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For discussion on 4 March 2019

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

PURPOSE

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

PROGRESS OF IMPLEMENTATION

2. Since the launch of the BSAP on 21 December 2016, all relevant Government bureaux and departments (B/Ds) and other external stakeholders have been taking forward the implementation of initiatives under their respective purviews. The progress was generally in line with the timeframes set out in the BSAP. Highlights of major achievements made so far under the four key action areas are set out in the ensuing paragraphs. Detailed descriptions of the actions, expected deliverables and progress to date are provided at **Annex**.

MAJOR ACHIEVEMENTS

Area 1 – Enhancing conservation measures

3. Many of the studies and enhancement projects commissioned or managed by the Agriculture, Fisheries and Conservation Department (AFCD) for maintaining and enhancing the management of protected areas, including country parks, marine parks, Hong Kong Wetland Park and Mai Po Nature Reserve, are progressing on track.

4. The Environmental Protection Department set up the Countryside Conservation Office in end July 2018, with a view to promoting sustainable development of remote countryside. The Government has earmarked \$1 billion to support relevant conservation and revitalisation efforts, as well as to implement minor improvement works in remote countryside. The Government has also been supporting education and community projects via funding allocation from the Environment and Conservation Fund (ECF).

5. AFCD has standardised the mechanism for formulating Species Action Plans and published relevant technical guidelines to enhance protection of priority species. In view of the threat imposed by illegal harvesting, AFCD has prepared the Incense Tree Species Action Plan to provide a pragmatic framework of conservation measures for implementation among various parties, thereby achieving long-term sustainability of local Incense Tree populations.

6. The Protection of Endangered Species of Animals and Plants (Amendment) Ordinance 2018 (Amendment Ordinance) came into effect in May 2018, to effect a three-step plan to phase out local ivory trade. Steps 1 and 2 of the three-step plan, as well as the introduction of indictable offence and an increase of maximum penalties on smuggling and illegal trade of endangered species under the Amendment Ordinance, have already commenced.

Area 2 – Mainstreaming biodiversity

7. The Greening, Landscape and Tree Management Section (GLTMS) of the Development Bureau has formulated a five-pronged Urban Forestry Management Strategy, which has been adopted by the Government for managing the urban forest in Hong Kong from a holistic approach. In the meantime, the GLTMS has also completed a Street Ecology Study and released the Street Tree Selection Guide for improving the resilience of Hong Kong's urban forest.

8. Several river revitalisation or river park projects adopting the concept of “blue-green infrastructure” are in progress. The Drainage Services Department (DSD) has been revitalising urban nullahs into green river corridors. The reconstruction and rehabilitation of Kai Tak nullah is underway and the revitalisation of Tsui Ping River has reached the detailed design stage. The Civil Engineering and Development Department, in consultation with DSD, has completed the preliminary design of Tung Chung River Park and is now carrying out the detailed design of the Park.

9. The Government has updated the biodiversity parameters for incorporation into the Computer-aided Sustainability Evaluation Tool (CASET) since December 2018 with a view to better supporting biodiversity considerations in the formulation process of major policies and plans of the Government. The CASET is part of the sustainability assessment system, through which Government B/Ds have to assess the potential environmental, social and economic impact of their new strategic initiatives or major programmes at the project planning stage.

10. AFCD has completed studies on local fisheries resources to assess the effectiveness of existing fisheries management measures, including the trawling ban introduced in end 2012, in the recovery of fisheries resources in Hong Kong waters. AFCD has also commissioned a consultancy study to identify suitable quality agricultural land for possible designation of Agricultural Priority Areas, with a view to contributing to the modernisation and sustainable development of local agriculture.

Area 3 – Improving our knowledge

11. AFCD has reviewed the survey programme for major groups of terrestrial species and is updating the species checklists. Meanwhile, baseline monitoring surveys for various priority marine habitats and species are underway.

12. Experts within and outside the Government have been appointed to contribute to the compilation of a list of threatened species for Hong Kong. AFCD has developed the framework for assessment and arranged training for relevant personnel. Assessment of the identified priority groups is being prepared.

13. Following the endorsement of funding approach for supporting biodiversity research in September 2017¹, biodiversity conservation continues to be one of the priority research themes under the funding scheme of Environmental Research, Technology Demonstration and Conference Projects under the ECF. AFCD has also supported a number of relevant research project applications for other funding sources on a meritorious basis.

¹ The approach to coordinate funding for supporting biodiversity research, through mobilising relevant existing funding sources, such as the ECF, the Sustainable Agricultural Development Fund and the Sustainable Fisheries Development Fund, was endorsed by the Nature Conservation Subcommittee under the Advisory Council on the Environment in September 2017.

