assessment system, to better integrate biodiversity considerations in major policies and plans of the Government. Timeframe: S	ENB, AFCD	9(a)(i) Computer-aided Sustainability Evaluation Tool (CASET) updated to incorporate the revised biodiversity parameters by 2018.	<ul style="list-style-type: none"> The updated CASET with revised biodiversity parameters incorporated was launched in December 2018.
	b) Integrate biodiversity considerations in the territorial development strategy. Timeframe: O	PlanD, AFCD	9(b)(i) Biodiversity considerations taken into account in relevant study tasks of Hong Kong 2030+, and reflected in the territorial development strategy. Finalised territorial development strategy under Hong Kong 2030+ to guide the future planning, land and infrastructure development and the shaping of the built and natural environment of Hong Kong beyond 2030.	<ul style="list-style-type: none"> The public engagement exercise of the Hong Kong 2030+ study was completed in April 2017. PlanD is continuing with the technical assessments including the Strategic Environmental Assessment and Sustainability Assessment. Biodiversity considerations will be strengthened where appropriate in the finalised territorial development strategy. The target is to complete the Hong Kong 2030+ study in 2020.
	c) Update and amend Chapter 10 of the Hong Kong Planning Standards and Guidelines (HKPSG) by incorporating relevant guidelines on biodiversity considerations. Timeframe: M	PlanD, AFCD	9(c)(i) Chapter 10 of HKPSG amended by mid-2019.	<ul style="list-style-type: none"> PlanD and AFCD have completed the incorporation of relevant guidelines on biodiversity considerations into Chapter 10 – Conservation in December 2019. The revised Chapter 10 will be promulgated in March 2020.
	d) Enhance the practices in addressing ecological impacts of projects through environmental impact assessment (EIA) process. Timeframe: O	EPD, AFCD	9(d)(i) Review of the international practices on incorporating biodiversity considerations in the planning and development process.	<ul style="list-style-type: none"> EPD and AFCD jointly organised an internal refresher session to share experience and knowledge on baseline surveys for ecological assessment among EIA professionals on 5 December 2019. EPD will arrange EIAO Users Liaison Group meetings for sharing knowledge in ecological assessment practices amongst EIA authorities, works departments, private sectors, academics and practitioners in Q1 2020.

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
10 - Promote biodiversity in urban environment	a) Formulate an urban forestry strategy that contributes to a sustainable urban landscape and promotes the appreciation of urban biodiversity. Timeframe: S	Greening, Landscape and Tree Management Section (GLTMS)	10(a)(i) Urban Forestry Advisory Panel (UFAP) set up in January 2017. Urban Forestry Management Strategy formulated by 2018. Qualifications Framework Specification of Competency Standards (SCS) on urban arboriculture, horticulture and landscape works developed.	<ul style="list-style-type: none"> UFAP was set up in January 2017 and has been in operation. As reported at the LegCo Panel on Development Meeting on 27 February 2018, the Government adopts a five-pronged strategy that includes undertaking the annual Tree Risk Assessment and Management as part of the precautionary measures before the wet season, implementing a dedicated regime for high-risk trees, promoting proper tree care on private properties, building capacity in the workforce, and stepping up community education and involvement. The SCS for the arboriculture and horticulture industry was launched on 9 December 2019.
	b) Promote diversification of our soft landscapes and optimise use of native species for enriching urban biodiversity. Timeframe: M	GLTMS	10(b)(i) Soft landscape specifications standardised between Hong Kong and Guangzhou. Availability of native seed stock improved. Government workflows and contracts reviewed to set baseline standards.	<ul style="list-style-type: none"> The Hong Kong Institute of Landscape Architects (HKILA) commissioned a consultant to study the Standardisation of Soft Landscape Planting Materials Specification for Guangdong Province and Hong Kong in November 2018. The consultant has sent the draft report to HKILA and its relevant counterparts for endorsement. HKILA targets to publish the report by February 2020. GLTMS released the Street Tree Selection Guide (STSG) in December 2018 to promote vegetation diversity and the use of native tree species. GLTMS has initiated discussions with AFCD, to jointly promote the use of native tree species listed in the STSG, in particular the production of light standard size trees with low market availability. Initial review of Government contracts and workflows has been completed. Findings and recommendations will be available in Q1 2021.
