

濕地的功用 Functions of Wetlands

濕地是陸地和水交接的地方，有著不同的生境。濕地的類型千變萬化。濕地公約(拉姆薩爾公約)會議文件1.1提到「濕地泛指沼澤、泥沼與泥炭沼地帶，當中的水體可以是天然的或是人造的；可以是永久存在的或是暫時性的。當中的水分可能是靜止的也可以是流動的；可以是淡的、是鹹的、也可以是半鹹半淡的。當中亦包括潮退時，水深不超過六米的淺海區域」。

根據「世界自然保育監察中心」估計，地球表面約有6%為濕地，當中的2%為湖泊、15%為氾濫平原、20%為沼澤、26%為泥沼、30%為泥炭沼。濕地在地球上雖然只佔有很少的面積，但它為人類和野生動物提供豐富的天然資源。

Wetlands are places where land and water meet. Wetlands come in many forms. According to the Article 1.1 of the Wetland Convention (Ramsar Convention), wetlands are defined as: "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres".

As suggested by the "World Conservation Monitoring Centre", wetlands cover roughly 6% of the Earth's land surface of which 2% are lakes, 15% floodplains, 20% swamps, 26% fens, and 30% bogs. Wetlands cover small proportion of the Earth's surface, but they are essential to the life of human and other wildlife.

濕地的主要功用 Major Functions of Wetlands

我們從不同的濕地獲得好處。濕地能夠儲存水份、潔淨水質、保護海岸線、防止氾濫、為野生生物提供食物及庇護所、為人類提供食物及原材料、提供運輸的渠道及進行康樂活動的地方。

We benefit from wetlands in many different ways. Wetlands store water, filter water, protect shorelines, store flood waters, provide resources for natural products, provide food and habitats for wildlife, and provide opportunities for recreation.



高山的河流
River in high mountain



沼澤化草甸
Meadow marsh



魚塘
Fishponds



湖泊
Lake

1. 儲存水份 Water Storage

苔原、泥炭沼、湖泊、泥沼和沼澤像一塊吸滿水的巨型海綿，儲存水份，然後慢慢地釋放至表面徑流以及地下水，有助穩定溪水全年的排放量，以至在乾旱的季節，濕地中的水生植物也能得到滋潤。另一方面，濕地的植物亦會吸收水份，從而增加濕地的儲水空間。

地下水及河流都是重要的淡水水源，對人類及野生動物都非常重要。

Wetlands such as tundra, bogs, lakes, fens and swamps soak water like giant sponges. They store water and release it slowly through surface run-off and to underground aquifers (a layer of rocks containing water). Because of this, the annual water discharge of streams is maintained steadily and aquatic plants that found in wetlands flourish even in the dry months. On the other hand, aquatic plants also take up water and increase the storage capacity of wetlands.

Groundwater and rivers are crucial freshwater source to human, as well as wildlife.



上圖：苔原就像一塊海綿，能有效儲存水份

下圖：「濕地知多少？」展覽廊的海綿模型便展示了該項功能

Top: Tundra has similar function as that of a sponge for water storage
Below: Sponge model in "What are Wetlands?" Gallery demonstrates the water storage function

2. 防止洪水氾濫 Flood Prevention

濕地能短暫地儲存洪水，再慢慢釋出。這種儲存的功能，可以降低水流的排放量及流速，從而減低低地氾濫的機會，並減少氾濫所引致的人命及財產的損失。

Wetlands temporarily store flood water and release it slowly. The water-storing capacity reduce the volume of peak discharge and the flow rate of water. Hence, wetlands help to reduce the chance of flooding at lowland area as well as protect human life and their properties.

3. 保護海岸線和河床 Protect Shoreline and River Banks

沿海岸線生長的紅樹林和珊瑚礁是一道天然的屏障，它們有效保護海岸線免受風浪的吹襲和侵蝕。生長在河岸或池塘邊的濕地植物也能抓緊泥土及減低水流的流速。

Mangroves and coral reefs protect shorelines as they provide barriers to storm and erosion by absorbing the force of waves and currents. On the other hand, aquatic plants grown on the river banks and pond bunds retain storm water.



紅樹林有保護海岸線的作用

Mangrove serves important function to protect shoreline



紅樹林模型展示抵禦海浪的功能

The mangrove model imitates protection against waves

4. 過濾 Filtering

濕地是一個天然的濾水器，能清除無機污染物、減少水中的懸浮物。生活在濕地中的昆蟲和微生物，是分解水中有機物的箇中能手，而水生植物及沉積物能分別吸取及吸納水中過多的營養物，水質亦得以改善。

Wetlands work like a filter in the natural environment. They remove inorganic nutrients and reduce suspended sediments. Insects and microbes inhabiting in wetlands help breaking down the organic matter. Excess nutrients are taken up by aquatic plants and adsorbed by sediment.



