濕地與漁業
Wetland and Fisheries

世界上幾乎所有水體(包括淡水、鹹淡水及鹹水)都有漁業運作。根據拉姆薩爾公約公佈的資料，全球約有十億人口依賴魚產作為主要的蛋白質來源。而從事漁業的人口，約為三千五百萬，他們大部份都是居住在發展中國家。濕地漁業主要可分為養殖漁業和捕撈漁業。兩種漁業都需要健康的濕地，才可以持續發展。

Fisheries are operated in almost all water bodies over the world, including freshwater, brackish water and marine. According to information from Ramsar Convention, one billion people rely on fish as their main sources of protein, 35 million people are engaged in fisheries, the majority of them live in developing countries. Wetland fisheries can be divided into aquaculture and capture fisheries. Both of them rely on healthy wetlands to sustain.

漁業是濕地其中一種重要的經濟作業
Fisheries is one of the major industries that rely on wetlands

水產養殖
Aquaculture

早於幾千年前，居住在中國、米索不達米亞及埃及的人民已從事水產養殖。香港現時可以找到約四種水產養殖的方式，包括塘魚養殖、海魚養殖、蠔隻養殖及基圍操作。在2006年，水產養殖業的產量達3,562公噸，價值約1億2仟萬元，分別佔漁業總生產量及總生產值的2.3%和7.2%。

Aquaculture has began in China, Mesopotamia and Egypt for thousands of years. In Hong Kong, we can find about 4 different ways of aquaculture, this include marine fish culture, pond fish culture, oyster culture and *gei wai* operation. In 2006, production from the aquaculture was 3,562 tonnes with value of $120 million, which was 2.3% in weight and 7.2% in value of the total fisheries production respectively.

塘魚養殖
Pond Fish Culture

本港的魚塘集中在新界西北部。魚苗多在早春時分放養。養魚戶從本地的濕地捕捉魚苗或從中國大陸及其他亞洲國家購入，再進行放養。飼養的魚類品種包括鯇魚、大頭魚、鯉魚、鯪魚及烏頭。魚苗在魚塘內生長八至十二個月後，養魚戶便會在塘內下網捕魚，並挑選體型合適的魚獲出售。過往，養魚戶會在魚塘上設置鴨舍，並在塘中養鴨，鴨的糞便成為魚的飼料。現時，大多養魚戶都會使用方便儲存的乾飼料，養魚戶亦使用打氣機在水面不停攪動，確保魚塘裡的水不會出現缺氧。

魚塘
Fishpond

烏頭
Grey Mullet

鯪魚
Grass Carp

鯉魚
Common Carp

Fishponds are mainly located in the northwest New Territories, where fish fry are stocked in early spring. Fish fry are collected from local wetlands or imported from mainland China and other Asian countries. Freshwater fishes such as Grass Carp, Bighead Carp, Common Carp, Mud Carp as well as Grey Mullet are predominantly cultivated in local fishponds. Fish fry grow in fishponds for 8 to 12 months. Then fishes of marketable size are collected for sale. In the past, fish farmers also rear ducks in sheds built above fishponds. Faeces of the ducks became feed for the fishes. Nowadays, fish farmers use dry feed instead, and they use aerators or other machinery for agitating water to increase dissolved oxygen.

海魚養殖
Marine Fish Culture

根據《海魚養殖條例》，所有海魚養殖活動必須由持有牌照的養魚戶經營，而且只能夠在指定的魚類養殖區內運作。香港的海魚養殖，集中在西貢和新界東北的不當風海灣。養殖的品種包括：青斑、芝麻斑、龍躉、火點等。魚苗在懸浮的網箱內養殖，一般稱為魚排。過往養魚戶會利用低收益的雜魚作為飼料，但隨著技術改良，現時已廣泛採用乾飼料。養魚戶亦運用氣泵確保魚塘不會出現缺氧現象。

漁民收獲養殖的龍躉
Giant Groupers are cultivated and collected by fishermen

Under the Marine Fish Culture Ordinance, all marine fish culture should be operated in designated fish culture zones under a licence scheme. Most mari-culture rafts are found at sheltered coastal area in Sai Kung and northeastern New Territories. The marine fish fry are cultivated in cages suspended by floating rafts. Commonly cultured marine fishes include Green Grouper, Brown-spotted Grouper, Giant Grouper and Russell's Snapper etc. In the past, fishermen used fish with low economic value trash fish as feed. Nowadays, they use dry feed instead, and use aerators pumps to ensure sufficient oxygen supply.

