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**ACE Paper 3/2005**  
***For Discussion***

## **Consultation Paper on the Proposed Amendment of the Fisheries Protection Ordinance, Cap 171 for the Establishment of a Regulatory Framework for Fishing Activities in Hong Kong Waters**

### **Purpose**

The purpose of this paper is to consult and solicit the views of members on the proposed amendments to the Fisheries Protection Ordinance, Cap 171 for the establishment of a framework to regulate fishing activities in Hong Kong waters.

### **Background**

2. Since the late 1980s, there has been a steady decline in fisheries resources and fish catch within Hong Kong waters. To address this problem, the Agriculture, Fisheries and Conservation Department (AFCD) completed a consultancy study in 1998 to assess the situation and identify ways of remedying it. The study found that the catches in most areas had dropped by over 50% and the fish fry production had decreased by 90% in the last decade. Twelve of the 17 fish species assessed were “heavily over-exploited”, and the rest “fully exploited”. Furthermore, the local fishery had shifted from one that was dominated by large, slow growing, high value fish species to one composed of small, faster growing, low value species. The findings pointed to an over-exploitation of fisheries resources in Hong Kong waters, resulting in a steady decline.

3. The study recommended several priority fisheries management measures to protect and sustain local fish stocks. Some of these measures, including habitat enhancement through the deployment of artificial reefs, habitat restoration by mitigating the impact of marine works projects, and fish restocking with a fish fry releasing trial scheme, have already been actively pursued with encouraging results.

4. To further alleviate the pressure of fishing activities on local fisheries resources for the recovery and maintenance of stocks at a sustainable level, a working group comprising representatives of relevant government departments, fishing community, green groups and academics was set up to consider and devise a regulatory framework for fishing activities in Hong Kong waters, taking into account the study’s recommendations. The proposed framework includes the establishment

of a fishing licence system and limiting new entrants to our fisheries, and the designation of fisheries protection areas (FPAs). An extensive consultation exercise with fishermen groups, advisory committees, district councils and the public was conducted in this connection.

5. Taking into consideration that there may be a need to further enhance the conservation and restoration of our fisheries resources, we, with the support of the Agriculture and Fisheries Advisory Committee, propose to establish a legal mechanism for the implementation of a territory-wide “closed season” for fishing in Hong Kong waters. It will enable us to implement the measure if it is considered necessary in future.

6. Acting upon all the consultations, we propose to amend the Fisheries Protection Ordinance (Cap. 171) to provide a regulatory framework for the implementation of the three management measures, namely,

- the establishment of a fishing licence system and limiting new entrants to our fisheries;
- the designation of fisheries protection areas (FPAs); and
- the implementation of a territory-wide “closed season” for fishing.

The proposed regulatory framework will enable us to effectively control fishing activities in Hong Kong and bring our fisheries back on a sustainable path. Details of the needs for and the impacts and benefits of the proposed regulatory framework are provided in **Appendix 1**.

### **Fishing Licence System and Limiting New Entrants**

7. Access to Hong Kong’s fisheries has always been open. This situation has rendered it very difficult to control over-fishing or enforce any related management measures for the sustainable development of the fishing industry. It is therefore advisable to set up a fishing licence system, under which all fishing activities conducted within Hong Kong waters with the use or aid of any vessels shall require fishing licences or permits.

8. The proposed licensing system will be vessel-based, targeting at fishing vessels which generate considerable pressure on fisheries resources. Fishing licences will be issued only to the owners of the local fishing vessels for fishing in local waters. The licence will be transferable and valid for two years. Fees for licence issuance or renewal will be set on a cost recovery basis.

9. Recreational fishing conducted with the use or aid of non-fishing vessels will not be subject to any control under the proposed licence system, as the methods deployed for such activities would generally capture relatively smaller amounts of fish, and its impact on fisheries resources and marine environment is limited. Other fishing activities conducted with the use or aid of non-fishing vessels will not be allowed except for scientific research or related purposes for which a fishing permit is required.

10. The proposed licensing system will not only serve to limit the access to our fisheries resources to local fishermen but also enable the Government to collect important data vital to the effective management of our fisheries. When circumstances so require, the Government may have to control the growth of the local fishing fleet and keep the total fishing effort at a level that could sustain the fisheries resources. The proposed licensing system is an instrument to exercising such control, with the following powers conferred upon the Director of Agriculture, Fisheries and Conservation (DAFC) in addition to his other powers as the licensing authority to issue, renew and cancel licences and permits, and approve the transfer of licences, allowing him :

- (a) to impose moratorium on the issue of new fishing licences or permits should the situation warrant;
- (b) to impose conditions on the licences or permits to limit the operation to be carried out by a vessel with specified particulars e.g. vessel engine power, fishing gear etc., the alteration of any of which requires prior approval from DAFC; and
- (c) to refuse to grant, renew or approve alteration of vessel or fishing specification in a licence/permit or to approve transfer of a licence if he considers that it is not in the best interest of promoting the sustainability of local fisheries resources.