Area 4 – Promoting community involvement

14. The fourth annual Hong Kong Biodiversity Festival was held from October to December 2018. The three-month Festival has engaged 50 partners, including Government B/Ds, NGOs, tertiary institutions as well as public and private organisations, and offered over 120 activities in total. Under the theme “City within Nature”, partners have collaborated to showcase Governmental facilities that are sustainably designed or operated and have successfully contributed to the conservation of local biodiversity. Meanwhile, a series of publicity and social media campaigns have been rolled out to disseminate the message to the general public.

15. The Sustainable Development Fund and ECF’s Environmental Education and Community Action Projects have set “sustainable consumption of biological resources” as a priority area or special theme to encourage the organisation of relevant projects and activities. Six projects have been approved so far. It was also included as one of the assessment aspects of the Hong Kong Awards for Environmental Excellence applicable to several sectors.

16. AFCD has enhanced the resources for early childhood education on nature conservation by developing a series of learning and teaching packages for kindergarten students’ activity-based learning at Hong Kong Wetland Park and Lions Nature Education Centre.

17. Out of the several educational resource centres and exhibition venues being revamped or set up by the Government and/or other organisations under the BSAP, the Learning Centre on Biological Resources and Sustainable Living (the Learning Centre) was opened in November 2018. The Learning Centre is set up under the Institute of Bioresource and Agriculture of Hong Kong Baptist University, with the support of several organisations including AFCD.

INTER-DEPARTMENTAL WORKING GROUP ON BSAP

18. The Inter-departmental Working Group on BSAP (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

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

Environment Bureau

Agriculture, Fisheries and Conservation Department

February 2019

Implementation of Hong Kong Biodiversity Strategy and Action Plan (BSAP) 2016-2021

Progress update for Advisory Council on the Environment (ACE) – March 2019

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
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 is drafting a biodiversity management plan for the proposed RNCP in consultation with various stakeholders.
			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"> AFCD has commissioned a consultancy study to review the fisheries management measures in marine parks since 2017. Two rounds of stakeholder engagement sessions were conducted in July 2017 and March 2018, and views of the Country and Marine Parks Board were sought in April 2018. The study was completed in 2018. AFCD and ENB are working on the implementation details including necessary legislative amendments, resources requirement and interfacing with the designation of the Southwest Lantau Marine Park (SWLMP).
	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"> Since 2016, PEP work has been carried out in a total of 29 ha of plantations in country parks with a total of five non-governmental organisations (NGOs) participating in the programme. For 2018/19, 13.5 ha of plantations have been identified for PEP work. In addition, three NGOs are participating in the programme with 4 ha identified for PEP work.
	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 has reviewed the scientific interest of all SSSIs making reference to updated biodiversity data. The SSSI Management and Monitoring Plan has 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 after the 13th Meeting of the Conference of the Contracting Parties to the Ramsar Convention in October 2018.
	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 (WWF-Hong Kong) for 2018/19 to enhance the habitat enhancement work in 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 2018/19 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 and enhance 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, and conducted visitor satisfaction surveys to facilitate the review. The study is expected to be completed by Q2 2019.

¹ The "Timeframe" of Specific Actions are categorised as follows:

- "O" (Ongoing) = continuing existing programmes;
- "S" (Short term) = targeted completion within 1-2 years (i.e. by end 2018);
- "M" (Medium term) = targeted completion within 3-5 years (i.e. by end 2021);
- "L" (Long term) = targeted completion beyond term of the first BSAP

² "B/Ds" listed includes both leading and supporting bureaux and departments.

³ Descriptions reflect the progress made as at end of 2018 where appropriate.