蠔隻養殖
Oyster Culture

在香港，蠔隻養殖主要分為海底養殖和浮排養殖兩種方法。

海底養殖法已有200年歷史。蠔民會在潮間帶泥灘上放置舊石塊、瓦片或柱杆作為附著器收集蠔苗，這些蠔苗需要生長4至5年才可收成售賣。

浮排養殖是一種近年興起的養殖方法。蠔民從中國大陸入口中型蠔，把蠔放在籃子，然後將籃子懸掛於浮排內育肥。這些蠔大概在6至12個月後便可出售。

過去，剩下的蠔殼可以製造石灰。時至今日，在新界西北部，剩下的蠔殼碎片多直接倒入魚塘以中和塘泥的酸性。

位於流浮山仍使用海底養殖法的蠔田
Oyster field for bottom culture at Lau Fau Shan

浮排養殖法是把中型蠔放在懸掛於浮排的籃子內育肥
Raft culture method is to rear medium-sized oysters in baskets suspended by rafts

蠔民正在蠔場採蠔
Matured oysters are being collected

The two types of oyster culture practices in Hong Kong are bottom culture method and raft culture method.

The bottom culture method has been practised for more than 200 years. Oyster farmers lay stone, tile or pole on inter-tidal mudflat to collect spats. The spats need 4 to 5 years to reach marketable size.

Raft culture method is adopted in recent years. Medium-sized oysters are imported from mainland China and then placed in baskets suspended by rafts. Such oysters are marketable after 6 to 12 months.

In the past, the emptied oyster shells were collected for making lime. Nowadays, they are used to neutralise acidity of mud in fishponds in northwest New Territories.

基圍
Gei Wai

基圍是一種運作成本較低的漁業，在亞洲地區基圍運作已有數百年歷史，但在香港則始於1940年代中期，香港現存仍運作的基圍位於米埔沼澤。

基圍是一種環繞紅樹林築堤而建的人工濕地。當基圍運作時，養蝦戶會在漲潮時開啟水閘，把蝦苗及魚苗從后海灣引入基圍內。這些蝦苗及魚苗會進食基圍裡的浮游生物，這些浮遊生物進食紅樹林落葉的腐殖質。夏季和秋季是收取蝦穫之時，養蝦戶會於潮退時在水閘設網，當水閘被打開，肥美的基圍蝦隨水沖到水閘，落在網裡。

Gei wai is a kind of low operation cost fisheries. Though it has been operated in Asia for hundreds of years, it began in Hong Kong in mid-1940s. The remaining *gei wai*s which are still operating in Hong Kong are located in the Mai Po Maushes.

米埔自然護理區僅存數個仍然運作的基圍，用作養殖基圍蝦作教育用途
Several remaining traditional *gei wai*s are still in operation for producing shrimps for education purpose in the Mai Po Nature Reserve

Gei wai is a kind of artificial wetlands, formed by bunks enclosing mangroves along the coastal area. With the use of sluice gates, shrimp farmers introduce shrimp larvae as well as other fish fries from the Inner Deep Bay during high tide. The larvae feed on plankton that feed on detritus of fallen mangrove leaves in *gei wai*. When shrimp larvae grow into adults in summer and autumn, farmers make use of a net placed at the exit of opened sluice gate to collect them during low tide.

