

**For information**

**LEGISLATIVE COUNCIL  
PANEL ON ENVIRONMENTAL AFFAIRS**

**Marine Conservation**

**Purpose**

At the meeting of 21 July 2010, Members requested the Administration to provide information on the conservation of marine ecosystem in Hong Kong for members' reference. The requested information is provided in the ensuing paragraphs.

**Background**

2. Hong Kong's subtropical marine environment supports species of both tropical and temperate climates. Local waters contain a wide diversity of fish, crustaceans, molluscs and other marine life.

3. The waters of Hong Kong are important spawning and nursery grounds for a variety of fishes. A total of 17 species of marine mammals are found here and two of them, the Chinese white dolphin and the Indo-Pacific finless porpoise, occur year-round and are considered residents. Among the seven species of sea turtles in the world, five have been recorded in Hong Kong waters and the Green Turtle is known to nest in our remote beaches. Despite its location close to the northern limit for corals, Hong Kong supports some 84 species of stony corals which is considered quite rich in diversity even by international standard.

**Conservation of Marine Ecosystem**

4. There is serious concern over the degradation of our marine environment by pollution, coastal development works and overfishing. Such human activities and development, if excessive and uncontrolled, may pose a serious threat to species and habitats of conservation importance as well as the overall biological diversity of the vibrant marine life.

5. We have implemented various measures to conserve the marine

environment and enhance local fisheries resources. The following measures have been taken for the conservation and sustainability of our marine ecosystem:-

### ***Conservation of Important Species***

6. To maintain long-term viability of the Chinese white dolphin in Hong Kong waters, a conservation programme was implemented since 2001. The programme covers management measures, public education, research and cross-boundary cooperation. A continuous monitoring has been undertaken for over a decade for this species and the findings indicate that Chinese white dolphin constantly use Hong Kong waters as part of their habitats and there is no sign of any significant decline in their occurrence and abundance.

7. Since 2000, we have co-ordinated annual Reef Check activity in collaboration with Reef Check Foundation to actively monitor the status of coral communities in Hong Kong. The recent findings indicate that the growth and conditions of corals in all 33 survey sites in Hong Kong waters are generally in stable condition and the majority of survey sites within marine parks have been recorded with high coral coverage (>50%) and high species diversity. In addition, we undertake comprehensive coral studies to provide information for sound and adaptive management. Specially-designed coral marker buoys have also been installed at Sharp Island, Port Island and Un Kong Wan for better protection of corals from anchor damages.

8. All sea turtle species are protected under the Wild Animals Protection Ordinance (Cap 170) and the Protection of Endangered Species of Animals and Plants Ordinance (Cap 586). AFCD implemented a number of conservation measures to protect the globally endangered sea turtle which include close monitoring and management of the green turtle nesting site at Sham Wan on Lamma Island, rescue operations of stranded sea turtles, enforcement actions and scientific research, as well as public education.

### ***Designation of Protected Areas***

9. Identifying species, habitats and areas that require protection and designating suitable locations as statutory protected areas are common and effective tools for nature conservation. Setting up of marine parks/reserve

protects Hong Kong's existing marine environment and maintains the great variety of marine life therein.

#### Establishment of marine parks and reserves

10. The Marine Parks Ordinance (Cap. 476) enacted in 1995 was a milestone for local marine conservation. It provides for the designation, control and management of Marine Parks and Marine Reserves. There are currently four marine parks and one marine reserve in Hong Kong. They were Hoi Ha Wan Marine Park, Yan Chau Tong Marine Park, Sha Chau and Lung Kwu Chau Marine Park, Tung Ping Chau Marine Park and Cape D'Aguilar Marine Reserve, covering a total area of 2 430 ha.

11. The Establishment of marine parks and reserve goes a long way in conserving the marine ecology of Hong Kong. Hoi Ha Wan Marine Park, for instance, covers some of the best coral sites in Hong Kong. Of the 84 species of reef-building corals recorded locally, more than 60 species are found in Hoi Ha Wan Marine Park.

12. The Sha Chau and Lung Kwu Chau Marine Park is located in the western waters which is the major habitat of the Chinese white dolphin in Hong Kong. Indeed, one of the major functions of the marine park is to help protect the Chinese white dolphin frequently sighted there. It should be noted in this regard that the designation of the marine park and the dedicated management and enforcement effort have succeed in protecting the ecology of park such that it remains to be one key habitat within Hong Kong waters for this marine mammal. According to the findings of our long-term monitoring on Chinese white dolphin being carried out for over a decade, Sha Chau Lung Kwu Chau Marine Park is still one of the sites with the highest dolphin sighting frequency ten years after its designation in 1996.

13. Designation of marine parks/reserve contributes to conservation of biological diversity and ecological function and processes. We have plans to designate more marine parks in future with a view to better conserving species and habitats of ecological importance. In order to improve ecosystems in marine parks and offer better protection for marine organisms, we also propose to ban commercial fishing in marine parks. We are in active consultation with the fishermen groups on taking forward the initiative.