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
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 SWLMP has been revised in light of the progress of the marine park fisheries management review study. AFCD is working with EPD to take forward the South Lantau Marine Park (SLMP) proposal (which combines the proposed marine parks at Soko Islands and the one associated with the development of IWMF). The designation timetable for SLMP has been revised in light of the progress of the marine park fisheries management review study, and the SLMP is expected to be designated by 2020. AFCD will continue to work on the statutory procedures for marine park designation.
			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 had commenced stakeholder consultation in late 2018.
	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. Public consultation exercise is currently underway to collect views on the proposed RNCP.
			2(b)(ii) Assessment of remaining enclaves and designate suitable enclaves as country parks.	<ul style="list-style-type: none"> Assessment on the suitability of the remaining enclaves for incorporation into country parks is in progress, with priority given to the enclaves on Lantau Island. Suitable enclaves will be incorporated into country parks according to the statutory procedures.
	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 (HCMP) for LVNP was finalised. It provides the framework for planning, design, implementation, maintenance and monitoring aspects of the LVNP. Feedbacks from green groups on the HCMP were generally positive. A forum was held in September 2018 to gather views of green groups on the design of the LVNP, including details of visitors' facilities, layout and management arrangements. Subject to funding approval, the works at the LVNP will commence in Q1 2020.
	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"> Management Agreement (MA) projects are being implemented at seven sites, viz. Fung Yuen, Long Valley, fishponds within and 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 study for the proposed golf course development at the Shuen Wan Restored Landfill has been submitted to EPD for review. A Management Agreement (MA) project is being implemented to restore and maintain various habitats in Sha Lo Tung. An NGO is carrying out habitat management and monitoring as well as educational initiatives in collaboration with villagers.
	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"> NGOs, in collaboration with local villagers, are implementing various revitalisation projects and minor improvement works at Lai Chi Wo. 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).

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
		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 under EPD in end July 2018 to coordinate conservation projects that promote sustainable development of remote countryside. The Government has earmarked \$1 billion for such conservation and revitalisation efforts, as well as minor improvement works. CCO has been liaising with relevant departments such as AFCD, ArchSD, CEDD, DSD, EMSD, FEHD, HAD and WSD, etc. to explore the feasibility of the potential minor works suitable for implementation in the pilot areas of Lai Chi Wo and Sha Lo Tung. An Advisory Committee comprising non-official members is under preparation with a view to being set up within first half of 2019.
		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"> The nine approved projects under the special theme of “Nature conservation in South Lantau” of the Environmental Education and Community Action (EE&CA) projects in 2017/18 are being implemented. A new round of invitation of applications for EE&CA projects under the special theme “Conservation in South Lantau” in 2018/19 was closed on 29 October 2018. The results are anticipated to be available in Q1/Q2 2019. CEDD commenced a consultancy study titled “Ecological Study for Pui O, Shui Hau, Tai O and Neighbouring Areas – Feasibility Study” in December 2017. A 12-month ecological survey commenced in March 2018.
3 - Enhance conservation of natural streams	a) Conduct ecological surveys and compile ecological database on natural streams, especially Ecologically Important Streams (EIS).	AFCD	3(a)(i) List of EIS updated by 2019.	<ul style="list-style-type: none"> AFCD started reviewing data and conducting field verification in May 2018. Data for around half of the sites had been reviewed and verified by end 2018.
	Timeframe: M			
	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.	WSD, AFCD	3(b)(i) Pilot projects on adopting ecologically friendly design for catchwaters.	<ul style="list-style-type: none"> WSD has carried out trials of wildlife-friendly measures at catchwaters, including installing animal escape routes and using ecologically friendly materials in its improvement works, in consultation with AFCD. Further to the trial, the standard drawing of animal escape route in catchwaters is being formulated for territory-wide application on need basis. 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.
	Timeframe: S/M	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"> Trial eco-enhancement works to enrich riparian and lotic habitats have been completed and monitoring is in progress at various channel sections including Ma Wat River, Lower Lam Tsuen River, Kwan Tei River, Kam Tin River, Yuen Long Bypass Floodway (YLBF) and Hung Shui Kiu. Initial observations have shown signs of biodiversity improvements. Other trials and structural designs are being considered 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. Nursery trials and out-planting trials are being carried out for the application of native plant species to enhance biodiversity in DSD’s sites.
			3(b)(iii) Adopting green channels design principles in appropriate drainage projects to promote connectivity for freshwater life within the drainage basin.	<p>Experience sharing</p> <ul style="list-style-type: none"> DSD and AFCD have collaborated through conducting technical exchange meetings, joint visits, capacity-building seminars and providing comments on such projects. Joint site visits were conducted to DSD trial sites in North District and Yuen Long (August 2017), HKWP (September 2017) and Jordan Valley Nullah (February 2018) to bolster collaboration in enhancing biodiversity. <p>Promote public awareness</p> <ul style="list-style-type: none"> To promote public awareness on green measures in drainage projects, over 400 visits to YLBF wetland, San Tin Polder, Tai Hang Tung Stormwater Storage Scheme, Happy Valley Underground Stormwater Storage Scheme and various sewage treatment works were organised in 2018, involving more than 12 000 visitors. To cultivate public acceptance of the blue-green concepts in DSD works, DSD Open Day 2019 was held at Sha Tin Sewage Treatment Works on 19 & 20 January 2019. The “EcoDMS” website was launched in June 2018 to promote public awareness of ecological and water quality conditions of selected river sections. Guided tours to Lam Tsuen River, Kowloon City Sewage Pumping Stations and YLBF were organised by AFCD with the joint support from Jockey Club-Water Initiative on Sustainability and Engagement and DSD in November and December 2018, under the Hong Kong Biodiversity Festival (HKBF) 2018 (also see Specific Action 20c).

