

Ramsar Information Sheet

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- 1. Date this sheet was completed:** December 1997
- 2. Country:** People's Republic of China
- 3. Name of wetland:** Mai Po and Inner Deep Bay, Hong Kong
- 4. Geographical co-ordinates:** 20°29' - 22°31'N 113°59' - 114°03'E
- 5. Altitude:** 0 m (sea level)
- 6. Area:** 1,513 ha

7. Overview

Shallow bay with extensive inter-tidal mudflats backed by dwarf mangroves, shrimp ponds and fish ponds along the coast.

- 8. Wetland type:** G I 1
- 9. Ramsar Criteria:** 2a, 2d, 3a, 3c
- 10. Map of site included:** Yes

11. Name and address of compiler:

Agriculture and Fisheries Department
The Government of Hong Kong Special Administrative Region
Of the People's Republic of China
Canton Road Government Offices
393 Canton Road
Kowloon
Hong Kong

12. Justification of criteria selected under point 9:

2a: The site regularly holds 13 globally threatened species (including the Black-faced Spoonbill whose population is "critical") and five have important populations there.

2d: The site is the type locality for some 17 species of invertebrates including a crab, which is found nowhere else in the world.

3a: Over the 1990-1994 five-year period, Deep Bay has, on average, supported 48 500 waterfowl in mid-winter.

3c: The site regularly holds over 1% of the global population of at least 3 species of birds (see item 18 for details)

13. General location:

On the north-west New Territories of Hong Kong.

14. Physical features:

A natural shallow estuarine bay with an average of water depth about 2.9 m, and a tidal range of 1.37 m. Inner Deep Bay receives water and sediments from both Hong Kong and Shenzhen. The substrate is fine silt. During wet season, the salinity is comparatively low and sometimes near fresh water. During the dry season, the salinity reaches that of normal sea water. There is no stratification of the water of Deep Bay because the bay is shallow.

The climate of Hong Kong is sub-tropical, and under the strong influence of monsoons. Rainfall occurs mainly from April to September.

15. Hydrological values:

The site helps to alleviate flood problems in the north west of the territory. The mangroves are of value in stabilising the shore of the bay.

16. Ecological features:

Estuarine inter-tidal mudflat is backed by dwarf mangroves, shrimp ponds and fish ponds. The major species of the mangroves are *Kandelia candel*, *Avicennia marina*, *Aegiceras corniculatum*, *Bruguiera conjugata*, *Exoecaria agallocha* and *Acanthus ilicifolius*.

17. Noteworthy flora:

Inner Deep Bay supports a stand of dwarf mangrove. The main species are *Kandelia candel*, *Avicennia marina*, *Aegiceras corniculatum*, *Bruguiera conjugata*, *Exoecaria agallocha* and *Acanthus ilicifolius*. The marine angiosperm *Halophylla beccarii* is found on the mudflat and *Ruppia maritima* has been recorded in the shrimp pond.

18. Noteworthy fauna:

Inner Deep Bay is the type of locality for some 17 species of invertebrates new to science. The area regularly supports large numbers of waterfowl in winter (over 63,000 recorded in mid-January 1995) and on migration (up to 20,000 - 30,000 shorebirds). The area supports significant portions of the population of the following birds:

		Estimated % of world population
Black-faced Spoonbill	<i>Platalea minor</i>	24
Saunders' Gull	<i>Larus saundersi</i>	5
Spotted Greenshank	<i>Tringa guttifer</i>	3

Other globally threatened species which occur regularly or species with important biogeographically populations include:

Dalmatian Pelican	<i>Pelecanus crispus</i>
Chinese Egret	<i>Egretta eulophotes</i>
Bear's Pochard	<i>Aythya baeri</i>
Baikal Teal	<i>Anas formosa</i>
Asiatic Dowitcher	<i>Limnodromus semipalmatus</i>
Relict Gull	<i>Larus relictus</i>

19. Social and cultural values:

This is the only place in Hong Kong where *Gei Wai* (shrimp ponds) operation, a traditional way of shrimp cultivation by the local people can be found. The site is also valuable for education and bird watching.

20. Land tenure/ownership of:

- (a) site: The great majority of the site is government land, some of which has been licensed to operators engaged in oyster culture and shrimp/fish culture;
- (b) surrounding area: Surrounding the site is mainly leased or licensed land used for fish farming or residential uses.

21. Current land use/principal human activities:

- (a) site: Nature conservation, scientific research, education, fish farming and certain recreational activities (e.g. bird watching);
- (b) surrounding area: Brackish/freshwater fishponds, open storage, and residential development.