	c) Promote the concept of Place Ecology in urban landscape designs. Timeframe: M	GLTMS	10(c)(i) Concept of Place Ecology promoted through a series of public seminars and talks organised/attended by GLTMS. Promotion of place-based approach with vegetation diversity with complementary species mix as a key component.	<ul style="list-style-type: none"> GLTMS organised a series of seminars to introduce how our urban landscape can contribute to augmenting liveability and improving resilience. DEVB implemented a trial scheme to transform an existing traffic island at Wylie Road into a rain garden, and handed over the planting to the maintenance department in February 2019. GLTMS released the STSG in December 2018 for the reference of departments and landscape practitioners. Promotion activities including advertorial at local newspapers, TV and radio interviews, and sharing sessions for Government departments, landscape architecture professionals and landscape practitioners were carried out from December 2018 to January 2019.
	d) Promote knowledge building and sharing among the public and private sectors in the latest landscape concepts, designs and technologies that contribute to a sustainable urban ecosystem. Timeframe: M/L	GLTMS, Works departments	10(d)(i) A series of outreach events organised by GLTMS and collaborating organisations. A holistic EDB Quality Framework System on building capacity and proper arboricultural practices developed.	<ul style="list-style-type: none"> A series of seminars, talks and exhibitions to raise public awareness on urban forestry, through collaborations with universities, professionals, overseas experts and other relevant departments, has been organised by GLTMS and collaborating organisations. The SCS for the arboriculture and horticulture industry was launched on 9 December 2019 to uplift the quality of practitioners and the professional standing of the industry. The GLTMS will hold the Hong Kong 2020 International Urban Forestry Conference during 16-17 January 2020, inviting renowned local and overseas experts to share their insights and latest research findings on topics of city greening, resilient landscape and tree care in constrained environment.
		AFCD	10(d)(ii) The BEAM Plus New Buildings Manual updated to incorporate incentives to promote biodiversity in building projects.	<ul style="list-style-type: none"> AFCD worked with the Hong Kong Green Building Council in incorporating biodiversity considerations in building projects, through the revision of the BEAM Plus New Buildings manual. The BEAM Plus New Buildings V2.0, launched in September 2019, includes credit points to provide incentives for promoting ecologically responsible designs and measures to protect natural habitats and enhance biodiversity.

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
	e) Explore opportunities to enhance the value of urban parks for biodiversity conservation and education. Timeframe: M	LCSD	10(e)(i) Further enhancement of the existing conservation corners to maintain a natural habitat and environment for attracting wildlife. Signage and educational boards displayed at the conservation corners for educational purposes. The existing educational programmes enriched to launch guided visit programmes to the conservation corners for the public and local schools to raise the public's awareness of wildlife conservation.	<ul style="list-style-type: none"> LCSD established a new conservation corner at Hong Kong Zoological and Botanical Gardens (HKZBG) in 2019, increasing the total number of conservation corners at urban parks to 39. The Horticultural Education Exhibition 2019 organised by LCSD was held on 2 and 3 November 2019 at Kowloon Park. With a theme of "Hong Kong Biodiversity", the exhibition attracted about 9 700 visitors. A talk titled "Flora Conservation in Hong Kong" was delivered by a speaker of AFCD. The Zoological Education Exhibition 2019 organised by LCSD was held on 30 November and 1 December 2019 at HKZBG. The exhibition themed as "Connect with Wilderness" featured the work of HKZBG in educating the public on wildlife conservation, and a talk "Walking Sticks" was delivered by a speaker of AFCD. The event was well received by some 5 000 visitors.
	f) Adopt the concept of revitalising water bodies in large-scale drainage improvement works and planning drainage networks for New Development Areas (NDAs). Timeframe: O	DSD	10(f)(i) Study on revitalisation of water bodies to explore practicable options for applying the blue-green concept in large-scale drainage improvement works and planning drainage networks for new development areas, with an aim to promote greening, biodiversity, beautification and water friendliness in addition to achieving efficient drainage.	<ul style="list-style-type: none"> The study on "Revitalisation of Water Bodies" is in progress. DSD has established an inventory of water bodies and devised a methodology to evaluate revitalisation potential of river channels. Tai Wai Nullah, Fo Tan Nullah and Jordan Valley Nullah have been identified to have potential for revitalisation. Agreement No. CE 7/2019 (DS) – River Revitalisation and Flood Resilience Planning in Yuen Long South – Feasibility Study commenced in November 2019. The study will explore revitalisation schemes for three river channels (i.e. Yuen Long (West) Nullah, Tin Tsuen Channel and Yuen Long Nullah) and three watercourses in Yuen Long South Development Area.