11. To ensure the effective implementation of the proposed control regime, it is proposed to make contravention of the fishing licence control scheme an offence. Any person who conducts fishing activities with the use or aid of a fishing vessel without a valid fishing licence or permit, or conducts fishing activities other than the specified recreational fishing methods with the use or aid of a non-fishing vessel without a valid permit, will be held responsible for the offence. Details of the proposed fishing licence system are shown in **Appendix 2**.

### **Fisheries Protection Areas (FPAs)**

12. To help promote recovery of our fish stocks to a sustainable level, it is

proposed that FPAs be established in selected waters in Hong Kong, to provide a protected environment for nursery and spawning for fish fry, juvenile and spawning fish.

13. Under this proposal, no fishing vessels will be allowed to carry out fishing activities in the FPAs without a permit issued by DAFC for operation in advance, in addition to the territory-wide fishing licence. Permits to fish in the FPAs will only be issued to bona fide fishermen habitually fishing in the waters of the FPAs concerned and persons fishing with any vessels for scientific research and related purposes. Trawling activities, which are non-selective in nature and have greater impact on the ecosystem, will be strictly prohibited within the areas. Recreational fishing is allowed inside the FPAs except the “no-take” zones in which all fishing activities will be prohibited. Such zones are set up within the areas where artificial reefs are laid, to protect fish fry or other fish taking shelter in the reefs from being captured, thereby ensuring the effectiveness of the reefs in enhancing fisheries resources.

14. The designation of FPAs will be made subsequent to public consultation. To protect fisheries resources in FPAs effectively, it is proposed to make it an offence for non-compliance with the above-mentioned fishing regulations. Details of the proposed procedures for the designation of FPAs and the proposed control measures within FPAs are shown in **Appendix 3**. Two areas, namely, Tolo Harbour and Port Shelter, which have been identified as important fish spawning and nursery grounds and will be proposed for designation as FPAs, are shown in **Figure 1**.

### **Annual Territory-Wide “Closed Season” for Fishing**

15. The implementation of a “closed season” for fishing is a common fisheries management measure adopted by many countries including Australia, India, Japan, Korea, Pakistan and the USA. As a fisheries resources conservation measure, it allows a break for fish to breed and stocks to recover. The Mainland has, since 1999, implemented the “closed season” policy in the South China Sea, and reported an increase in catch rates and average size of catch for certain species after the implementation of the “closed season” (The findings of the Mainland reports are summarized in **Appendix 4**). Given the stressed fishery condition of our waters, there may be a need to introduce an annual territory-wide “closed season” in Hong Kong in future to enhance the sustainability of fisheries resources.

16. It is proposed to set up a legal framework for the implementation of an annual territory-wide “closed season”. The proposed implementation of an annual “closed season” will be made only after full consultation with the fishing industry, the

public and relevant parties. Details regarding its duration, timing and extent of fishery control such as the types of fishing activities prohibited during the period will be determined taking into account of the views of all the stakeholders. Preliminary idea is to make reference to the “closed season” implemented by the Mainland in the South China Sea covering only a short period of time (e.g., two months) in a year and prohibiting only certain fishing methods such as trawling and purse seining. Under this arrangement, we estimate that out of over 4000 fishing vessels in Hong Kong, only a few hundreds of trawlers and purse-seiners relying on Hong Kong waters for fishing would be affected. We will discuss with affected fishermen to see what assistance could be offered to them if a “closed season” is to be introduced.

17. To ensure the effective implementation of the proposed “closed season”, it is proposed that all fishing licences and permits previously issued in connection with prohibited fishing activities be suspended automatically during the period. However, permits may be granted to allow fishing for scientific research or related purposes during the “closed season”. It is also proposed that non-compliance with the “closed season” requirement be made an offence. Details of the proposed mechanism for the designation and implementation of the annual territory-wide “closed season” are in **Appendix 5**.

### **Proposed Implementation Schedule**

18. The effective implementation of the proposed designation of FPAs in Hong Kong waters and the annual territory-wide “closed season” would require prior establishment of the fishing licence system. Subject to the enactment of the legislative amendments to the Fisheries Protection Ordinance, we plan to establish the fishing licence system first, before proceeding to designating the two proposed FPAs. The proposed annual territory-wide “closed season” will only be implemented at a later stage as necessary, subject to consultation with the fishing industry, the public and other stakeholders.