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
		DSD	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 continuously being conducted with a view to developing further techniques and design criteria suitable in the local context to promote ecosystem services and biodiversity. Site trials for the design approach of eco-landscape commenced in May 2018 and ended in October 2018, and are currently under 12-month monitoring 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 agreed that some conservation principles could be incorporated into FEHD's internal guideline on malaria control work in streams. The timetable for work has been adjusted due to the recent outbreak of dengue fever. The two departments will continue to follow up the revision of the guideline in 2019.
	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 84% 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. EPD will commence the construction works soon. In addition, EPD plans 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 has 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 has been 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 and the Shenzhen Urban Management Bureau conducted mutual visits in March and November 2018 respectively, for strengthening cooperation in the conservation management for Robin's Nest in Hong Kong and Wutongshan in Shenzhen, and for establishing an ecological corridor for wildlife. Both parties also agreed to exchange seeds / seedlings and data, and exert joint-effort to control invasive plants. AFCD met with the Forestry Administration of Guangdong and Shenzhen Futian National Nature Reserve in January 2018 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 has reviewed international practices in wildlife crossings for updating the guidelines. The updating work is expected to be completed by Q1 2019.
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 SPCA and/or the HKPF, to combat illegal poaching of local wild animals. A task force has been set up in AFCD to conduct targeted patrol of sites with Incense Tree. For enhancing enforcement on illegal harvesting of Incense Trees, AFCD has provided training to help frontline staff of HKPF and C&ED identify agarwood and detect illegal activities, as well as conducting joint operations with HKPF at black spots. A training workshop on Incense Tree enforcement was held in Hong Kong in July 2018 for relevant local and Mainland officials, to strengthen the collaboration among relevant departments and enforcement agencies in the Mainland.
	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 was established in 2016. It 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 Legislative Council 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.

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
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 (Nature Conservation Practice Note No.5) was 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"> AFCD has reviewed existing data obtained from camera trap surveys and other sources, and identified information gaps. An advisory group has been formed to provide advice on the drafting of the SAP. The first advisory group meeting was held in December 2018, and the SAP is expected to be formulated for implementation by 2019.
			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 the SAP and uploaded the document 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"> The task will commence in 2019.
			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 to look into the diurnal distribution pattern of Finless Porpoise commenced in July 2018, and is expected to be completed in mid-2019. AFCD is preparing the SAP for stakeholders' comments with a view to incorporating the findings of the Passive Acoustic Monitoring study. The SAP is expected to be finalised for implementation by late 2019.
			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.
			6(b)(vi) Coral SAP formulated and implemented by 2019.	<ul style="list-style-type: none"> AFCD has commissioned consultancy studies on coral bleaching and bioerosion, as well as coral restoration and water quality monitoring, to provide necessary information for the formulation of the SAP. Comprehensive surveys were conducted at 33 major coral areas in Hong Kong to study species diversity, coral coverage and distribution. Two rounds of detailed investigation on coral bleaching and bioerosion were also completed in the summer and winter of 2017/18. The study team is analysing the data for the preparation of the final report. Fragments of 30 <i>Platygyra</i> corals were collected from heavily eroded colonies and transplanted onto the suitable natural substratum at the coral areas within Hoi Ha Wan Marine Park to accelerate the recovery process. Monitoring of the transplanted <i>Platygyra</i> fragments and the re-introduction of <i>Acropora</i> colonies will be carried out until mid-2019 to assess the rate of recovery and the effectiveness of transplantation.
	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 Passive Acoustic Monitoring to look into the diurnal distribution pattern of Chinese White Dolphin commenced in 2018.
			6(c)(ii) Romer's Tree Frog SAP updated by end of 2019.	<ul style="list-style-type: none"> The task will commence in mid-2019.
			6(c)(iii) Three-banded Box Turtle SAP updated by 2020.	<ul style="list-style-type: none"> AFCD has completed a study to elucidate the genetic affinity of the Three-banded Box Turtles being kept in Kadoorie Farm and Botanic Garden. AFCD has commissioned a consultancy survey in key turtle sites to assess the intensity of trapping activity.
			6(c)(iv) Black-faced Spoonbill SAP updated by 2021.	<ul style="list-style-type: none"> The consultancy study on the habitat use of Black-faced Spoonbill commenced in October 2018.
		AFCD	6(c)(v) Green Turtle SAP updated by 2019.	<ul style="list-style-type: none"> AFCD has conducted the following actions at the turtle breeding site in Sham Wan: completed a survey of ghost nests and removed these nests in the bay area; deployed a remote monitoring system to enhance surveillance; and commissioned dive surveys in the bay to monitor turtle occurrence and habitat conditions. AFCD is making preparatory work for expanding the Sham Wan Restricted Area to enhance the protection of Green Turtle.
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.

