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# wetlands conservation in hong kong

## BACKGROUND & BELIEFS

Freshwater wetlands are among the most important yet least appreciated links in the ecological chain. They provide water, food and shelter for aquatic and land animals (including humans), provide breeding grounds for birds and other wildlife, serve as natural water reservoirs and filters, and reduce erosion along river banks and shorelines.

Yet wetlands are endangered in their own right – easily overwhelmed by pollution and lacking the perceived “glamour” of other natural habitats. Their flat, open spaces create tempting targets to be exploited for irrigated agriculture or aquaculture, or drained to become housing developments or industrial parks. Half of the world's wetlands have been destroyed in the past 100 years.

Wetlands are enormously important to Hong Kong, both for their environmental benefits and as a community resource. They create an unparalleled education platform for schoolchildren, researchers and other visitors.

WWF actively supports the goals of the Convention on Wetlands (Ramsar Convention), an international treaty signed in 1971. Its mission is to provide a framework for conservation and wise use of wetlands through local and national action and global cooperation, helping to achieve sustainable development throughout the world.

Effective management of wetlands is an investment for people and wildlife. WWF believes it is necessary to adopt a new mindset that appreciates the environmental importance of wetlands, and their economic value to the people who rely on them.



Preserving wetlands is essential to provide feeding and nesting sites for waterbirds.  
Image: © Amy TSANG

## OUR WORK

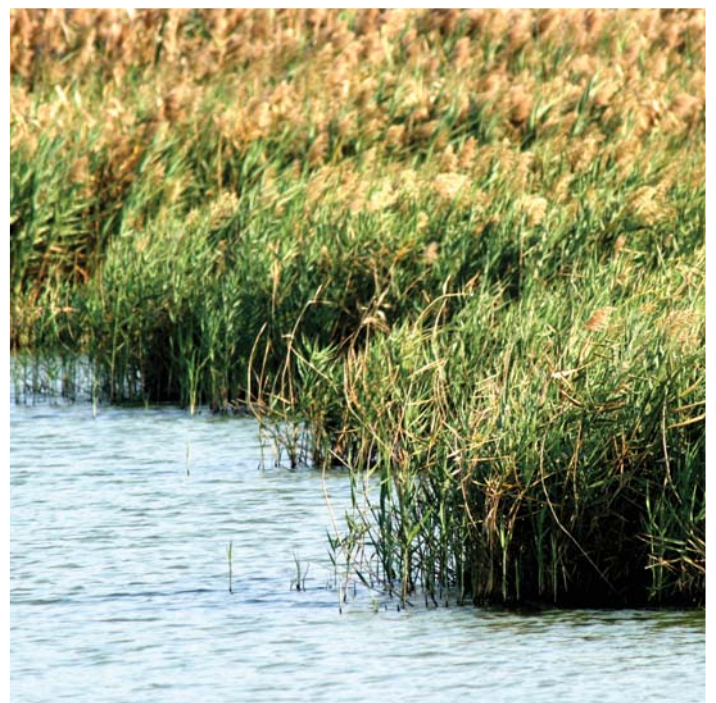
From a conservation perspective, the wetlands around Mai Po and Inner Deep Bay are Hong Kong's crown jewels. In recent years, more than 60,000 migratory waterbirds have wintered in these areas, including globally endangered species such as the Saunders' Gull and 20 percent of the world's population of Black-faced spoonbill. During the spring and autumn migrations, some 20,000 to 30,000 shorebirds regularly use the Mai Po mudflats as a site to rest and refuel before they continue their long journeys.

More than 380 species of birds have been recorded from these wetlands, with 20 of them considered to be threatened. More than one percent of the world's population of Saunders' gulls and the Spotted greenshanks visit Mai Po and Inner Deep Bay.

In addition to supporting waterbirds, the site also features a mosaic of wetland habitats such as inter-tidal mudflats, a stand of inter-tidal mangrove trees that is the sixth-largest protected stand in China, traditionally managed shrimp ponds, and fishponds. There is also a reedbed that is probably the largest in Guangdong province.