### **Advice Sought**

19. Members are invited to comment on the above proposed regulatory framework for fishing activities in Hong Kong waters.

**Health, Welfare and Food Bureau**

**Agriculture, Fisheries and Conservation Department**

**February 2005**

**The Need for and Impacts and Merits of the Proposed  
Regulatory Framework for Fishing Activities in Hong Kong Waters**

**Need**

Hong Kong was once a fishing port well-known for its abundant fish catch. In addition to providing fisheries products, the capture fisheries contributed quite considerably to the local economy. Since the late 1980s, however, there has been a steady decline in fisheries resources and fish catch within Hong Kong waters. According to a consultancy study completed in 1998, the catches in most areas had dropped by over 50% and the fish fry production had decreased by 90% compared with those in the late 1980s. Twelve of the 17 fish species assessed were “heavily over-exploited”, and the rest “fully exploited”. Furthermore, the local fishery had shifted from one that was dominated by large, slow growing, high value fish species to one composed of small, fast growing, low value species. The findings pointed to an over-exploitation of fisheries resources as the major cause for the decline, apart from coastal development and pollution.

To alleviate the pressure of fishing activities on local fisheries resources for the recovery and maintenance of stocks at a sustainable level, the Agriculture, Fisheries and Conservation Department (AFCD) has implemented a series of fisheries management measures including the strengthening of enforcement of Fisheries Protection Ordinance against destructive fishing activities; deployment of artificial reefs to enhance the fish habitat; trial release of fish fry to enhance fisheries resources; and the designation of marine parks and reserves to conserve marine resources and environment. Although initial success has been achieved in some local waters, we still do not see signs of a general recovery in fisheries resources.

**Proposed Regulatory Framework**

Without appropriate regulation of fishing activities in Hong Kong waters, the fisheries resources will not recover, or will even deteriorate further. Taking into account the recommendations of the consultancy study and the outcome of a consultation conducted earlier, AFCD proposes to amend the Fisheries Protection Ordinance to provide a regulatory framework for the implementation of three management measures, namely,

- the establishment of a fishing licence system;
- the designation of fisheries protection areas (FPAs); and
- the implementation of a territory-wide “closed season” for fishing.

The proposed regulatory framework will enable us to effectively control fishing activities in Hong Kong waters and bring our fisheries back on a sustainable path.

### **Impacts and Merits of the Management Measures**

#### **(1) Fishing Licence System:**

- Access to Hong Kong’s fisheries has always been open. This situation has rendered it very difficult for the Government to control over-fishing. With the implementation of a fishing licence system, it is possible to determine the actual fishing efforts and enable the Government to effectively enforce related fisheries management measures for the sustainable development of the fishing industry;
- Fishing licences will be issued to Hong Kong fishermen who are owners of local fishing vessels upon application. The licence will be transferable and fees for licence issuance or renewal will be set at a level affordable to the fishermen. As such, fishermen’s livelihood will not be affected by the fishing licence system;
- Hong Kong fishermen will benefit from the fishing licence system instead because the fishing licence will only be issued to local fishermen to ensure and protect their fishing rights;
- The existing Fisheries Protection Ordinance imposes no licensing requirements on vessels for fishing in local waters. It is therefore impossible to use this Ordinance to regulate fishing activities in Hong Kong waters by non-local vessels (e.g. mainland fishing vessels). However, upon implementation of the fishing licence system, the Government will be able to initiate prosecution against any person using non-local vessels to fish in local waters;
- Through the fishing licence system, the Government will be able to collect important data necessary for the effective planning of suitable fisheries management measures. For instance, when circumstances so require, the

Government may suspend issuance of further fishing licences and help some existing fishing vessels change to other operational modes in order to control the growth of the local fishing fleet and keep the total fishing efforts at a sustainable level. This would help protect the interest of Hong Kong fishermen who rely on fishing in local waters and promote sustainable development of the local fisheries.