			10(f)(ii) Revitalisation of urban nullahs into green river corridors through the urban area.	<ul style="list-style-type: none"> The reconstruction and rehabilitation of the upstream and midstream sections of Kai Tak River commissioned in mid-2018. Remaining works for upstream section was completed in December 2019. Detailed design of Tsui Ping River revitalisation commenced in December 2017. Tender evaluation for the works contract is in progress and the works is scheduled to commence in Q1 2020. A site trial of in-stream filtering system is in progress and scheduled for completion in Q2 2020. Revitalisation of Jordan Valley Nullah will be implemented as Cat D item and the tender evaluation of the works contract is underway. Detailed design of revitalisation works was substantially completed in mid-2019. The ecological enhancement works at upstream section and landscaping works at downstream section will commence in Q1 2020 for completion in 2022 tentatively. Revitalisation of Tai Wai Nullah and Fo Tan Nullah was upgraded to Cat B in August 2019. The investigation and preliminary design are anticipated to commence in 2020. The construction works is scheduled to commence in 2024 for completion in 2029.
		DSD, CEDD	10(f)(iii) Design of Tung Chung River Park to promote water-friendly culture and to preserve the ecology of the river.	<ul style="list-style-type: none"> CEDD has completed the final Preliminary River Park Proposal. The detailed design of the River Park is underway. The River Park is proposed to be divided into "Revitalization Zone" and "Conservation Zone" for promotion of water-friendly culture and preservation of the ecology of the river respectively.
		DSD, CEDD	10(f)(iv) Blue-green infrastructure at Anderson Road Quarry NDA.	<ul style="list-style-type: none"> CEDD commenced construction works on the flood attenuation lake cum park, underground stormwater tank and drainage system at Anderson Road Quarry NDA in December 2016. Landscaping works will commence by 2020 for completion in 2023 tentatively. The consultancy for the Study on Operation & Maintenance of the Anderson Road Quarry Flood Lake Park was awarded in August 2019.
11 - Promote sustainable fisheries	a) Designate and manage Fisheries Protection Area(s) (FPAs) to protect important fish spawning and nursery grounds Timeframe: L	FHB, AFCD	11(a)(i) Designation of FPAs.	<ul style="list-style-type: none"> Baseline information on potential FPAs is being analysed. Engagement of stakeholders to solicit views on designation of FPAs is underway.

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
	b) Continue to conduct fisheries monitoring programme in Hong Kong waters. Timeframe: O	AFCD	11(b)(i) Assessment of effectiveness of fisheries management measures completed in early 2018.	<ul style="list-style-type: none"> The study for monitoring the fisheries resources was completed. The results generally demonstrated signs of recovery of the fisheries resources in Hong Kong.
			11(b)(ii) Study on ichthyoplankton, zooplankton, juvenile fish and crustacean completed in early 2018.	<ul style="list-style-type: none"> The consultancy study for providing updated information on ichthyoplankton, zooplankton, juvenile fish and crustacean around the potential FPAs was completed.
			11(b)(iii) Inspection of artificial reefs completed by 2019.	<ul style="list-style-type: none"> The consultancy study on underwater fisheries survey in artificial reefs (ARs) was completed. Results revealed that high fish species richness was recorded in the ARs, which mirrored the findings of the AR survey conducted in 2011.
			11(b)(iv) Developing a fisheries monitoring programme in Hong Kong.	<ul style="list-style-type: none"> The consultancy study for developing options for a fisheries monitoring programme in Hong Kong commenced in August 2019. The study is anticipated to be completed in mid 2022.
	c) Provide funding support to encourage local fishing community to adopt sustainable fisheries operations. Timeframe: O	AFCD	11(c)(i) Applications for the Sustainable Fisheries Development Fund (SFDF) processed to provide funding to projects that support the development of sustainable fisheries.	<ul style="list-style-type: none"> Applications are being invited on a continuous basis. As at end of December 2019, 21 applications involving a total commitment of over \$113 million have been approved. Among the approved projects, nine are for promoting the development of aquaculture, two are for promoting fisheries-related eco-tourism, two are for assisting the development of capture fisheries, and eight are for promoting the modernisation of fisheries equipment.
	d) Conduct studies on measures to prevent cormorant predation on commercial pond fish in Deep Bay area. Timeframe: S	AFCD	11(d)(i) Measures to prevent cormorant predation tested for effectiveness, and promoted to fishpond operators.	<ul style="list-style-type: none"> The consultancy study on cormorant predation, and the consultancy study on the field trial of the recommended cormorant prevention measure were both completed. The study recommended the ideal wire density as well as factors to be considered by operators (e.g. cost of materials, time of installation, species, size and quantity of fish cultured in pond) when planning the use of preventive measures. The fishpond operators were informed on the recommendations.
12 - Promote sustainable agriculture	a) Promote the modernisation and sustainable development of local agriculture as an integral part of the New Agriculture Policy. Timeframe: O	FHB, AFCD	12(a)(i) Establishment of an Agricultural Park (Agri-Park).	<ul style="list-style-type: none"> Funding for the Phase 1 construction works was supported by the Public Works Subcommittee on 26 April 2019. The Finance Committee's approval for the Phase 1 construction works will be sought as soon as possible so that the construction works could commence smoothly.