## Restricted Areas

14. The sandy beach at Sham Wan of Lamma Island is the only regular nesting site of Green Turtles known in Hong Kong. The site is also one of the few remaining nesting sites in Southern China. In recognition of its ecological importance, the sandy beach at Sham Wan has been gazetted as a Restricted Area under the Wild Animals Protection Ordinance (Cap. 170) since 1999 to avoid or minimize human disturbance to the Green Turtle nesting site. The restricted period is from 1 June to 31 October during the nesting season. Although the number of female green turtles nesting in Sham Wan is small and nesting does not take place every year, the protection and management of Sham Wan nesting site is very important to the survival of this endangered species.

## *Ecological Impact Assessment*

15. Managing threatening processes that may affect the marine ecosystem is essential to complement the conservation measures set out above. The Environmental Impact Assessment (EIA) process has served as proactive planning tool to identify key environmental concerns at early stage, and provided a basis for informed decision-making to determine whether a project can proceed on environmental grounds. Under the EIA Ordinance (Cap. 499), Agriculture, Fisheries and Conservation Department (AFCD) is the authority to advise the Director of Environmental Protection on ecological matters, including flora, fauna, and wildlife habitats in ecological impact assessment for development projects.

16. Through the EIA process, important marine species (e.g. Chinese white dolphin) and habitats (e.g. coral communities) affected by the proposed development are identified so that the impact on them can be avoided or minimized. Mitigating both the direct and indirect impact on ecological resources through a proper ecological impact assessment helps protect the general marine environment from excessive and detrimental changes and maintain ecological integrity and marine biological diversity.

## *Artificial Reef Programme*

17. AFCD has launched the Artificial Reef Programme in 1996 with a

view to enhancing fisheries and ecological resources, protecting important spawning and nursery grounds, and improving habitat quality in open seabed areas. All these beneficial effects contribute to the conservation and sustainability of the marine environment.

18. It is generally agreed that artificial reefs (AR) can increase habitat complexity, in particular when deployed in simple habitats like soft muddy/sandy bottom by providing hard surface habitats which support more marine invertebrates and fish. Given the lack of hard bottom habitats in Hong Kong waters, AR can effectively serve the purposes of protecting and enhancing fisheries resources and marine habitats.

19. So far, AFCD has deployed 668 artificial reefs AR, totaling 179,130 m<sup>3</sup>. Deployment sites include marine parks, fish culture zones, Port Shelter, and Long Harbour. Different materials have been used, including redundant vessels and marine structures, prefabricated used-tyres and concrete modules, and quarry rock. Species rarely found in local waters today, including John's snapper, Longtooth grouper and Painted sweetlip, were seen in the AR.

### ***Regulation and Enforcement***

20. To protect the fisheries resources in Hong Kong, AFCD staff vigorously enforce the Fisheries Protection Ordinance (Cap. 171) against destructive fishing activities (i.e. fishing with poison, dynamite, electricity, suction, and dredging). Patrols are conducted on a daily basis at irregular hours.

21. The Marine Parks Ordinance (Cap. 476) provides for the designation, control and management of marine parks and marine reserve. In addition to the routine sea patrols and law enforcement operations within marine parks and marine reserve, AFCD staff carry out joint enforcement action with the Marine Police and the Mainland fisheries authorities in order to suppress illegal cross-boundary fishing activities.

22. In 2009, AFCD successfully prosecuted 10 cases of illegal fishing with the use of dredging devices in Hong Kong waters under the Fisheries Protection Regulations, in which 6 local and mainland fishermen were convicted and fined a total of HK\$42,150. The illegal fishing devices concerned were also forfeited. In the same year, we prosecuted another 7 cases involving

14 fishermen of illegal fishing in marine parks under the Marine Parks and Marine Reserves Regulation.

### ***Education and Publicity***

23. Conservation of the marine environment requires the full support and participation of the community. We regularly organise a variety of marine conservation education activities targeting various sectors of the community. From April 2009 to March 2010, 119 public eco-tours, 7 public seminars, 3 beach cleanup activities, 28 school lectures, and 63 exhibitions were organised to raise public awareness on the importance of marine conservation in Hong Kong.

### ***Cross-boundary Liaison***

24. A dedicated study group, the “Hong Kong-Guangdong Marine Resources and Conservation Special Panel”, has been set up under the “Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection” to facilitate exchange of information and enhanced co-operation between the two sides on fisheries and marine ecological matters. Under the Framework Agreement on Hong Kong/Guangdong Co-operation, both sides will continue to foster collaboration and will explore opportunities for co-operation and exchanges in the areas of establishment and evaluation of the effectiveness of artificial reefs; conservation of rare marine life; red tide studies and law enforcement actions through the existing “Hong Kong-Guangdong Marine Resources and Conservation Special Panel”.

### **Way Forward**

25. Hong Kong’s natural heritage belongs to every member of the community. For the benefits of our community and our future generations, we will continue our efforts to promote marine conservation and protect the marine ecosystem through the measures described above.

**Agriculture, Fisheries and Conservation Department**  
**October 2010**