**(2) Fisheries Protection Areas (FPAs)**

- To designate important spawning and nursery ground as Fisheries Protection Area (FPA) and implement management measures in the FPA (e.g. the regulation of fishing activities by issuance of fishing permit) to protect fish fry and spawning fish stocks from intense fishing pressure;
- Since trawling activities are non-selective in nature causing adverse impact on the growth of fish fry and juvenile fish, they are not in line with the purpose of designating FPAs for conserving juvenile fish and will thus be strictly prohibited within the areas;
- “No-take” zones, in which all fishing activities will be prohibited, are set up within the FPAs where artificial reefs have been laid to protect fish fry or other fish taking shelter in the reefs from being captured, thereby ensuring the effectiveness of the reefs in enhancing fisheries resources;
- Upon designation of FPAs and “no-take” zones, fish fry can be released in the “no-take” zones at a suitable time. Since all fishing activities are prohibited in these zones, the fish fry released will be protected from fishing activities and the effectiveness of the restocking will be guaranteed. This would help enhance fisheries resources;
- To ensure the effectiveness of enhancement of fisheries resources, it is important to minimize the fishing efforts in the FPAs. However, in view of the livelihood of the fishermen habitually operating in the waters of the FPAs, they will be issued a FPA fishing permit. It is believed that the establishment of the FPAs will have little impact on those not habitually fishing in the FPA waters.
- Most of the local trawling fishermen mainly operate in deeper offshore waters.



As the proposed FPAs only account for about 8% of the local waters, they will not be significantly affected although trawling activities are prohibited in the FPAs. The designation of the FPAs can help increase the fisheries resources not only in the FPAs but also outside them because some protected fish fry will swim out of the FPAs after growing up, which will benefit the trawling operators in the long term. The affected trawling fishermen will be provided with assistance through appropriate measures (including financial and technical support) by the government.

### **(3) Territory-wide Closed Season**

- The establishment of closed season is a fishery management measure commonly adopted by many countries (e.g. Australia, India, Japan, Korea, Pakistan, America and Mainland China) with the aim of conserving fisheries resources by offering opportunities for fish restoration and reproduction.
- According to the findings of mainland studies, the introduction of closed season in the South China Sea can effectively protect the brood stocks and fingerlings, enhance fisheries resources and catch rate, and improve the biodiversity of the fisheries resources.
- The present proposed legislative amendment is only to lay down a legal framework for the implementation of the closed season. The government plans to introduce a fishing licence system and set up the FPAs first. If the resources still see no signs of recovery or keep decreasing, it may be necessary to put the closed season in force to boost their restoration. Under such circumstances, the government will conduct a comprehensive consultation with the fishing community, the public and other stakeholders before deciding whether to introduce the closed season in Hong Kong.
- Since Hong Kong waters and the South China Sea are interconnected, the government when planning the introduction of the closed season will make reference to the moratorium arrangements in the mainland such as prohibiting fishing activities which are non-selective in nature and pose greater adverse impact on the ecosystem (e.g. trawling and purse-seining) from operating in local waters from June to July every year. This would help enforce the management measures of the scheme more effectively and the fishermen to cope with the arrangement more easily.

- To help the fishermen affected by the closed season, the government will provide them with support such as setting up working groups to coordinate the assistance and arrangements provided by different departments during the closed season; offering financial supports to the needy fishermen; arranging appropriate training and seminars to help improve their fishing skills and productivity; and help them change to other types of operation or business etc.

Agriculture, Fisheries and Conservation Department  
February 2005

**Proposed Fishing Licence System**

Item	Details
Objectives	To establish a fishing licence system for the effective control of fishing activities in Hong Kong waters and enforcement of any related management measures for the sustainable development of the fishing industry.
Controls	<ol style="list-style-type: none"> <li>1. All fishing activities (except recreational fishing listed below) with the use/aid of any vessel in Hong Kong waters require a valid fishing licence or fishing permit.</li> <li>2. Fishing licence is to be issued to owners of local fishing vessels to conduct fishing activities in all of the waters in Hong Kong except those areas which are restricted for fishing under this or other ordinances e.g. navigational channels, marine parks, marine reserves or fisheries protection areas etc.</li> <li>3. Fishing with the use/aid of any vessel in Hong Kong waters for scientific research and related purposes require a valid fishing permit.</li> <li>4. Recreational fishing with the use/aid of a non-fishing vessel involving hand-lining, capture of fish without the use/aid of any fishing gear or during scuba diving, is not subject to licensing control.</li> <li>5. The licence/permit specifies the conditions and particulars of the vessel, under and with which the fishing activity is to be carried out. All fishing activities carried out with the use/aid of the vessel shall comply with the conditions and particulars specified in the licence/permit.</li> </ol>
Fishing licence/permit Application	<ol style="list-style-type: none"> <li>1. All licence/permit related applications are to be made to the Director of Agriculture, Fisheries and Conservation Department.</li> <li>2. Fishing licence application requirements:               <ol style="list-style-type: none"> <li>(a) Applicant is a person ordinarily resident in Hong Kong or a local company with majority of shares owned by people ordinarily resident in Hong Kong;</li> <li>(b) Applicant is the owner of a local fishing vessel and possesses a valid vessel licence issued by Marine Department;</li> <li>(c) The vessel is primarily used for, or designed for and equipped to be used for fishing activities; and</li> <li>(d) Applicant pays the prescribed fee to cover the administrative</li> </ol> </li> </ol>