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
	b) Enhance the monitoring, management and control plans for target invasive alien species. Timeframe: O	AFCD	7(b)(i) Effective control of Sonneratia in Inner Deep Bay by 2021.	<ul style="list-style-type: none"> In 2018, 9 400 Sonneratia trees were removed from Inner Deep Bay.
			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"> AFCD has produced posters about mercy release, and distributed them to relevant organisations and displayed them at various locations (e.g. Government venues, ferry piers). AFCD also disseminated messages to discourage mercy release through advertisements on relevant publications, social media, public seminar, as well as uploading mini-movies to the internet in late April 2018. Selected episodes were also shown on MTR platform and in-train TV from April to June 2018.
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 2019.
	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 are working together to prepare for the update. AFCD is examining potential areas under BSAP for incorporation into relevant sections of Chapter 10 of HKPSG.
	d) Enhance the practices in addressing ecological impacts of projects through environmental impact assessment 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"> The task is on-going.

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
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	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. Drafting of the SCS is underway for implementation by end 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) has signed a Memorandum of Understanding with its counterparts from Guangzhou and Macau. HKILA has also secured funding support from the “Professional Services Advancement Support Scheme” to study the Standardisation of Soft Landscape Planting Materials Specification for Guangdong Province and Hong Kong. GLTMS has initiated discussions with AFCD, who actively promotes the use of native species. Upon the recent completion of Street Ecology Study to improve the resilience of our urban forest, GLTMS released the Street Tree Selection Guide in December 2018 to promote vegetation diversity and the use of native species. A briefing session for departments and professional institutes was conducted in late December 2018 to encourage the use of the listed species, and a sharing session with the landscape industry was carried out in January 2019 to encourage improvement in the supply of native stock. Initial review of government contracts and workflows has been completed. Assessment is in progress.
	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"> This initiative focused on a series of seminars on how our urban landscape can contribute to augmenting liveability and improving resilience. The third and final seminar of the series, on “Water as Leverage for Resilient Cities – Urgent Challenges and Opportunities”, was held in January 2018. DEVB implemented a trial scheme to transform an existing traffic island at Wylie Road into a rain garden. The initiative developed into a collaborative effort among Government works departments, volunteer industry professionals, and THEi landscape architecture students and their teaching staff. The project was completed in February 2018. GLTMS released the Street Tree Selection Guide in December 2018 for the reference by departments and landscape practitioners. Leveraging on the Street Ecology Study, GLTMS has formulated a promotion plan that includes the professional development for landscape architecture professionals.
	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"> Seminars, talks and exhibitions to raise public awareness on urban forestry, through collaborations with universities, professionals, overseas experts and other relevant departments, are being organised by GLTMS and collaborating organisations. GLTMS is working closely with EDB to assist the arboriculture and horticulture industry to develop a set of Specification of Competency Standards and qualifications framework to uplift the quality of practitioners and the professional standing of the industry.
	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.	<ul style="list-style-type: none"> LCSD established three new conservation corners at Jordan Valley Park, Po Kong Village Road Park and Ma On Shan Park in 2017, increasing the total number of conservation corners at urban parks to 38. The enhancement of existing conservation corners at Lion Rock Park and Morse Park was completed in January 2018. AFCD and LCSD conducted a joint visit to the conservation corners in Hong Kong Park and Hong Kong Zoological and Botanical Gardens (HKZBG) in May 2018, and shared some observations and advice for enhancing biodiversity in urban parks. The Zoological Education Exhibition 2018 co-organised by LCSD and AFCD was held at HKZBG in December 2018. With the theme “Hong Kong Biodiversity”, the exhibition featured information panel display, talks, “Meet-the-Zookeepers”, orienteering fun day, guided tours and games stalls. The event attracted some 4 500 visitors. Roving exhibition of the panels will also be arranged at LCSD parks including Yuen Long Park, Tuen Mun Park, Tai Po Waterfront Park, Kowloon Park and Hong Kong Park until March 2019.

