

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.*

**1. DATE THIS SHEET WAS COMPLETED/UPDATED :**

18 June 2001

**2. COUNTRY :**

Thailand

FOR OFFICE USE ONLY.

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Designation date

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Site Reference Number

**3. NAME OF WETLAND :**

Krabi Estuary

**4. GEOGRAPHICAL COORDINATES :**

7° 50' to 8° 05' N and 98° 48' to 99° 01'E

**5. ELEVATION :**

Sea level.

**6. AREA :**

21,299.14 ha.

**7. OVERVIEW :**

An area of sand beach mangroves and mudflats extending from the Mollusc Fossil at Lam Pho of Khao Kanab Nam, Khao Laem Nang, east past the complex of rivers which open to the sea at Pak Nam Krabi, to the Khlong Yuan and Khlong Taling Chan, and south to Ban Laem Hin and Sriboya Island. The site encompasses some areas of steep wooded cliffs. The intertidal mudflats extend up to two km offshore at low tide. The area of mangrove and mudflat as 10,212 ha and 1,200 ha respectively. A substantial amount of fresh water enters the system as run-off via the major rivers, especially during the wet season. The sea-bed shelves fairly steeply to two metres immediately offshore, and to 6-10 m. in the major estuary. The tidal amplitude at Ao Nang varies from 1.0m at neap tides to 3.0m at the highest springs tides.

**8. WETLAND TYPES :**

Marine-coastal (A) (B) C (D) (E) (F) (G) H (I) (J) K 2K(a)

**Please now rank these wetland types by listing them from the most to the least dominants: A I G F B D E J**

**9. RAMSAR CRITERIA :**

(1) (2) (3) (4) 5 6 7 8

**Please specify the most significant criterion applicable to the site: 1**

**10. MAP OF SITE INCLUDED :**

Yes.

**11. NAME AND ADDRESS OF THE COMPILER OF THIS FORM :**

Natural Resource and Environmental Management Division  
 Office of Environmental Policy and Planning  
 60/1 Soi Pibulwattana 7  
 Rama VI Road, Bangkok 10400  
 Thailand.  
 Tel. 662-2713251 Fax. 662-2798088  
 e-mail sirikul@oepp.go.th

**12. JUSTIFICATION OF THE CRITERIA SELECFIED UNDER POINT 9 :**

Criteria 1: The Krabi Estuary is including the 45 million years mollusc fossil in the south of Klong Gilard estuary and seagrass bed at Sriboya Island (Ko Si Bo Ya). That is a representative rare and unique natural wetland type.

Criteria 2: At least 221 bird species are found in the mangrove area in the site. Among of those, Chinese Egret (*Egretta eulophotesand*), Masked Finfoot (*Heliopais personata*) are globally vulnerable species. Five species found as endangered in Thailand are Grey Heron (*Ardea cinerea*), Masked Finfoot (*Heliopais personata*), Nordmann's Greenshark (*Tringa guttifer*), Roseate Tern (*Stema dougallii*), Great Crested Tern (*S. bergii*), while Masked Finfoot (*Heliopais personata*) is also globally vulnerable and Nordmann's Greenshark (*Tringa guttifer*) is globally endangered. Seven species are vulnerable in Thailand i.e. Brown-winged Kingfisher (*Palargopsis amauroptera*), Ruddy Kingfisher (*Halcyon coromanda*), White-bellied Woodpecker (*Dryocopus javensis*), Mangrove Pitta (*Pitta megarhyncha*), White-Chested Babbler (*Trichastoma rostratum*), Ashy-throated Warbler (*Phylloscopus maculipennis*), and Mangrove Blue Flycatcher (*Cyornis rufigastra*), while Mangrove Pitta (*Pitta megarhyncha*) and White-Chested Babbler (*Trichastoma rostratum*) are globally near threatened as well. (Bird Conservation Society of Thailand 2001, Hilton-Taylor 2000).

Criteria 3: The mangrove forest concession No.24 and 26 still have very high biodiversity. They are habitat of mangrove birds and are abundant with various kinds of aquatic animal (see details under item 18).

Criteria 4: The Krabi Estuary supports plant and animal species at a critical stage in their life cycles. The mud flat and mangrove forest support larva of many economic marine organisms such as *Lates calcarifer*, *Mugil* spp., and *Scylla serrata*.