Item	Details
	<p>expenses involved.</p> <p>3. Fishing permit application requirement:</p> <p>(a) Applicant is the owner of the vessel with which the fishing activity is to be carried out for scientific research and related purposes in Hong Kong waters; and</p> <p>(b) No fee shall be payable for the grant and renewal of fishing permit.</p>
Fishing licence/permit validity period	<p>1. Fishing licence is valid for not more than 24 months.</p> <p>2. Fishing permit is valid for not more than 12 months.</p>
Fishing licence/permit transferability	<p>1. Fishing licence is transferable.</p> <p>2. Fishing permit is non-transferable.</p>
Hiring of fishing vessel	If any fishing vessel is to be hired out to a third party for carrying out fishing activities in Hong Kong waters, the third party has to be a person ordinarily resident in Hong Kong or a local company with majority of shares owned by people ordinarily resident in Hong Kong.
Offences	<p>1. Any person carries out fishing activities (except recreational fishing listed above) with the use/aid of a vessel without a valid fishing licence/permit commits an offence.</p> <p>2. The owner, master or person in charge of the vessel commits an offence if he allows any person on board the vessel to carry out fishing activity without a valid fishing licence/permit.</p> <p>3. If the owner of the vessel is not on board the vessel at the time the fishing activity is carried out, he shall be liable if he knowingly permits or assists such activity to be carried out without a valid fishing licence/permit.</p>
Penalties	The maximum penalties for the above offences include a fine of HK\$25,000 and imprisonment for 6 months.
Cancellation of fishing licence/permit	<p>Fishing licence/permit may be cancelled if:</p> <p>1. Licensee/permittee has been convicted of any offence under the Fisheries Protection Ordinance or any regulations made under the Ordinance; or</p> <p>2. The vessel has been engaged in activities which do not comply with any of the provisions of the Fisheries Protection Ordinance or any regulations made under the Ordinance.</p>

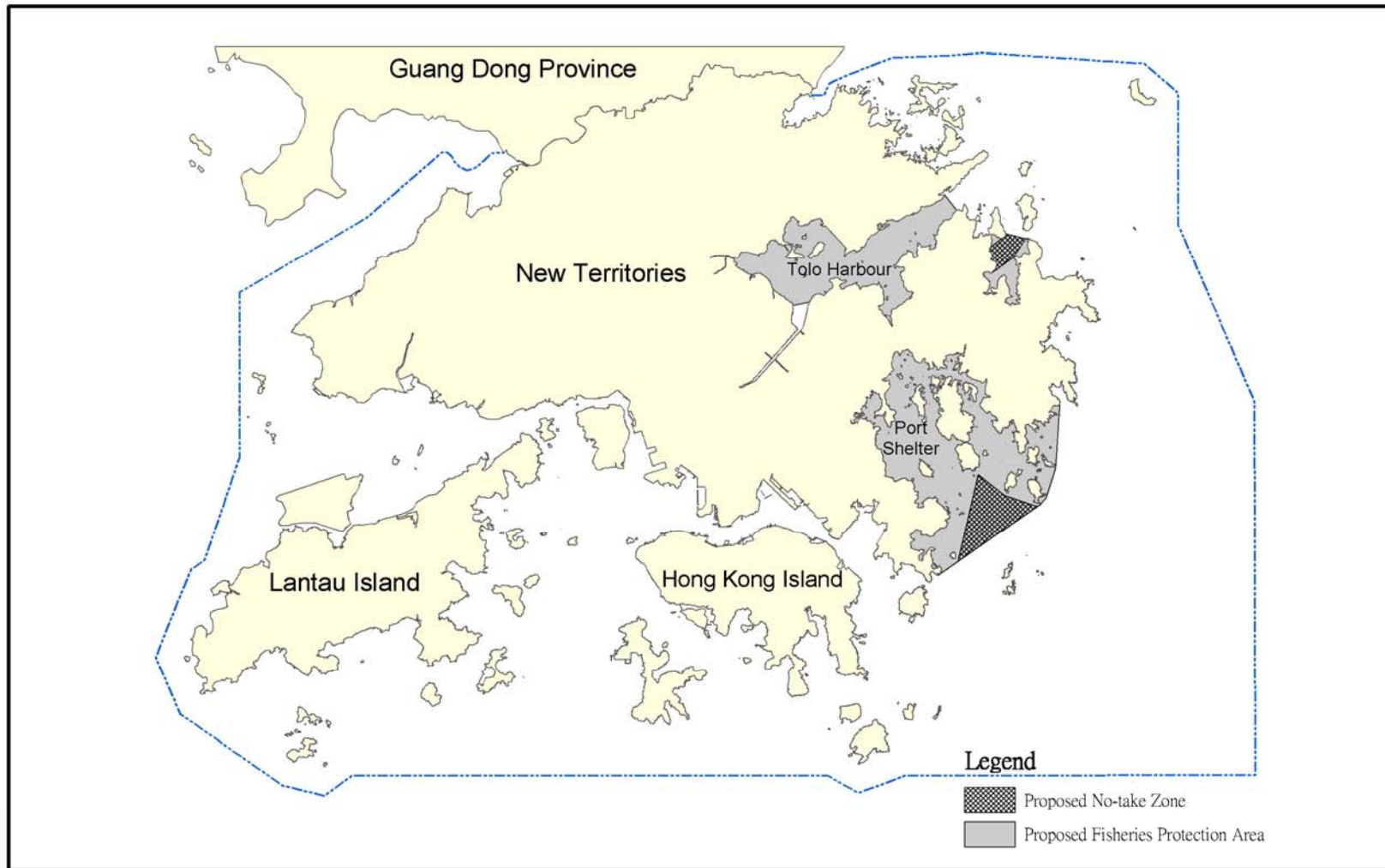
Item	Details
Right of appeal	Any person aggrieved by a decision of the Director in turning down a fishing licence/permit related application may, within 21 days of the receipt of the notification of the decision of the Director, appeal to the Administrative Appeals Board.
Moratorium on issue of further licence/permit	When there are reasons to support the need for stepping up the control of fishing activity to promote the sustainability of fisheries resources, the Director may impose a moratorium on the issue of further fishing licences/permits or restrict the growth in the overall engine power of fishing vessels.