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
	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 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, Middle Tuen Mun River Channel and Jordan Valley Nullah have been identified to have potential for revitalisation. Further in-depth investigation is being carried out to work out revitalisation proposals, aiming for substantial completion of feasibility studies in 2019. AFCD has provided comments on the study.
		DSD	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 commenced in mid-2018. Remaining landscaping works for upstream section are expected to be completed by early 2019. Detailed design of Tsui Ping River revitalisation commenced in December 2017. An in-stream planting trial commenced in January 2018, aiming to derive planting methodology and plant species suitable for the project.
		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.
		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.
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.
	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 has been completed. The results generally demonstrate 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 has been 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 is underway. Geophysical survey on artificial reefs areas was completed. Results revealed that most of the artificial reefs remained relatively prominent with no major subduction or displacement.
	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 December 2018, eleven applications involving a total commitment of over \$58 million have been approved. Among the approved projects, eight are for promoting the development of aquaculture, two are for promoting fisheries-related eco-tourism and one is 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 was completed. The consultancy study on the field trial of the recommended cormorant prevention measure in winter 2017/18 was also completed.
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"> Following the authorisation of the Chief Executive in Council on the land resumption road works for Phase 1 of the Agri-Park on 27 November 2018, the authorisation notice of the road scheme was gazetted on 21 and 28 December 2018. On 8 January 2019, the LegCo Panel on Food Safety and Environmental Hygiene supported the Phase 1 construction works. Funding for Phase 1 works would be sought in the first half of 2019.
		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 has commenced since October 2018. Given that a considerable amount of agricultural land in the New Territories is involved, it is estimated that the study may take several years to complete.

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
		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"> Farm visits, seminars and workshops were conducted to assist farmers in adopting modern agro-technologies (including farm mechanisation and automation) and environmentally friendly farming practices (including organic farming). Potential agro-technology projects were identified for collaboration with local research institutions or agricultural organisations.
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 has consolidated and reviewed the survey objectives and sampling designs currently adopted in the biodiversity survey programme. Survey protocols were compiled, and species checklist updates are currently under review, and are expected to be completed by early 2019.
	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. Findings and recommendations of long-term monitoring will be provided in the final report, which will be submitted in mid-2019 (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 in early 2018. Half of the study sites have been surveyed and the specimens are being identified; the remaining field surveys are in progress.
			13(b)(iii) Reef fish species list updated by 2019.	<ul style="list-style-type: none"> AFCD has commissioned a consultancy study on local reef fish diversity. The study has completed four out of the eight quarterly surveys and the remaining field surveys are in progress.
			13(b)(iv) Macroalgae species list updated by 2019.	<ul style="list-style-type: none"> AFCD has commissioned a study on the diversity and distribution of macroalgae in Hong Kong. The study has completed half of the surveys and the remaining field surveys are in progress.
		AFCD	13(b)(v) Marine park surveys completed by 2021.	<ul style="list-style-type: none"> Coral surveys at three marine parks (Tung Ping Chau, Yan Chau Tong and Hoi Ha Wan Marine Parks) were completed in 2016. Further surveys will be carried out in 2019 and 2020 to update the coverage and distribution of coral communities within Tung Ping Chau and Hoi Ha Wan Marine Parks.. Quarterly fisheries resources surveys in all existing marine parks and marine reserve, and potential marine parks, i.e. Southwest Lantau and South Lantau, were completed in Q4 2018. Data analysis is under way. Juvenile fish surveys have commenced to investigate the biomass and abundance of juvenile fish at different habitats of marine parks and marine reserve since Q4 2018.
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 has been formulated. Experts for different taxonomic groups, including AFCD officers and external experts, were appointed as assessors and reviewers in May 2018. AFCD arranged training for the personnel involved in the assessment in late May to early June 2018. The different specialist groups have started conducting assessments or preparatory work for the assessment.
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. AFCD commissioned a consultancy study in Q4 2018 to conduct a habitat mapping study for Tung Ping Chau Marine Park.
	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 has conducted an internal review of the existing habitat classification schemes, and consolidated a preliminary scheme with 20 habitat types. AFCD commissioned a pilot study in October 2018 to refine the preliminary habitat classification scheme, based on which GIS-based habitat maps will be developed for two trial sites. Taking into consideration the results of the pilot study, AFCD will extend the study to cover the whole territory of Hong Kong.