**13. GENERAL LOCATION :**

Krabi Estuary is located in Muang District, Krabi province on the southern part of Thailand approximately 176 Km and 814 Km. from Phuket and Bangkok respectively.

**14. PHYSICAL FEATURES :**

Krabi Estuary is covered with mangrove forest, mud flat, 45 million years mollusc fossil, seagrass bed and communities with total area of 20,228 ha. The length of the coastal zone is approximately 26 kilometers. The mud flat will be exposed during the low tide, some of them are 2 kilometers in width. The length of the one between Krabi estuary and Yuan canal is approximately 9.3 kilometers. During the lowest tide, the average water depth is 2 meters. The depth at the water channel is approximately 6-10 meters.

The Krabi Estuary is in tropical monsoonal climate with an average annual rainfall of 2,379.3 mm, most of which falls during the southwest monsoon, from May to October. The wettest month is usually September or October (361.0 and 348.6 mm of rainfall

respectively) and the dyiest is February (24.9 mm). The relative humidity ranges from 68% in February to 81% in October. The average annual daily temperature is 28.1° C.

#### 15. HYDROLOGICAL VALUES :

The principal values of Krabi Estuary are sediment trapping, transportation and maintenance of sea water quality.

#### 16. ECOLOGICAL FEATURES :

Krabi Estuary is included with mangrove forest with a high predominance of *Rizophora* spp. , mud flats, rocky mountain with evergreen forest mollusc fossil and sea grass bed.

Even though during the past the area was under logging, some large plant still exist. At last 19 species of mangrove species are found, some of them are Large-leaf mangrove (*Rhizophora mucronata*), Small-leaf mangrove (*R. apiculata*), *Ceriops* spp., *Xylocarpus* spp, *Lummitzera* spp mangrove date palm (*Phoenix paludosa*), seagrass such as *Cymodocea serruleta*, *Halophila ovalis*, *Cymodocea rotundata*, *Syringodium isoetifolium*. (Scott A. Derek, 1989 and National Inventory of Natural Wetland, 2000)

#### 17. NOTEWORTHY FLORA :

none

#### 18. NOTEWORTHY FAUNA :

At least 221 bird species are found in the mangrove area. Among of those, Chinese Egret (*Egretta eulophotesand* , Masked Finfoot (*Heliopais personata*) are globally vulnerable species. Five species found as endangered in Thailand are Grey Heron (*Ardea cinerea*), Masked Finfoot (*Heliopais personata*), Nordmann's Greenshark (*Tringa guttifer*), Roseate Tern (*Stema dougallii*), Great Crested Tern (*S. bergii*), while Masked Finfoot (*Heliopais personata*) is also globally vulnerable and Nordmann's Greenshark (*Tringa guttifer*) is globally endangered. Seven species are vulnerable in Thailand i.e. Brown-winged Kingfisher (*Palargopsis amauroptera*), Ruddy Kingfisher (*Halcyon coromanda*), White-bellied Woodpecker (*Dryocopus javensis*), Mangrove Pitta (*Pitta megarhyncha*), White-Chested Babbler (*Trichastoma rostratum*), Ashy-throated Warbler (*Phylloscopus maculipennis*), and Mangrove Blue Flycatcher (*Cyornis rufigastra*), while Mangrove Pitta (*Pitta megarhyncha*) and White-Chested Babbler (*Trichastoma rostratum*) are globally near threatened as well. Nationally near threatened species are found such as Brahminy Kite (*Haliaeetus indus*) Edible-nest Swiftlet (*Aerodramus fusciphagus*), Black-nest Swiftlet (*A. maximus*) and Great Slaty Wookpecker (*Muelleripicus pulverulentus*). (Bird Conservation Society of Thailand 2001, Hilton-Taylor 2000).

At least 50 fish species were found. The most abundant and have economic value are Milkfish (*Chanos chanos*), Giant Seaperch (*Lates calcarifer*) and other species such as Indo-pacific Tarpon (*Megalops cyprinoides*), various species of Mullet (*Mugil* spp.), Perchlet (*Ambassis* spp.) and Slipmouth (*Leiognathus* spp.), etc. (Parr, W.K. Jonn,1988).