捕撈漁業
Capture Fisheries

本港大部份魚獲都是以捕撈方式獲取的。捕撈漁業主要在南海大陸架附近的水域運作。根據漁農自然護理署的記錄，在2006年，香港約有3940艘漁船，從事各類拖網(包括單拖、雙拖、蝦拖)、延繩釣、刺網及圍網等作業。

The fishing areas of Hong Kong vessels is in the waters of the adjacent continental shelf in the South China Sea. According to the record of Agriculture, Fisheries and Conservation Department, the fishing industry consisted of 3940 vessels in 2006. Major fishing operations include trawling (stern trawling, pair trawling, shrimp trawling) long-lining, gill-netting and purse-seining.

香港的捕撈漁業，以捕魚和蝦為主
Capture fisheries in Hong Kong usually harvest fishes and shrimps

漁業面對的威脅
Impacts on Fisheries

濕地是大部份魚類(包括深海魚類)的育幼場所，也是牠們的棲息地。漁業可否持續地運作，有賴健康的濕地環境。然而，過度捕撈、破壞性捕魚及非可持續性養魚業均會降低濕地環境的質素，繼而降低漁業產量。

根據拉姆薩爾公約秘書處的資料，全球約75%具商業價值的海洋漁業資源及許多內陸漁業資源正被過度捕撈至不可被持續運用的地步。某些國家，漁民甚至大量捕撈魚苗。這些魚苗不單食用價值不高，亦未開始產卵繁殖下一代。這樣的捕撈只會使魚獲愈來愈少，甚至可能令某些品種絕種。

大量捕撈魚苗會使魚獲越來越少
Over collection of fish fries will result in decline of fish stock

除此之外，有些漁民會利用炸藥非法炸魚或毒魚(使用山埃或魚藤酮)以取得更多魚獲。這些捕魚方法會破壞生態環境，危及附近的非目標魚類和浮游生物，以至破壞相關的食物鏈甚至生態系統。

Most of fishes (including deep ocean fishes) spend all or part of their life cycles in wetlands. Sustainability of fisheries relies on healthy wetlands. However, overfishing, destructive fishing and unsustainable aquacultural practices deteriorate the quality of wetland environment, which in turn reduces fish stocks.

According to information from Ramsar Secretariat, about 75% of commercially significant marine fishes and many inland fish stocks are being overfished to an unsustainable level. In some countries, fishermen collected fish fry which have not yet reached marketable sizes and have not yet matured to spawn. This practice results in dramatic decline of fish stocks and drives some species to the brink of extinction.

In addition, some fishermen carry out destructive fishing by using dynamites and poisons (such as cyanide and rotenone). These methods also kill non-targeted small fishes and planktons nearby, thus destroy the related food chains and even the ecosystem.

漁業資源存護
Conservation of Fishery Resources

自1999年開始，中國政府於每年6月1日至8月1日定為休漁期，禁止在南中國海域捕魚。

本港水域內設立的四個海岸公園及一個海岸保護區，保護了魚類和其他海洋生物的重要生境。人工魚礁計劃和魚苗放養試驗，目的是增加本地的漁業資源。《海魚養殖條例》規定所有海魚養殖活動均須領取牌照並在指定魚類養殖區內經營，這有助於保護海洋環境。

To allow restoration of fish stock, in 1999 the Chinese government introduced annual fishing moratorium for fisheries in the South China Sea from 1st June to 1st August.

In Hong Kong, designation of the four marine parks and one marine reserve protects important habitats of fishes and other marine creatures. The artificial reef and the fish restocking projects enrich the local fisheries resources. Marine Fish Culture Ordinance requires all marine fish culture to be operated under a licence scheme and in designated fish culture zones. All these help to protect the marine environment.

我們能做甚麼?
What Can We Do?

除了政府的政策外，大眾市民也可透過避免吃野生瀕危物種等方法來協助保護我們的漁業。

Apart from the policy implemented by local government, we can help to conserve fishery resources by avoiding consumption of wild endangered species.