		FHB, DEVB, AFCD	12(a)(ii) Study on Agricultural Priority Areas (APAs).	<ul style="list-style-type: none"> The consultancy study for identifying quality agricultural land for possible designation as APAs commenced in late 2018. The consultant is currently conducting a baseline review to identify major clusters of farmland in Hong Kong and studying overseas experience.
		AFCD	12(a)(iii) Applications for the Sustainable Agricultural Development Fund (SADF) processed to provide funding to projects that support the development of sustainable agriculture.	<ul style="list-style-type: none"> Applications are being invited on a continuous basis.
		AFCD	12(a)(iv) Assistance provided to farmers to raise productivity through modern agro-technologies and environmentally friendly farming practices (including organic farming).	<ul style="list-style-type: none"> AFCD will continue to conduct farm visits, seminars and workshops to assist farmers in adopting modern agro-technologies (including farm mechanisation and automation) and environmentally friendly farming practices (including organic farming). AFCD will continue to identify potential agro-technology projects for collaboration with local research institutions or agricultural organisations.

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
13 - Conduct biodiversity survey	a) Enhance territory-wide biodiversity surveys on major groups of terrestrial and freshwater species. Timeframe: O	AFCD	13(a)(i) Programme of AFCD biodiversity survey reviewed, and survey manual compiled by 2018. Existing species checklist of major taxa groups updated by 2018.	<ul style="list-style-type: none"> AFCD consolidated and reviewed the survey objectives and sampling designs currently adopted in the biodiversity survey programme. Survey protocols were compiled, and species checklists of major taxa groups were updated in early 2019 and uploaded to AFCD website.
	b) Conduct baseline and long-term surveys of priority marine habitats and species. Timeframe: O	AFCD	13(b)(i) Long-term coral monitoring plan devised by 2020.	<ul style="list-style-type: none"> Baseline coral distribution and diversity data at 33 major coral areas in Hong Kong were collected, and in-depth surveys to monitor coral bleaching and bio-erosion in some concerned areas were completed. The study team is finalising a report with specific recommendations for the long-term monitoring of the major coral communities in Hong Kong (see also Specific Action 6b(vi)).
			13(b)(ii) Octocorals species list updated by 2019.	<ul style="list-style-type: none"> AFCD commissioned a study on local octocoral and black coral distribution and diversity at 28 hotspots. Half of the study sites have been surveyed and the specimens are being identified; the remaining field surveys are in progress and the species list is expected to be updated by 2021.
			13(b)(iii) Reef fish species list updated by 2019.	<ul style="list-style-type: none"> AFCD commissioned a consultancy study on local reef fish diversity. The reef fish species list was updated upon the completion of the field surveys.
			13(b)(iv) Macroalgae species list updated by 2019.	<ul style="list-style-type: none"> AFCD commissioned a study on the diversity and distribution of macroalgae in Hong Kong. The macroalgae species list was updated upon the completion of the field surveys.
13(b)(v) Marine park surveys completed by 2021.	<ul style="list-style-type: none"> Coral surveys at three marine parks were completed in 2016. AFCD has commissioned a 24-month coral monitoring as part of the long term monitoring programme for Tung Ping Chau and Hoi Ha Wan Marine Parks. The first wet season survey was completed and the first progress report was submitted. Quarterly fisheries resources surveys in all existing marine parks and marine reserve, and potential marine parks were completed. The study team has been analysing data for the preparation of the final report. Since Q4 2018, 20-month juvenile fish surveys have commenced to investigate the biomass and abundance of juvenile fish at different habitats of marine parks and marine reserve. Transitional survey and dry season survey were completed and the first Biannual Report was submitted on time. 			
14 - Conduct species assessment	a) Compile a list of threatened species for Hong Kong to guide conservation actions. Timeframe: M/L	AFCD	14(a)(i) List of threatened species drawn up for priority groups by 2021.	<ul style="list-style-type: none"> The institutional framework for compiling the Hong Kong List of Threatened Species was formulated. Experts for different taxonomic groups, including AFCD officers and external experts, were appointed as assessors and reviewers in May 2018. AFCD arranged two training sessions for around 60 personnel involved in the assessment process, in May and June 2018. The different specialist groups have started conducting assessments or preparatory work for the assessments, and draft assessments of some groups are undergoing an independent review process.
