

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.

DD MM YY

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Designation date

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Site Reference Number

3. NAME OF WETLAND :

Nong Bong Kai Non-Hunting Area

4. GEOGRAPHICAL COORDINATES :

20° 14' - 20° 15' N, 100° 1' - 100° 3' E

5. ELEVATION :

350 meters

6. AREA :

433.8 ha.

7. OVERVIEW :

Nong Bong Kai Non-Hunting Area was formerly a small natural lake. It is a beautiful lake and a famous waterbird sanctuary which attract a large number of tourist.

8. WETLAND TYPE :

Inland: L M N Q R Sp Ss Tp Ts
U Va Vt W Xf Xp Y Zg Zk(b)

Please now rank these wetland types by listing them from the most to the least dominant: O P

Permanent freshwater lakes over 8 ha and surrounded with seasonal flood plain.

9. RAMSAR CRITERIA :

1 2 3 4 5 6 7 8

Please specify the most significant criterion applicable to the site: 2

10 MAP OF SITE INCLUDED :

Yes.

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

Wildlife Conservation Division, Royal Forest Department
61 Thanon Phahon Yothin , Chatuchak , Bangkok 10900
Tel : (662) 5614292-3 ext. 714
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12. JUSTIFICATION OF THE CRITERIA SELECTED UNDER POINT 9 :

Criteria # 2: Nong Bong Kai Non-Hunting Area is a major habitat of birds especially waterbirds, both locally and migratory birds. Some of them are globally vulnerable species such as Baer's Pochard (*Aythya baeri*), critically endangered species in Thailand such as *Phalacrocorax carbo* and endangered species in Thailand such as *Ardea purpurea*, *Milvus migrans* (Forest Research Center 2000, Hilton-Taylor 2000).

Criteria # 3: In Nong Bong Kai Non-Hunting Area, 121 species, 13 orders, 43 families, and 84 genera of birds were found. Fifty-three species are waterbirds or birds that directly or indirectly utilized wetlands as feeding grounds, living spaces, or other activities, for example, little grebe (*Tachybaptus ruficollis*), Grey Heron (*Ardea purpurea*), Intermediate Egret (*Egretta intermedia*), Black Stork (*Ciconia nigra*), Northern Pintail (*Anas acuta*), Baer's Pochard (*Aythya baeri*), Purple Swampphen (*Porphyrio porphyrio*), Pheasant-tail Jacana (*Hydrophasianus chirurgus*), Grey-head Lapwing (*Vanellus cinereus* (Blyth)), Brown-headed Gull (*Larus brunnicephalus*), and Stork-billed Kingfisher (*Halcyon capensis*), etc. Among these 17 species are highly abundance. There are 64 migratory species (56 Migratory species and 8 local and migratory species) (Detch Pongkhumpiey 1996)

At least 21 species of fishes were found in Nong Bong Kai included Siamese Fighting fish (*Betta splendens*), Croaking Gourami (*Trichopsis vittatus*), Nile Tilapia *Oreochromis niloticus*, *Notopterus notopterus*, *Badis badis*, *Ambassis siamensis*, and *Pristolepis fasciatus*.

Criteria # 4: Nong Bong Kai Non-Hunting Area is an important habitat for waterbirds especially the migratory birds that will stay in Nong Bong Kai and surrounded area during October to March of every year. At least 15 species of birds nesting and laying egg in Nong Bong Kai such as *Ixobrychus cinnamomeus*, *Eurostopodus macrotis*, *Dendrocynga javanica*, *Porphyrio porphyrio* and *Gallixrex cinerea* (Detch Pongkhumpiey 1996).

13. GENERAL LOCATION :

Nong Bong Kai Non-Hunting area is a part of Chiang Saen Basin and Nong Bong Kai (Chiang Saen Lake). Boundary of the site is shown in the map enclosed. Nong Bong Kai or Chiang Saen Lake is the famous waterbird sanctuary in Tambon Yonok in Chiang Saen district of Chiang Rai province. It is approximately 60 Km far from Muang District, Chiang Rai Province.

14. PHYSICAL FEATURES :

Nong Bong Kai is a small lake surrounded by mountains and low hills. With two small islands inside the lake. Part of Nong Bong Kai are formerly paddy field and floodplain which creating non-uniform bottom and depth. Surrounding areas comprise mainly of agricultural lands (orchards and other upland crops), communities and degraded forests which are privately owned. Major part of non-hunting area is water area. Small part of the area are forests which are remain as narrow strip around the lake and on the island. The lake is surrounded by low hills. The forests are degraded forests with scattering small trees. Soil character is of sandy clay in general, but some are sandy loam especially in the flat plain.

The climate is under the influence of the northeast and southwest monsoon with average temperature of 25.5°C. The highest temperature was measured in April with average temperature of 35.3°C. and the lowest temperature was reported in January with average temperature of 12.5°C. Rainy season is between July and October with highest average rainfall of 367.4 mm in July.

15 HYDROLOGICAL VALUES :

Nong Bong Kai is one of several connected water bodies including streams, rivers, lakes, swamps, and reservoirs which providing water for agricultural lands, community consumption and other purposes in Chiang Saen Basin.