**Proposed Designation of Fisheries Protection Areas (FPAs)**  
**and Associated Control Measures**

Item	Detail
Aims	To provide a legal framework for the designation of important spawning and nursery ground as Fisheries Protection Area (FPA) and implementation of control measures in the FPA to protect fish fry and spawning fish stocks in the areas from intense fishing pressure.
FPA designation procedures	<ol style="list-style-type: none"> <li>1. Prepare a draft map showing the boundaries of the proposed FPA, the “no-take” zones, if any, and other details;</li> <li>2. Publish the draft map and relevant details by notice in the Gazette and on newspapers and allow any persons to submit objection within 60 days from the date of publication of the notice;</li> <li>3. Submit the draft map with amendment (if any) to Chief Executive in Council for approval within 6 months from the last day of the objection period;</li> <li>4. Upon approval by Chief Executive in Council, deposit the approved map in the headquarters of the Agriculture Fisheries and Conservation Department for inspection and notify it in the Gazette; and</li> <li>5. Designate the FPA by Order in the Gazette.</li> </ol>
Controls	<ol style="list-style-type: none"> <li>1. Trawling activity is prohibited within FPAs.</li> <li>2. All fishing activities (except recreational fishing listed below) with the use/aid of any vessel in the waters of FPAs require a valid FPA fishing permit</li> <li>3. Recreational fishing with the use/aid of a non-fishing vessel involving hand-lining, capture of fish without the use/aid of any fishing gear or during scuba diving, is allowed in the waters of FPAs.</li> <li>4. All fishing activities with the use/aid of a vessel are prohibited in “no-take” zones within FPAs.</li> <li>5. When there is a need to further restore fisheries resources or protect fisheries spawning and nursery grounds in FPAs, the Director may, by order in the Gazette, specify the period of a year during which all fishing activities or fishing by specified fishing methods are prohibited within specified FPAs. No person shall carry out any fishing activities with</li> </ol>

Item	Detail
	the use/aid of a vessel by the prohibited fishing method during the specified period within FPAs.
FPA fishing permit	<ol style="list-style-type: none"> <li>1. Application requirement: <ol style="list-style-type: none"> <li>(a) For fishing with the use/aid of a fishing vessel in FPA, the applicant shall be a fishing licence holder and a bona fide fisherman habitually fishing in the waters of the FPA; or</li> <li>(b) For carrying out fishing activities with the use/aid of a vessel in the FPA for scientific research and related purposes, the applicant shall be the owner of the vessel with which the fishing activity is to be carried out.</li> </ol> </li> <li>2. Fishing permit is valid for not more than 12 months.</li> <li>3. Fishing permit is non-transferable.</li> <li>4. No fee shall be payable for the grant and renewal of fishing permit.</li> </ol>
Offences	<ol style="list-style-type: none"> <li>1. Any person carries out prohibited fishing activity or other fishing activity (except recreational fishing listed above) with the use/aid of a vessel in the FPAs without a valid fishing permit commits an offence.</li> <li>2. The owner, master or person in charge of the vessel commits an offence if he allows any person on board the vessel to carry out such fishing activity in the FPAs without a valid fishing permit.</li> <li>3. If the owner of the vessel is not on board the vessel at the time such fishing activity is carried out, he shall be liable if he knowingly permits or assists such activity to be carried out without a valid fishing permit.</li> </ol>
Penalties	The maximum penalties for the above offences include a fine of HK\$25,000 and imprisonment for 6 months.
Proposed FPAs	Tolo Harbour and Port Shelter are important fish spawning and nursery grounds. It is proposed to designate these two areas as FPAs and the areas in which artificial reefs have been deployed within the FPAs as “no-take” zones (Figure 1). The two proposed FPAs cover a total sea area of 13,700 hectares or 8.3% of the total sea area of Hong Kong.