15 - Collate information on terrestrial and marine habitats	a) Compile relevant information on marine habitats for guiding conservation of marine habitats. Timeframe: M	AFCD	15(a)(i) Habitat maps of marine ecosystem prepared by 2021.	<ul style="list-style-type: none"> AFCD is reviewing existing information for the preparation of a habitat map of marine ecosystem. A pilot mapping study of a coral habitat at Sharp Island was completed. AFCD commissioned a consultancy study in Q4 2018 to conduct a habitat mapping study for Tung Ping Chau Marine Park. Macroalgae survey in the dry season and qualitative coral survey was completed, and the first progress report has been submitted.
	b) Review and develop a standardised classification of habitat types in Hong Kong, and prepare a Geographic Information System-based habitat map. Timeframe: M	AFCD	15(b)(i) Territorial habitat map of terrestrial ecosystems prepared by 2019.	<ul style="list-style-type: none"> AFCD commissioned a consultancy study "Territory-wide Study on Hong Kong's Terrestrial Habitats Using Remote Sensing and GIS" in October 2019. The Study is expected to be completed by December 2020.

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16 - Improve sharing of knowledge	a) Develop a web-based information hub to provide a one-stop shop for information on local biodiversity. Timeframe: M	AFCD	16(a)(i) A web-based information hub on biodiversity launched by 2020.	<ul style="list-style-type: none"> AFCD has reviewed relevant local and international examples to explore the potential elements of the web-based information hub. A stakeholder workshop was held in January 2018 to gather comments and recommendations on the information hub and GIS platform from various stakeholders. A consultancy study has commenced in early 2019 to explore the software requirements, structure and design of the information hub. The construction of the information hub is expected to commence in 2020.
	b) Develop a Geographic Information System-based platform to facilitate sharing of data among different groups of users. Timeframe: L	AFCD	16(b)(i) Protocol of data-sharing developed. IT framework and data requirement of the GIS platform developed by 2020.	<ul style="list-style-type: none"> AFCD has prepared a summary of the major marine and terrestrial biodiversity datasets from a list of potential data providers, and drafted a guide for managing sensitive biodiversity data. A stakeholder workshop was held in January 2018 and a list of local experts who are willing to share biodiversity data has been consolidated. A consultancy study has commenced in early 2019 to explore technical options (see also Specific Action 16(a)(i)).
17 - Identify essential ecosystem services	a) Commission a study on the ecosystem services provided by major habitat types in Hong Kong. Timeframe: M	AFCD	17(a)(i) Baseline profile of ecosystem services of major habitats in Hong Kong available by 2020.	<ul style="list-style-type: none"> AFCD will commence a consultancy study to obtain baseline information of ecosystem services provided by major habitats in Hong Kong in Q1 2020.
18 – Enhance understanding on traditional knowledge	a) Encourage research on traditional knowledge relevant to conservation and sustainable use of biodiversity. Timeframe: L	AFCD	18(a)(i) Studies on relevant topics conducted.	<ul style="list-style-type: none"> Research to document and promote traditional knowledge and practices in the sustainable use, preservation, restoration, and management of biological resources and ecosystem services has been listed as one of the priority research topics to be supported under Action 19.
	b) Encourage the wise use of natural resources using traditional knowledge, especially through the MA scheme. Timeframe: O	AFCD	18(b)(i) MA projects that promote traditional knowledge in conservation of biodiversity continue to be implemented. Education activities that promote traditional knowledge in conservation of biodiversity organised.	<ul style="list-style-type: none"> Several MA projects adopted traditional wet crop agriculture (e.g. in Long Valley and Lai Chi Wo) and fishpond drain-down practice (e.g. in fish ponds within and outside Ramsar Site), demonstrating the wise use of natural resources in contributing to the conservation of biodiversity.
19 – Provide funding support to research and studies	a) Conduct studies that would directly and significantly contribute to the conservation of biodiversity. Timeframe: O	AFCD	19(a)(i) Studies on priority topics that support the implementation of BSAP commissioned.	<ul style="list-style-type: none"> The Nature Conservation Subcommittee of the Advisory Council on the Environment (ACE-NCSC) discussed the approach for providing and coordinating funding to support biodiversity research and studies in September 2017, and supported the priority research topics proposed. AFCD has commissioned /is preparing to commission studies on priority topics including a number of surveys and consultancy studies that support the implementation of BSAP. Details of the studies are provided under Specific Actions 6b, 6c, 7a and 13b.