Some of the mammals in the mangrove area found are Crab-eating Monkeys (*Macaca fascicularis*) and Small-clawed Otter (*Aonyx cinerea*), while Crab-eating Monkeys (*Macaca fascicularis*) is globally near threatened and Dugong (*Dugong dugon*) is globally vulnerable specie.

#### 19. SOCIAL AND CULTURAL VALUES :

The mud flat of Krabi estuary is one of the important sites of the southern part of Thailand for migratory birds. The mangrove concessions No. 24 and 26 still have very high

biodiversity. They are habitat of mangrove birds and are abundant with various kinds of aquatic animal. The site has tourism and educational values. Since the area is near to the town, therefore it is a suitable bird-watching site for student and interested parties.

**20. LAND TENURE/OWNERSHIP :**

Mangrove forest, mud flats rocky mountain and seagrass bed are state owned. Community surrounding area are privately owned.

**21. CURRENT LAND USE :**

Fishing and harvesting of crabs, fruits of the Nypa Palms are harvested for food, while the fronds are used for hatching. There has been some development of aquaculture.

**22. ADVERSE FACTORS AFFECTING THE ECOLOGICAL CHARACTER OF THE SITE :**

The enlargement of communities surrounding Krabi Estuary and also the rapid growth of tourism are the major causes of water quality degradation. Remaining mangroves at the site are under pressure from illegal encroachment, while industrialization and increased aquaculture may also pose threats in the future. There is probably some hunting of larger waterbirds.

**23. CONSERVATION MEASURES TAKEN :**

The sand beaches, rocky wooded hills, mangroves and *Melaleuca* woodland which line the shores of the bay of Ao Nang, to the west of the site east as far as Pak Nam Krabi, are included in the Hat Nopparat Thara-Mu Ko Phi Phi National Park, Areas of mangrove at the site are categorized as National Reserve Forest and can only be cut under legitimate concessions.

**24. CONSERVATION MEASURES PROPOSED BUT NOT YET IMPLEMENTED :**

none.

**25. CURRENT SCIENTIFIC RESEARCH AND FACILITIES :**

none.

**26. CURRENT CONSERVATION EDUCATION :**

none.

**27. CURRENT RECREATION AND TOURISM :**

The area has much recreational potential owing to its proximity to the town of Krabi. It is perhaps the most easily accessible area of species-rich mangrove for bird-watcher and naturalists in Thailand.

**28. JURISDICTION :**

Most of mangrove forests in Krabi estuary are concession forest that will be finished in 2001 and will change to forest conservation.

Mangrove forest area is under functional jurisdiction of the Royal Forest Department. The 45 million years molluse fossil is in Nopparatna Tara Beach and Pi Pi Island Marine National Park.

**29. MANAGEMENT AUTHORITY :**

- 1) Mangrove Forest Management Unit 3 and Unit 4  
Nakhon Sri Thamarat Regional Forest  
Royal Forest Department  
Muang District  
Krabi Province 81000 Thailand
- 2) Nakhon Si Thamarat Regional Forest  
Phra Ngen Road  
Muang District  
Nakhon Si Thamarat Province 80000 Thailand
- 3) Krabi Municipality  
Utrakij Road , Muang District,  
Krabi Province 81000, Thailand.  
Tel. 66-75- 611120  
Fax. 66-75-620603

### **30. BIBLIOGRAPHICAL REFERENCES :**

- 1) Parr, W.K. John, A Evaluation of Mangroves and Mudflats at Krabi, South Thailand, A Project of the Asian Wetland Bureau in co-operation with the Royal Thai Forest Department, December 1988.
- 2) National Inventory of Natural Wetland : Southern Part of Thailand, Office of Environmental Policy and Planning, Bangkok, October, 2000.
- 3) Scott A. Derek and J. Jintanukul ,A Directly of Asian Wetlands, IUCN, The World Conservation Union, 1988, p.728-729.
- 4) Bird Conservation Society of Thailand, The Survey of Bird Habitat in Non-Hunting Area and Important Estuaries in the Southern Part of Thailand, Interim Report, January 2001.
- 5) Hilton-Taylor, C. 2000. 2000 IUCN Red List of Threatened Species, The IUCN Species Survival Commission. IUCN The World Conservation Union, 61 p.