上圖：蘆葦床能過濾水中的污染物和沉積物

下圖：「濕地知多少？」展覽廊有一個模擬蘆葦床功能的展覽品

Top: Reedbed filters pollutants and sediments in water

Below: Exhibit imitating reedbed can be found in "What are Wetlands?" Gallery

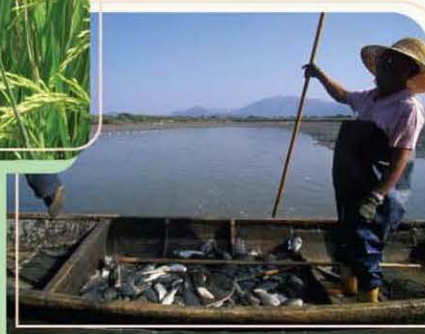
5. 供給食物和日用品 Provide Food and Necessities

濕地供給我們多種食物、藥物、建築原料或其他日用品的原材料。我們日常食用的稻米、芋、薏米或西洋菜都是水耕農地的作物，而魚、蝦、蟹和蠔也是濕地供給我們的食物。昔日的農村社會，會以曬乾的濕地植物作為鋪蓋屋頂的物料（蘆葦）、油燈的燈心（燈心草）和包紮物件的繩（鹹水草）。



濕地供給我們稻米、魚類等重要糧食資源

Wetlands provide us important food sources including rice and fishes



Wetlands provide food, medicines and raw materials for building and making commodities. Wet agricultural lands produce Rice, Taro, Job's Tears and Water Cress which are common ingredients of Chinese dishes. Fish, crabs, oysters and shrimps are also important wetland food sources. In the traditional agricultural society, sun-dried wetland plants were used for roofing materials (Reed), making the wick of oil lamp (Common Rush), and natural strings (Malacca Galingale).

6. 提供庇護所 Provide Shelters

濕地是眾多生物的家園，部份動物必須在濕地繁殖及養育牠們的幼體。一些候鳥在遷徙過程中，甚至會利用不同地區的濕地作為棲息和覓食場所。而部份體型細小的昆蟲，更能運用濕地的植物作為興建家園的材料。

Wetlands provide essential habitats to a great variety of wildlife. Some animals utilise wetlands intermittently for breeding and rearing young. Many birds use various wetlands as roosting places and feeding grounds along their migratory route. Some tiny insects even build their homes with wetland plants.



濕地是眾多生物的棲息地，而「濕地知多少？」展覽廊內亦展示了各種不同濕地生境的動植物
Wetlands provide essential habitats for wildlife. The life wall in "What are Wetlands?" Gallery demonstrates wetlands are homes to diverse animals and plants

7. 運輸渠道 Transportation Channel

昔日，河道是貨運和客運的主要渠道，而河口城市往往成為海上運輸與內河運輸的中轉站。世界上不少貿易中心都由這些運輸中轉站應運而生。時至今日，內河運輸仍有其優勢，就是貨運量大而成本較低。故此，這種運輸在各地仍然十分普遍。

Rivers are channels for transporting goods and passengers. Cities at estuaries serve as relay hubs for passengers and goods from sea-faring journeys to inland cities via rivers and channels. Various world trade centres are developed from these stopovers. Nowadays, inland shipping is widely adopted because of its high carrying capacity and relatively low operation cost.



河道是運輸的主要渠道
Rivers are important means for transportation

8. 提供康樂地方 Provide Recreation Opportunities

濕地是我們進行康樂活動的地方。大家可以在當中進行觀鳥、生態攝影、釣魚和游泳等活動。

Wetlands provide us with venues for recreational and educational purposes, like bird watching, wildlife photography, fishing as well as swimming.



珊瑚礁是浮潛的理想地點
Coral reefs are ideal places for snorkeling



濕地亦是觀鳥愛好者的地方
Wetlands are good spots for watching birds

濕地的功能與我們的生活息息相關。為確保我們有優質的水源，並保障我們及野生生物的健康，我們必須採取行動，保護我們的濕地。

Many functions associated with wetlands have significant benefit to our society. We should start to protect our wetlands, in order to guarantee a good water quality and the health of wildlife and people.