Figure 1. Proposed Fisheries Protection Areas





## **The Effectiveness of “Closed Season” in the South China Sea**

### **(I) Recovery of Fisheries Resources in South China Sea**

#### **(1) *Effective conservation of spawning and juvenile fish***

The northern South China Sea lies in sub-tropics where sea temperature is generally higher all year round, which makes it favourable for fish spawning and gives rise to scattered spawning grounds and extended spawning season. Surveys on fish eggs conducted at different periods in the northern South China Sea indicated that the spawning season continued all year round but, for a majority of species, the peak period is around April to June. The population structure of major fish stock of economic value surveyed during the “closed season” showed that the measure was effective in protecting juvenile fish population and spawning population of dwindling fish stocks.

#### **(2) *Increase in the density of fishing resources***

The findings of two professional surveys indicated that the density of fisheries resources increased to varying extent in all seasons in northern South China Sea and Beibu Wan after the implementation of “closed season”. Summer recorded the most significant difference (i.e. a fortnight before and after the fishing operations resumed), when fisheries resources in the northern South China Sea nearly doubled and that of Beibu Wan nearly tripled, when compared with the same period in 1998 before the introduction of “closed season”.

#### **(3) *Significant increase in catch***

Before the implementation of “mid-summer closed season”, fisheries resources in the South China Sea had been on steady decline since 1980s. The catch rate only began to rise and returned to the level of early 1990s after the introduction of “closed season” in 1999. An analysis of a wealth of resource survey data (collated from over 8 000 catch hauls) showed that catch rates in all fish grounds have increased at varying extent.

#### **(4) *Changes in catch composition***

After the implementation of “closed season”, biodiversity in various fishing grounds has increased which demonstrated the positive protective impact of “closed season” on fisheries resources.

(5) *Phenomenon of abundant aggregation of fish stocks after annual “closed season”*

In 1999, this phenomenon was marked by an abundant aggregation of Spanish mackerel, black pomfret and squid in Quanhai area. In 2000, catch of green pilchard, golden scad and crimson seabream in Beibu Wan and Guangdong West fishing grounds set the best record for the past decade. In 2001, an abundant quantity of *decapterus maruads*i was found in the fishing grounds of eastern Guangdong, Pearl River estuary and eastern Hainan on resumption of fishing operations. In 2002, significant aggregation of neritic squids was spotted in the fishing grounds of Shanwei, Jiazi, etc. The neritic squids caught by trawling accounted for over 60% of the total catch. Moreover, aggregation of Spanish mackerel and black pomfret, which had disappeared from South China Sea for many years, has reappeared.

(II) **Improved cost-effectiveness in fishing industry**

Implementing “closed season” could reduce the intensity of fishing and save production cost. With the introduction of “closed season”, fisheries resources could increase in both quantity and quality, which enhanced its cost-effectiveness. For instance, the catch value of Guangxi region totaled \$1.03 billion in 1999, 53.4% higher than 1998 whilst the total catch value for 2000 amounted to \$1.32 billion, 28.5% higher than 1999.

(III) **Structural adjustments in fishing operations**

Given the differences in fisheries resources in different locations, “closed season” has varying effects on their conservation and maintenance. Thus, different regions have adjusted their operations to accommodate the “closed season” and maximize the benefits of “closed season”.

(1) **Guangdong Province:** Since the “closed season” was implemented six years ago, the number of trawlers and purse-seiners, target vessels banned under the measure, has declined by 30% and 50% respectively whilst more than 9 000 gill netters have joined the fishing fleet.