	b) Encourage research to fill key information gaps on local biodiversity, through funding support by the Environment and Conservation Fund (ECF). Timeframe: O	EPD, AFCD	19(b)(i) Studies on priority topics that fill key information gaps supported by ECF. Provide funding support for meritorious research projects on the subject selected by the ECF through the competition mechanism.	<ul style="list-style-type: none"> AFCD issued a letter to the research community in November 2017 to share the list of priority research topics supported by the ACE-NCSC and encourage submissions. AFCD briefed the ECF Research Projects Vetting Subcommittee on the Government's strategy to support relevant research on 6 April 2018. Subsequently, AFCD has provided support to meritorious project applications to the ECF Environmental Research, Technology Demonstration and Conference Projects scheme (ERTDC), as well as the Ocean Park Conservation Foundation for research funding. Since 2016, ERTDC has approved 31 applications related to biodiversity, involving a total commitment of \$37 million.
	c) Support research on sustainable agriculture and fisheries practices and management.	AFCD	19(c)(i) Projects that support the development of sustainable fisheries supported by the Sustainable Fisheries Development Fund.	<ul style="list-style-type: none"> Refer to Specific Action 11c.

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
	Timeframe: O		19(c)(ii) Projects that support the development of sustainable agriculture supported by the Sustainable Agricultural Development Fund.	<ul style="list-style-type: none"> Refer to Specific Action 12a.
20 - Promote biodiversity awareness	a) Review and enhance education activities that promote biodiversity, being conducted by AFCD. Timeframe: M	AFCD	20(a)(i) Review of HKWP's public awareness promotion and education programmes completed by 2018.	<ul style="list-style-type: none"> Consultancy studies on the performance of HKWP's public awareness promotion and education programmes in raising public awareness of wetland conservation were completed.
			20(a)(ii) Exhibition and education facilities of HKWP revamped by 2021.	<ul style="list-style-type: none"> The exhibition galleries of HKWP were revamped with interactive exhibits and improvement works to enhance experiential learning experience. The enhancement of education facilities in the Resource Centre and Wetland Discovery Centre was completed.
			20(a)(iii) Education programmes including Inter-school Bird Race and Family Farming Experience Programme organised at HKWP.	<ul style="list-style-type: none"> In 2019, a publicity event showcasing wetland biodiversity through playing and artistic mediums was held during the Easter holiday, attracting over 7 000 visitors. In 2019, HKWP organised education and publicity programmes targeting the youth and families, including Family Farming Experience Programme and a series of walk-in education workshops, attracting around 2 500 visitors. "Love our Wetlands" Video Competition for Secondary Schools was held from October 2018 to February 2019. A total of 28 teams and about 160 students and teachers participated in the Competition. The 19th Inter-school Bird Race was held on 14 December 2019, with 160 participants from 35 teams.
			20(a)(iv) Public education programmes on marine biodiversity organised.	<ul style="list-style-type: none"> AFCD continued to organise a wide range of public education events on marine biodiversity, including exhibitions, seminars, field trips, coastal clean-ups, ambassador programme, student workshop and competitions. Programmes organised in 2019 included "Hong Kong Marine Biodiversity Roving Exhibition", "Ting Kok Coastal Conservation Plan" and "Hong Kong Underwater Photo and Video Competition". AFCD also collaborated with tertiary institutions to organise a train-the-trainers programme (with the Education University of Hong Kong) and a summer course for secondary students (with the Hong Kong University of Science and Technology) in 2019. AFCD launched the "Hong Kong Marine Classroom" website in 2019, and produced a booklet for 2019-2020 education programmes.
	20(a)(v) Education programmes including school and public programmes organised in country parks.	<ul style="list-style-type: none"> AFCD is organising various biodiversity education programmes in country parks, including school visit programmes and teachers' training tailored for different school levels, benefiting over 200 schools, as well as public programmes such as tree planting events, orienteering days, workshops, nature appreciation guided tours and roving exhibitions. AFCD is preparing the brief for a consultancy study to develop curriculum-oriented and centre-based programmes for primary and secondary schools at Woodside Biodiversity Education Centre. Quotation invitation is expected to commence in Q1 2020. 		
b) Promote awareness and community involvement through citizen science monitoring programmes. Timeframe: M	AFCD	20(b)(i) Members of the public engaged to participate in citizen science projects.	<ul style="list-style-type: none"> AFCD is co-organising / supporting various citizen science monitoring programmes with NGOs / institutions, viz. Hong Kong Reef Check (Reef Check Foundation), Coral Saver and Ghost Gear Detective (WWF-Hong Kong), and Coral Restoration Workshop (Reef Check Foundation and the University of Hong Kong), as part of the Subventions for Biodiversity Education 2019 (Specific Action 20). Volunteers were trained to assist the monitoring of trees and bird nest boxes at HKWP. In addition, around 40 members of the public were trained by the Hong Kong Bird Watching Society to participate in the International Black-faced Spoonbill Census 2019 held at HKWP in January 2019. 	

