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For discussion on 28 September 2022

Developing the Hong Kong Biodiversity Information Hub

PURPOSE

This paper briefs Members on the development of the Hong Kong Biodiversity Information Hub (HKBIH), and seeks Members' views on the strategies to promote local biodiversity using this new platform.

BACKGROUND

2. Tremendous global efforts have been made in building biodiversity information repositories for enhancing knowledge accessibility, management and communication in recent years. The importance of information sharing has also been repeatedly recognised as a vital foundation to meet the goals of the Convention on Biological Diversity.

3. Under Action 16 of the Hong Kong Biodiversity Strategy and Action Plan (BSAP), the Government is committed to developing a web-based information hub to provide a one-stop shop for information on local biodiversity, with an aim to fostering a better understanding of local biodiversity by the general public and stakeholders, and facilitating the mainstreaming of biodiversity in Hong Kong.

4. With reference to overseas examples, the Government recognises that the information hub should be tailored to local needs with a good balance in terms of knowledge depth, user-friendliness and functionality. As such, the information hub should be designed to not only host a vast amount of consolidated local biodiversity information, but also present such information in an easily

comprehensible manner so that they can be widely used by the general public and other stakeholders.

5. The HKBIH should contain information on species and habitats readily comprehensible by the general public, and such information should be appropriately catalogued to facilitate usage. Recognising the importance of collaborative efforts in materialising this goal, the Agriculture, Fisheries and Conservation Department (AFCD) held a stakeholder meeting in January 2018 to solicit ideas and suggestions from stakeholder groups, such as academics, consultants, conservationists and amateur naturalists, on the major components of the HKBIH. A consultancy study to review overseas examples of relevant repositories, and to prepare a prototype of a biodiversity information repository for Hong Kong was also completed in 2020.

6. Apart from facility/infrastructure development, AFCD has also been engaging external data providers, and organising the pervasive yet scattered biodiversity data and materials from various sources, for the HKBIH.

DEVELOPMENT of HKBIH PHASE 1

7. The HKBIH would be developed in two phases: Phase 1 of the HKBIH covers a thematic website and its supporting databases and infrastructures which has been completed as planned and rolled out on 1 March 2022, whereas Phase 2 covers a Biodiversity Geographic Information System (BGIS) which is technically more complicated and would be launched at a later stage.

8. The thematic website (<https://bih.gov.hk>) of the Phase 1 development of the HKBIH includes key facilities such as Species Database, Multimedia Database, Platform for Education Programmes and a series of thematic webpages. It is currently managed by AFCD, with its content and data contributed and maintained by our collaborators and partners. Details of the key facilities are listed at **Annex**.

9. With a wealth of information on over 5,500 terrestrial, freshwater and marine species, the HKBIH is now the largest open access repository of the city's biodiversity information. AFCD has been linking the contents of its social media platforms (e.g. the [Mr. B Nature Classroom Facebook page](#)) with that of the HKBIH to create a synergy in promoting local biodiversity. Traffic rate has shown that the HKBIH is catching on with the general public since its launch, with the total number of visits to various webpages averaging over 10,000 per day. From time to time,

AFCD has also received public enquiries about the website content and suggestions of improvement. Encouragingly, some citizens have also expressed their readiness to contribute information to enrich the content of the HKBIH.

10. To engage the general public in contributing to the HKBIH, a photo sharing activity was launched during the International Day for Biological Diversity on 22 May 2022. The activity was well received and over 360 photos of terrestrial birds and reef fishes taken by members of the public had been collected. Selected photos will be featured on the HKBIH. Similar activities will be organised from time to time to collect photos of different taxa groups of species and as part of the overall promotion and publicity effort to encourage the general public in the conservation of biodiversity.

11. AFCD is also joining hands with over 20 partner organisations to promote a wide range of activities related to biodiversity on the education portal of the HKBIH. The education portal has a user-friendly interface where partner organisations can upload promotions for their biodiversity-themed educational activities, and the general public can easily search for these activities. By pooling and presenting various educational activities in the same portal, it allows HKBIH visitors to quickly access educational information and at the same time boost publicity for educational activities organised by various partner organisations.

PROGRESS OF BGIS (PHASE 2) DEVELOPMENT

12. The Phase 2 development of the HKBIH (i.e. the development of the BGIS) commenced in March 2022. The BGIS will store and map out the spatial information of Hong Kong's biodiversity, allowing our citizens to gain insights into the occurrences of species at different locations in Hong Kong and hence obtain a better understanding of the biodiversity surrounding them. To tally with existing design concept of the HKBIH, a customised, user-friendly layout/setting for the BGIS will be created.

13. With a view to aligning with the aim of serving as a one-stop shop for biodiversity information, the BGIS targets to include datasets of major taxa groups of both terrestrial and marine species. At this stage, we have identified a set of data gaps and has been engaging external data providers in phases to try to fill these gaps as far as possible. A series of foreseeable issues concerning data accuracy, curation of species names, intellectual property rights, sensitive species, etc. may

arise during the development of the BGIS. We will make reference to the suggestions and recommendations received in the aforementioned stakeholder meeting and consultancy study, and continue to resolve these challenges through discussions with various external data providers.