(2) **Guangxi Province:** Trawling is the most popular fishing practice in this region and accounts for about 70% of the annual total catch. These fishing vessels are larger and mainly rely on fishing grounds outside Pearl River estuary, where waters were of 150m to 250m deep, and Nansha, which helps to alleviate the pressure on coastal fisheries resources to a certain extent. Since the best period for purse seining with

light attraction during the year coincides the “closed season”, fishermen have gradually turned away from this kind of practice. Gill netting, which is not subject to any restriction during the “closed season”, has become more popular as fresh catch commands higher price.

- (3) **Hainan Province:** Implementation of “closed season” has brought significant improvements in resource conservation for middle and upper strata of coastal waters. Fishermen flocked in from various areas and adjusted their operation to take advantage of the changes in fisheries resources. As a result, many fishermen have converted their vessels and shifted from drill gill net fishing to purse seining with light attraction. As the shift enabled fishermen to operate safely in a wide expanse of fishing grounds that offered stable resources, there have been marked gains in production efficiency.

(IV) **Main factors that undermine the effectiveness of “closed season”**

“Closed season” has a positive impact on the conservation and maintenance of fisheries resources in South China Sea. The fishing moratorium protects fisheries resources against further depletion, alleviates the negative impact of intense fishing, and gives a break for juvenile fishes of major economic species and shrimp fry to grow and spawning fishes to breed. It lays a sound foundation for the sustainable development of fishing industry in South China Sea. However, “closed season” has become less effective in the past two years (2002 and 2003) when compared with previous three years (1999 to 2001). The main reasons are as follows:

- (1) **Over-fishing:** Fishing activities in the South China Sea have become very intense, particularly when fishing operations resumed after the ‘closed season’. High intensity and mass exploitation when operations resumed after “closed season” meant that fish stocks that have just recovered quickly became depleted after a new round of over-fishing.
- (2) **Serious damage to spawning and nursery ground:** The surrounding waters of Pearl River estuary are the spawning and nursery grounds for some 200 marine fish species. Most marine dumping grounds of South China Sea are also concentrated in these waters. With steady increase in the volume of wastes dumped over the years and land-based pollution, spawning grounds become buried and the nature of sea bottom of adjacent waters was also changed. Significant areas of spawning grounds in the coastal waters have been irreparably destroyed and the ecology in the region has suffered heavy damages.

The abovementioned information is extracted from the following literatures:

- (1) *Evaluation on the Effectiveness of “Mid-summer closed season” in the South China Sea*: Resources and Environmental Protection Department, Bureau of Fisheries Management and Fishing Port Superintendence, Ministry of Agriculture; *Fisheries at South China Sea and Pearl River Delta* (Issue No. 8, 2004).
- (2) *Implementation of the “closed season” System-Promote Sustainable Development of Fisheries Industries in South China Sea*: WU Zhang, Bureau of Fisheries Management and Fishing Port Superintendence, Ministry of Agriculture; The Working Report presented at the Review and Award Conference for “closed season” in South China Sea (November 1, 2002).

**Proposed Implementation of the**  
**Annual Territory-wide “Closed Season”**

<b>Item</b>	<b>Detail</b>
Objectives	To provide a legal framework for the implementation of an annual territory-wide “closed season” and necessary control measures to allow a break for fish to breed and stocks to recover.
Implementation procedures	<ol style="list-style-type: none"> <li>1. Prepare a draft plan which includes details of the timing and duration of the “closed season”, the types of fishing activities/ fishing methods to be prohibited during the “closed season” and the commencement date, following consultation with the fishing industry and relevant parties;</li> <li>2. Publish the draft plan by notice in the Gazette and on newspapers and allow any persons to submit objection within 60 days from the date of publication of the notice;</li> <li>3. Submit the draft plan with amendment (if any) to Chief Executive in Council for approval within 6 months from the last day of the objection period;</li> <li>4. Upon approval by Chief Executive in Council, effect the implementation of the annual territory-wide “closed season” by Order in the Gazette.</li> </ol>
Controls	<ol style="list-style-type: none"> <li>1. Fishing activity by prohibited fishing methods is not allowed during the “closed season”.</li> <li>2. All fishing licences and fishing permits issued for conducting fishing activities prohibited during the “closed season” shall be automatically suspended during the “closed season”.</li> </ol>
Offences	<ol style="list-style-type: none"> <li>1. Any person carries out the prohibited fishing activity during the “closed season” commits an offence.</li> <li>2. The owner, master or person in charge of the vessel commits an offence if he allows any person on board the vessel to carry out the prohibited fishing activity during the “closed season”.</li> <li>3. If the owner of the vessel is not on board the vessel at the time the prohibited fishing activity is carried out during the “closed season”, he shall be liable if he knowingly permits or assists such activity to be carried out.</li> </ol>

Item	Detail
Penalties	The maximum penalties for the above offences include a fine of HK\$25,000 and imprisonment for 6 months.