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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, including academics, NGOs and environmental consultants. A consultancy study will be commissioned in Q1 2019 to explore the software requirements, structure and design of the information hub.
	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 to gather comments and recommendations. A list of local experts who are willing to share biodiversity data has been consolidated. A consultancy study will be commissioned 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 is planning to commission a study on ecosystem services related to Hong Kong.
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. A documentary, “Rhymes of Shui Hau” (《水口婆婆的山歌》), related to the traditional knowledge of the rural community and their interactions with the natural environment, was promoted in the HKBF 2018 (see also Specific Action 20c).
	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"> Traditional wet crop agriculture is being practised in Long Valley and Lai Chi Wo MA projects, and the traditional fishpond drain-down practice is being encouraged in the MA projects 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) was consulted on 22 September 2017 on the approach for providing and coordinating funding to support biodiversity research and studies. The priority research topics proposed were supported. 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"> The priority research topics were discussed by ACE-NCSC on 22 September 2017. AFCD issued a letter to the research community in November 2017 to share the list of priority research topics supported, outline the approach to support the relevant research through existing funding sources, and encourage submissions. The ECF Research Projects Vetting Subcommittee was briefed on the Government’s strategy to support biodiversity-related research and the priority research topics on 6 April 2018. AFCD has provided support to meritorious project applications to the ECF Environmental Research, Technology Demonstration and Conference Projects scheme and the Ocean Park Conservation Foundation research funding in the 2018 invitations for applications.
	c) Support research on sustainable agriculture and fisheries practices and management. Timeframe: O	AFCD	19(c)(i) Projects that support the development of sustainable fisheries supported by Sustainable Fisheries Development Fund.	<ul style="list-style-type: none"> Refer to Specific Action 11c.
			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.	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.

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	Timeframe: M		20(a)(ii) Exhibition and education facilities of HKWP revamped by 2021.	<ul style="list-style-type: none"> The exhibition galleries of HKWP are being 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 2018, a publicity event showcasing wetland biodiversity through playing and artistic mediums was held during the Easter holiday, attracting over 17 000 visitors. In 2018, HKWP also organised other education and publicity programmes targeting the youth and families, including Family Farming Experience Programme and a series of walk-in education workshops, attracting over 2 500 visitors. The 10th Storytelling Competition was held in January 2018 and about 220 people attended the event. The 18th Inter-school Bird Race was held in December 2018 and about 170 people attended the event. A Video Competition for Secondary Schools was launched in October 2018 and 33 teams (150 students) participated in the Competition.
			20(a)(iv) Public education programmes on marine biodiversity organised.	<ul style="list-style-type: none"> In 2018, AFCD continued to organise a wide range of public education events on marine biodiversity, including exhibitions, seminars, field trips, coastal clean-ups, fishermen culture tours, ambassador programme, student workshop and competitions. Programmes organised included “Hong Kong Marine Biodiversity Roving Exhibition 2018”, “Ting Kok Coastal Conservation Plan” and “Hong Kong Underwater Photo and Video Competition”. AFCD also collaborated with tertiary institutions to organise training programmes for the youth. These included 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). A new facebook page “Hong Kong Marine Classroom” was launched in 2018 to promote marine education programmes to local schools. AFCD has also launched a new documentary-type video “Hong Kong Marine Biodiversity” and organised public screening events.
	b) Promote awareness and community involvement through citizen science monitoring programmes. Timeframe: M	AFCD	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 200 schools, as well as public programmes such as tree planting events, family 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 2019.
	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"> As part of the Subventions for Biodiversity Education (the Subventions) 2018 under Specific Action 20c, funding support was provided to NGOs to organise citizen science programmes to engage members of the general public. AFCD is co-organising various citizen science monitoring programmes with NGOs / institutions, viz. Hong Kong Reef Check (Reef Check Foundation), Coral Saver (WWF-Hong Kong) and Scientific Diver (City University and Hong Kong Underwater Association). Volunteers have been trained to assist the monitoring of trees and bird nest boxes at HKWP. In addition, around 50 members of the public were trained by the Hong Kong Bird Watching Society to participate in the International Black-faced Spoonbill Census 2018 held at HKWP in January 2018. Similar training was conducted in January 2019. With the support of 50 partners, including government departments, tertiary institutions, NGOs and the public and private sectors, HKBF 2018 offered over 120 programmes from October to December 2018 to promote the rich biodiversity of Hong Kong. Under the theme “City within Nature”, HKBF 2018 provided around 40 guided tours to Government green projects, involving around 900 participants. As part of HKBF 2018, a promotion vehicle visited various places all over Hong Kong, and engaged over 10 000 members of the public in interactive educational games on local biodiversity. A promotion video was launched in October 2018. It has received good response with over 300 000 views and 9 000 “likes” on social media. In 2018, 17 applications were approved under the Subventions with a total approved funding amount of \$1.59 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 has 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 report is being finalised.
	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"> Twenty mainstreaming events were co-organised by AFCD with relevant B/Ds or partners in 2018. Topics covered included BSAP, urban biodiversity, species conservation and enhancing biodiversity through landscape design.