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	c) Organise annual festivals to provide a platform for engaging partners and relevant stakeholders in promoting biodiversity to the public. Timeframe: O	AFCD	20(c)(i) Education programmes including guided tours, workshops, and volunteer programmes organised. NGOs engaged as partners in organising events.	<ul style="list-style-type: none"> A publicity campaign “Be Part of Nature” was launched in April 2019, through outdoor and social media, to promote positive behaviour towards nature and wildlife via social media. Highlight of the campaign included two mini-films. AFCD participated in a joint-departmental publicity campaign “Assemble for Hong Kong” in April 2019 to promote the mascot, Mr. B. AFCD organised the Hong Kong Biodiversity Festival (HKBF) 2019 themed "Savouring Nature Up-close" from October to December 2019. With the support of 46 partners, including Government departments, universities, community organisations and the public and private sectors, HKBF 2019 offered about 150 activities to promote biodiversity. Highlights included the "Savouring Nature" Exhibition in K11 Musea, which featured artistic display of local wildlife specimens; and the @Conservation Walk programme, which showcased the achievements of NGOs in conserving species and habitats. In 2019, 16 applications were approved under the Subventions for Biodiversity Education with a total approved funding amount of \$1.57 million.
	d) Conduct a survey on knowledge and attitudes towards biodiversity in Hong Kong. Timeframe: S	AFCD	20(d)(i) Baseline level and change of public knowledge and attitude to biodiversity documented.	<ul style="list-style-type: none"> AFCD commissioned a study to document the baseline level of the knowledge and attitude of the general public and stakeholder groups (teachers and planning and development professionals) towards biodiversity in Hong Kong, to inform future education programmes and to track the change of attitude and awareness in relation to the implementation of BSAP. The survey was completed in 2018, and the results were published on AFCD’s website.
	e) Encourage partnership between Government and business sector in biodiversity conservation. Timeframe: M	AFCD	20(e)(i) Mainstreaming events organised for various sectors including businesses, engineering, agriculture and fisheries.	<ul style="list-style-type: none"> Sixteen mainstreaming events, including talks, guided tours, publication and technical exchange, were co-organised by AFCD and relevant B/Ds or partners in 2019. Topics covered included BSAP, climate change, urban biodiversity, sustainable consumption of biological resources, species conservation, as well as biodiversity enhancement measures in public works. The Hong Kong Observatory and AFCD jointly published a book “Climate Change and Biodiversity in Hong Kong” in March 2019.
	f) Encourage programmes to promote biodiversity education and community involvement, through funding support by the Environment and Conservation Fund. Timeframe: O	EPD, AFCD	20(f)(i) Provide funding support for meritorious biodiversity-related EE&CA projects selected by the EE&CA Projects Vetting Sub-committee.	<ul style="list-style-type: none"> “Biodiversity” has been set as a priority theme for EE&CA project applications since 2016/17. In the first round of 2019/20 applications, seven biodiversity-related applications were approved with a total funding amount of around \$4.1 million. The vetting process of the second round of application in 2019/20 is underway.
21 - Promote biodiversity in education	a) Incorporate the concept of biodiversity in the school curriculum. Timeframe: M	AFCD, EDB	21(a)(i) The concept of biodiversity is already included in the school curriculum.	<ul style="list-style-type: none"> The concept of biodiversity has already been included in the school curriculum, including General Studies (P1-6), Science (S1-3), Biology (S4-6), Combined Science (S4-6) (Biology part) and Integrated Science (S4-6). The curricula will continue to be reviewed and updated as appropriate. EDB organised the “Smart City Project Programme” in the school years of 2017/18 and 2018/19 with the supports of AFCD, DSD and the Hong Kong Observatory, in which students could further develop their knowledge and skills acquired from STEM Education, as well as the study of biodiversity. The events were well received by the participating teachers and students.
	b) Engage NGOs to provide capacity building for teachers on biodiversity. Timeframe: L	AFCD, EDB	21(b)(i) Teachers’ seminars/ workshops on biodiversity organised.	<ul style="list-style-type: none"> In the 2018/19 school year, EDB organised professional development programmes (PDP) related to biodiversity for secondary school teachers, including two workshops on marine biodiversity and conservation and a workshop about field study investigation on plankton; as well as guided visit to the Biodiversity Gallery of the Science Museum, Fung Yuen Butterfly Reserve, and Woodside Biodiversity Education Centre of AFCD. In the 2019/20 school year, EDB organised PDP related to biodiversity for secondary school teachers, including a visit to Woodside Biodiversity Education Centre in October 2019 and a field study investigation workshop on rocky shore in December 2019. As part of the Subventions 2019 under Specific Action 20c, AFCD provided funding support to NGOs to organise teachers’ training courses and develop teaching resources to support teachers in carrying out biodiversity education.