After years of advocacy by WWF and other organizations, the Hong Kong government in 1995 listed 1,500 hectares in Mai Po and Inner Deep Bay as a Ramsar Site, a “Wetland of International Importance” under the Ramsar Convention. Today, WWF is privileged to manage these beautiful, tranquil and productive wetlands on behalf of the people of Hong Kong.

The period from November to April is traditionally the peak period for migratory water birds to visit the wetlands of Mai Po and Inner Deep Bay. During this period, WWF conducts around 50 school and



Reeds growing in shallow waters help provide food and shelter for many kinds of creature.  
Image: © Amy TSANG

public education visits each month to promote greater awareness of the importance of wetland conservation.

Beyond their environmental benefits, the Deep Bay wetlands support a traditional way of life for many people, helping to preserve the region's cultural heritage. These include the fishpond farmers who manage the 1,000 hectares of ponds in and around the Mai Po Inner Deep Bay Ramsar Site. The traditional management of these fishponds is an example of the wise use of wetlands. Not only do the ponds provide a livelihood for fishermen, but they also provide food and habitat for wildlife, especially when they are drained in winter for fish harvesting.

In 1979, the Hong Kong Birdwatching Society began counting wintering waterbirds in and around the wetlands of Mai Po and Inner Deep Bay. Their numbers rose from 12,830 to 68,000 in 1997, but since have stabilized at around 54,000. This decline is probably due to increasing pollution in Deep Bay, which affects the amount of food, including crabs and mudskippers, available for the birds when they arrive.



By making marshlands accessible, WWF helps the public to understand their importance.  
Image: © Amy TSANG

## FEATURE: Managing Gei Wai and Fishponds

In Asia, people living in coastal areas have hundreds of years of experience producing shrimp in ponds located adjacent to bays or estuaries. During the mid-1940s, a wave of immigrants from China came to Hong Kong and began creating ponds known as *gei wai* (literally meaning a pond enclosed by a bund). These are recognised as good examples of how coastal wetlands can be managed sustainably, benefiting local communities with minimal adverse impact to the environment.

WWF takes an active role in managing the *gei wai* within Mai Po for a variety of reasons – to make them more productive for wildlife, and because traditional management practices are changing. Some examples:

- Limiting the height and spread of trees along the *gei wai* bunds. The reason is that waterbirds prefer open habitats for roosting so they can better see approaching predators.
- Conducting research to learn what types of aquatic grass are preferred by ducks as food, and introducing those grasses into the ponds.
- Removing silt from the *gei wai* to prevent them from becoming dry land, or using the silt to create shallow islands where waterbirds can roost.
- Regularly cutting grass along the bunds. Research showed that wintering ducks are attracted by short grass for roosting and grazing.

Traditional management of *gei wai* and freshwater ponds includes draining them in winter to harvest the commercial fish inside. This subsequently creates feeding opportunities for herons, egrets, spoonbills and other waterbirds in the shallow water at the bottom of the ponds where small, non-commercial fish and shrimps are trapped.



WWF launched the “Adopt a Green Fish Farm Project”.  
Image: © Tobin LAU

However, fewer fishpond operators outside Mai Po are following such traditional management practices. Instead, they are partially draining the ponds at different times throughout the year, when the price of fish is higher in wholesale markets. Such partial draining does not provide the shallow water necessary for waterbirds to feed. Another problem is that many fishpond operators are leaving the industry, with few people lining up to take their place.

WWF responded to these changes by launching the “Adopt a Green Fish Farm Project.” It is the first programme in Hong Kong to apply the “Wise Use” concept – supporting an industry that benefits local communities, wildlife and the environment.

The goals of the pilot programme include raising awareness of the ponds' ecological importance; increasing public involvement with the farmers through monthly activities; providing financial assistance and moral encouragement so that pond farmers continue their traditional management practices; and encouraging members of a younger generation to join the industry.