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
	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 in the 2016/17, 2017/18 and 2018/19 EE&CA project applications to encourage NGOs to carry out EE&CA projects that could effectively promote public awareness and community involvement in conservation of biodiversity. In the first round of 2018/19 applications, four biodiversity-related applications were approved with a total funding amount of \$2.68 million. The vetting process of the second round of application in 2018/19 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 is already 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. AFCD supported EDB’s “Smart City Project Programme 2017/18” and organised training in April 2018 under the theme “Smart City and Biodiversity”. The event was well received by the participating teachers and students. AFCD will continue to support this programme in 2018/19, providing opportunities for students to further develop their knowledge and skills acquired from STEM Education, as well as the study of biodiversity.
	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"> EDB organised two guided visits to the Biodiversity Gallery of the Science Museum in May 2018. In addition, two professional development programmes on marine biodiversity and conservation with the theme about discovery of ocean drifter were organised in collaboration with an NGO in November 2018. As part of the Subventions 2018 (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.
		AFCD, EDB	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 has been revamped to facilitate access to new teaching resources. New teaching resources (e.g. self-visit lesson plan and pictorial guide for interpretation) are available in the Teacher’s Page. The HKWP website has been upgraded to a mobile-responsive format.
	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).	<ul style="list-style-type: none"> EDB has commissioned the project to develop L&T resources for kindergarten education at HKWP and LNEC. Demonstration of the trial version of L&T package was conducted at HKWP and LNEC in August 2017, and pilot training sessions were held in December 2017. The L&T packages (including Teacher Guide, Teacher Supplementary Information Booklet, Student Booklet and Parent Leaflet) were finalised in July 2018. The educational programmes “Wetland Footprints” in HKWP and “Countryside Adventure” in LNEC have been rolled out in the 2018/19 school year. Briefing sessions to introduce the L&T packages to kindergartens were held in November 2018.
			21(c)(ii) Kindergarten resource centre set up in LNEC.	<ul style="list-style-type: none"> 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 and trial version of L&T package was conducted in April 2018. Pilot training sessions for kindergarten teachers and AFCD staff, and seminars for parents of kindergarten students, were held in August and September 2018 respectively. The initial design and L&T packages (including Teacher Guide & Parent Leaflet) were finalised in December 2018.

Action	Specific Action ¹	B/Ds ²	Expected Deliverables	Description of progress ³
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"> SDC submitted the report on the public engagement to the Government in 2017, setting out 20 recommendations to promote sustainable consumption of biological resources under four aspects, namely to foster a culture of sustainable consumption of biological resources, to facilitate smart choice for consumers, to promote best practices among businesses and to show leadership on the part of the Government. The Government has responded to the SDC's recommendations and formulated a strategy to promote sustainable consumption of biological resources through "Community Engagement" and "Facilitating Access to Knowledge". EPD, AFCD and EDB are following up on the recommendations. ECC has launched the campaign on sustainable consumption of biological resources with AFCD's support. AFCD has also launched a webpage on this theme. AFCD delivered a talk to secondary and tertiary school students in May 2018 to introduce this concept. EDB organised professional development courses on biodiversity, promoted eco-labelled food items and green living through piloting learning, teaching materials and seminars. "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. Six projects involving a total of \$6 million funding have been approved so far. NGOs (Business Environment Council and WWF-Hong Kong) are implementing a number of recommendations from SDC through funding support by the Sustainable Development Fund, including the production of an information platform on sustainable products, a recognition scheme, and sustainable consumption guides. EPD has upgraded the Government's green specifications categories of compost, photocopying and printing papers to drive adoption of green products derived from biological resources by B/Ds. Under the Hong Kong Awards for Environmental Excellence, sustainable consumption of biological resources has been incorporated as one of the assessment aspects for various sectors including hotels and recreation clubs, restaurants, shops and retailers. EPD also organised a forum in March 2018 to share the Government's green procurement guidelines with trade associations, suppliers, professional bodies and NGOs to encourage the use of green products and formulation of their own green procurement guidelines.
	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; AFCD has supported the setting up of the Learning Centre.
	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.