Action	Specific Action / Timeframe (S: short-term; M: medium-term; L: long-term; O: ongoing)	B/Ds	Expected Deliverables	Description of progress
			21(b)(ii) Five sets of pamphlets and six sets of display panels on biodiversity conservation updated and produced by HKWP by 2019. HKWP website revamped by 2019.	<ul style="list-style-type: none"> HKWP's education materials, including five sets of pamphlets and six sets of mobile display panels, were updated and produced to support teachers in conducting education activities on biodiversity conservation. HKWP's Teachers' Page was revamped to facilitate access to new teaching resources. New teaching resources (e.g. self-visit lesson plan and pictorial guide for interpretation) were available in the Teacher's Page.
	c) Enhance the resources for early childhood education on nature conservation. Timeframe: S/M	AFCD, EDB	21(c)(i) Learning and Teaching (L&T) packages for kindergarten students' activity-based learning at HKWP and Lions Nature Education Centre (LNEC). 21(c)(ii) Kindergarten resource centre set up in LNEC.	<ul style="list-style-type: none"> EDB commissioned the project to develop L&T resources for kindergarten education at HKWP and LNEC. The L&T packages (including Teacher Guide, Teacher Supplementary Information Booklet, Student Booklet and Parent Leaflet) were available for download on AFCD and EDB's websites. The educational programmes "Wetland Footprints" in HKWP and "Countryside Adventure" in LNEC were rolled out since the 2018/19 school year. The programmes were well-received. EDB has commissioned a project to design the kindergarten resource centre to be set up at LNEC. Demonstration of the initial design of resource centre, development of L&T package (including Teacher Guide and Parent Leaflet), pilot training sessions for kindergarten teachers and AFCD staff, and seminars for parents of kindergarten students, were completed. ArchSD will serve as the works agent for the modification works at LNEC. The bid of Minor Building Works was submitted by AFCD in June 2019 for the construction of an outdoor free exploration field and indoor exhibition area, and was being evaluated by ArchSD.
22 -Promote sustainable consumption	a) Conduct public engagement and explore relevant measures on promotion of sustainable consumption of biological resources. Timeframe: S	ENB/ EPD	22(a)(i) The Council for Sustainable Development (SDC) has conducted a public engagement on promotion of sustainable consumption of biological resources and would put forward recommendations for the Government's consideration.	<ul style="list-style-type: none"> "Sustainable consumption of biological resources" has been set as a special theme for the second round of ECF's EE&CA project applications in 2017/18 and a priority area in the 13th round of applications for the Sustainable Development Fund (SDF). Five projects involving a total of \$5.5 million funding have been carried out. Through funding support by SDF, NGOs implemented a number of recommendations from SDC by providing an information platform on sustainable products, a recognition scheme, and sustainable consumption guides. EPD participated in continual professional development seminars in June and November 2019 to encourage the construction industry to use more biodiesel; and conducted outreach activities to trade associations from printing, property management, and logistics and transportation industries in Q4 2019 to promote green procurement guidelines and usage of green products. EDB will continue to organise a PDP for teachers on biodiversity related themes promoting eco-labelled food items and green living in 2019/20, similar to 2018/19. Based on a consultancy study, new green products have been shortlisted, including some derived from biological resources, such as personal care products originated from palm oil and more paper and wooden products, for addition to the Government's Green Procurement Guidelines.
23 - Enhance facilities for biodiversity education and research	a) Open and maintain a permanent exhibition on biodiversity in the Hong Kong Science Museum. Timeframe: S	LCSD	23(a)(i) The Biodiversity Gallery in the Hong Kong Science Museum opened in September 2016.	<ul style="list-style-type: none"> The Biodiversity Gallery was opened and biodiversity workshops on various topics were hosted by NGOs regularly at the Gallery.
	b) Support the establishment of biodiversity centres. Timeframe: M	AFCD	23(b)(i) Establishment of biodiversity centres at local tertiary institutions supported.	<ul style="list-style-type: none"> AFCD is providing support to tertiary institutions for setting up new learning centres that will help promote biodiversity. The Learning Centre on Biological Resources and Sustainable Living was set up under the Institute of Bioresource and Agriculture of Hong Kong Baptist University in 2018, under the support of AFCD.
	c) Explore the opportunity for setting up a natural history museum in the long term. Timeframe: L	ENB, AFCD	23(c)(i) Opportunities for setting up a natural history museum explored.	<ul style="list-style-type: none"> AFCD will continue to liaise with relevant stakeholders to explore opportunities for setting up a natural history museum.