22. Factors adversely affecting the site's ecological character, including changes in land use and development projects:

- (a) site: There have been and will be necessary drainage related works and the subsequent routine maintenance of the drainage channels at the site.
- (b) surrounding area: Major activities which may have detrimental effect on the site include pollution of stream courses in the catchment, and applications for reclamation of fish ponds for residential developments, open storage areas and other activities around the site.

There have been and will be necessary drainage related works and the subsequent routine maintenance of the drainage channels at the site.

23. Conservation measures taken:

The Mai Po Marshes area has been declared a restricted area in 1975 under the Wild Animals Protection Ordinance as the Mai Po Marshes Restricted Area. The Restricted Area was extended to cover the Inner Deep Bay intertidal mudflats in February 1996. The same ordinance also prohibits hunting or possession of protected animals (including all birds) throughout the territory. Five sites of Special Scientific Interest (SSSI) have been listed in the area.

The surrounding area of Deep Bay is covered by statutory landuse plans, hence planning development in the area is controlled by the Town Planning Ordinance. All development proposals must be made to the Town Planning Board established under the Ordinance for consideration. Moreover, the Board has established two Buffer Zones in the area and guidelines have been drawn up to control developments within the Buffer Zones with a view to protect the site.

The Deep Bay Buffer Zone 1 basically covers the site. The Guidelines stipulate that new development within this zone should not be allowed unless it is required to support the conservation of the area's natural features and scenic qualities. New development within Deep Bay Buffer Zone 2 would not be considered unless the applicant demonstrates that the proposed development would have insignificant impact on the environment, ecology, drainage, sewerage and traffic in the area including the Mai Po Nature Reserve and Inner Deep Bay.

The Inner Deep Bay has been declared Water Quality Control Zone with water quality objectives defined in 1991. Moreover, the full implementation of statutory controls on livestock waste will eventually result in significant reduction of organic pollution entering Deep Bay.

The Agriculture and Fisheries Department (AFD) of the Government of the Hong Kong Special Administrative Region of the People's Republic of China has regularly provided warding to the Mai Po Marshes Restricted Area. The Mai Po Marshes Nature Reserve is jointly managed by AFD and the World Wildlife Fund for Nature Hong Kong (WWF HK). The latter offers regular educational walks for students and the general public in the Nature Reserve.

24. Conservation measures proposed but not yet implemented:

A consultancy study commissioned by AFD recommended a comprehensive conservation strategy and a management plan for the site. The Government of the HKSAR in general supports the recommendations and will implement them according to resources available.

The Planning Department of the Government of the HKSAR is conducting a study on the ecological value of fish ponds. The results of this study will help the planning of land use affecting fish ponds. Environmental Impact Assessment (EIA) studies on drainage or river training works on rivers/channels entering Inner Deep Bay (including the Shenzhen River Regulation and Main Drainage Channels projects) have been conducted or are underway. Practical mitigation measures recommended in the studies are being or will be implemented.

25. Current scientific and research facilities:

The tertiary institutes in the territory have been conducting studies on the ecology, hydrology and geology of the area. WWF HK has a field studies centre in the area.

26. Current conservation education:

WWF HK has an education centre, 1 nature trail and 11 observation hides at Mai Po.

27. Current recreation and tourism:

Over 40 000 people, of which 11 000 are students, visit Mai Po annually for bird watching or informal education visits and are largely guided by WWF HK.

28. Jurisdiction:

The site is within the Hong Kong Special Administrative Region of the People's Republic. The Agriculture and Fisheries Department takes charge of the conservation management of the site.

29. Management authority:

Agriculture and Fisheries Department, Government of the Hong Kong Special Administrative Region, Canton Road Government Offices, 393 Canton Road, Kowloon, Hong Kong

30. Bibliographical references:

ERL (Asia) Limited (1988). Deep Bay Integrated Environmental Management. Hong Kong.

Planning Department (1994). North West New Territories (Yuen Long District) Development Statements Study. Executive Summary. Government of HKSAR, Hong Kong.

Planning, Environment and Lands Branch, Government Secretariat (1993). The Hong Kong Environment: A Green Challenge for the Community. (Second Review of the 1989 White Paper: Pollution in Hong Kong - A Time to Act). Government of the HKSAR, Hong Kong.

Town Planning Board (1994) Town Planning Board Guidelines for Application for Developments within Deep Bay Buffer Zones under Section 16 of the Town Planning Ordinance. H Government of the HKSAR, Hong Kong.

Hong Kong Laws:

Forest and Countryside Ordinance, Chapter 96

Town Planning Ordinance, Chapter 131

Wild Animals Protection Ordinance, Chapter 170

Water Pollution Control Ordinance, Chapter 358