WAY FORWARD

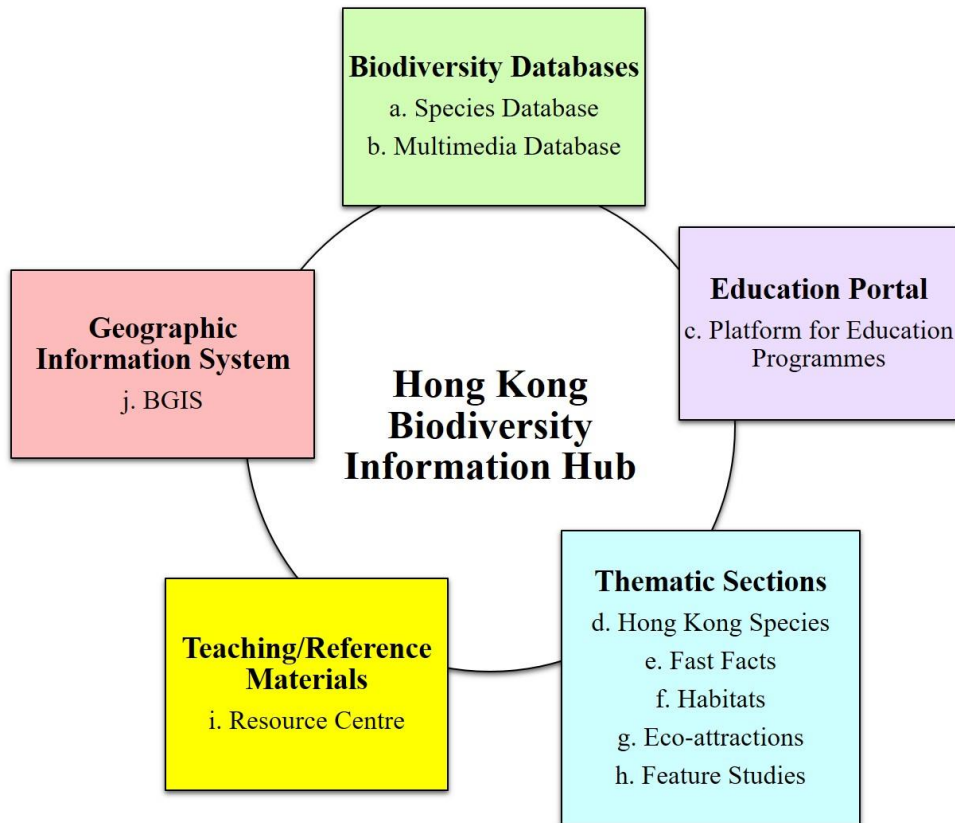
14. The BGIS is envisaged to be rolled out in 2024. During the development process, AFCD will continue to engage external data providers with a view to providing high-quality data and materials of various taxa groups of species to enrich different components of the HKBIH. Similar to other biodiversity information systems, content curation of the HKBIH will be an evolving process, and the information in the HKBIH will be continuously accumulated, updated and fine-tuned.

ADVICE SOUGHT

15. Members are invited to note and comment on the strategies to promote local biodiversity using the HKBIH as set out in this paper.

Agriculture, Fisheries and Conservation Department
September 2022

Key Facilities of the Hong Kong Biodiversity Information Hub



Remark: All facilities are currently available on the HKBIH except for the BGIS.

Biodiversity Databases

a. Species Database

This database contains detailed species information, such as scientific name, common name, Chinese name, synonym, description, distribution and conservation status, of over 5,500 terrestrial, freshwater and marine species.

b. Multimedia Database

This database contains over 13,000 photos and videos of over 3,000 species of local wildlife. Names of the photographers/videographers are acknowledged if the photos/videos are provided by external data providers including members of the public.

Education Portal

c. Platform for Education Programmes

This platform features various biodiversity education programmes, such as online events, guided tours, exhibitions and workshops, organised by AFCD and its partners.

Thematic Sections

d. Hong Kong Species

This section features 13 major taxa groups of local organisms (e.g. fungi, plants, amphibians, birds, fishes, etc.). Each taxa group has an article with pictures/videos to introduce its ecology, classification, local species number and status, etc.

e. Fast Facts

This section covers stories of 20 local iconic species or species named after Hong Kong (or sites in Hong Kong). Each story contains a species illustration drawn by a local nature artist and fun facts about the species.

f. Habitats

This section features 11 major habitats in Hong Kong (e.g. woodland, streams/rivers, mangroves, rocky shores, etc.). Each habitat has an article with pictures/videos to introduce its features and associated flora and fauna.

g. Eco-attractions

This section covers 7 easily accessible eco-attractions (e.g. Mai Po, Fung Yuen, Tai Po Kau, etc.) of Hong Kong. A brief introduction with photos/videos and transportation information is provided for each eco-attraction.

h. Feature Studies

This section features 12 innovative/territory-wide research projects and citizen-science projects related to local biodiversity. Each project has a lay summary of the significance and key findings with photos/videos provided by its principal investigator.

Teaching/Reference Materials

i. Resource Centre

This section provides plentiful educational materials such as videos and animations, species guides and illustrations, biodiversity newsletters and

photobooks, and useful links. Some of these materials are available for download for teaching purpose.

Geographic Information System

j. BGIS

This system is under development. It will feature a vast amount of species occurrence information collected by AFCD and external data providers. Users will also be able to search for species surrounding them based on their mobile devices' built-in GPS.