16 ECOLOGICAL FEATURES :

The lake is an important habitat for both local and migratory waterbirds. Part of water area is covered with dense pad of aquatic weed consisted mainly of cogon grass. Some of these pads of weeds are moved around the lake by wind. Certain parts of the area are flooded grassland. The reservoir are surrounded mostly by low hills and mountains with orchards and degraded forests. Adjacent to the lake are privately owned abandon old paddy fields and a reservoir which providing habitats for a large number of waterbirds. Nong Bong Kai has at least 24 species of aquatic plants. Most species of aquatic flora are found along the shore line, several species of floating, submerged and emergent plants are also found. Marginal plants are *Imperata cylindrica*, *Hymenache pseudointerrupta*, *Leersia hexandra*, *Phragmites karka*, *Sorghum halepense*, *Arundo donax* and *Mimosa pigra*. Floating species are *Eichhornia crassipes*, *Ipomaea aquatica*, *Jussiaea crenata*, *Lemna perpusilla* and *Azolla pinnata*.

17 NOTEWORTHY FLORA :

None

18 NOTEWORTHY FAUNA :

Birds: Nong Bong Kai Non-Hunting Area is an important habitat for waterbirds especially the migratory birds that will stay in Nong Bong Kai and surrounded area during October to March of every year. The site is likely to support 20,000 or more waterbirds and 1% of some waterbird species which then the site can be justified under criterion 5 and 6. Unfortunately, so far there are still no sufficient numerical data to support this information.

121 species, 13 orders, 43 families, and 84 genera of birds were found. Fifty-three species are waterbirds or birds that directly or indirectly utilized wetlands as feeding grounds, living spaces, or other activities, for example, Little Grebe (*Tachybaptus ruficollis* (Pallas)), Grey Heron (*Ardea purpurea* Linnaeus), Intermediate Egret (*Egretta intermedia* (Wagler)), Black Stork (*Ciconia nigra* Linnaeus), Northern Pintail (*Anas acuta* Linnaeus), Baer's Pochard (*Aythya baeri* Radde), Purple Swamphen (*Porphyrio porphyrio* Linnaeus), Pheasant-tail Jacana (*Hydrophasianus chirurgus* Scopoli), Grey-head Lapwing (*Vanellus cinereus* Blyth), Brown-headed Gull (*Larus brunnicephalus* Jerdon), and Stork-billed Kingfisher (*Halcyon capensis* Linnaeus), etc. Among these 17 species are highly abundance. There are 64 migratory species (56 migratory species and 8 local and migratory species). At least 15 species of birds nestling and laying eggs in Nong Bong Kai.

There were 23 species of birds in water area, very common species are *Anas acuta* Linnaeus, *Anas querquedula* Linnaeus, *Dendrocygna javanica* (Horsfield) *Hirundo rustica* linnaeus and *Dicrurus macrocercus* (Vielliot). Twenty-five species of bird were found in floating plants areas, very common species are *Ardeola bacchus*, *Anas acuta*, *Anas querquedula*, *Dendrocygna javanica*, *Porphyrio porphyrio* Linnaeus, *Hirundo rustica* and *Dicrurus macrocercus*. Areas with emergent plants and reeds had about 45 species of birds, very common species are *Ardeola bacchus*, *Dendrocygna javanica*, *Porphyrio porphyrio*, *Centropus sinensis* (Stephens), *Saxicola caprata* (Linnaeus), *Lanius schach* Linnaeus and *Lonchura punctata* (Linnaeus). In grassland and mud flat, there were 59 species of bird fauna found, very common species are *Ardeola bacchus*, *Anas acuta*, *Anas querquedula*, *Dendrocygna javanica*, *Porphyrio porphyrio*, *Centropus sinensis*, *Saxicola caprata* and *Acridotheres tristis* (Linnaeus). Around the forests and on the islands, offices, villages, mountains and plantation especially in the orchards, there are 78 species of bird fauna, very

common species are *Dendrocygna javanica*, *Streptopelia chinensis* (Scopoli), *Hirundo rustica*, *Dicrurus macrocircus* (Viellot), *Saxicola torquata* (Linnaeus), *Acridotheres tristis*, *Passer montanus* (Linnaeus), and *Lonchura punctulata*. (Detch Pongkhumpiey 1996)

Some of birds found in the site are globally vulnerable species such as Baer's Pochard (*Aythya baeri*), critical endangered species in Thailand such as *Phalacrocorax carbo* and endangered species in Thailand such as *Ardea purpurea*, *Milvus migrans*. (Detch Pongkhumpiey 1996, Hilton-Taylor 2000).

With in species of bird found in Nong Bong Kai and nearby areas, there is no bird that can be classified as conserved species, but 106 of them are classified as protected species, according to "The Wildlife Conservation and Protection Act (1992)". According to the classification of Humphrey and Bain (1990), there are no endangered species, but one threatened species is *Ciconia nigra* (Linnaeus). There are 57 local bird species, 56 migratory species and 8 species that are both local and migratory species. The last category are local birds that usually found in Nong Bong Kai and during winter season the population is added up by the same bird species migrated from other areas.

Fish : At least 21 species of fishes were found in Chiang Saen Lake included Siamese Fighting fish (*Betta splendens*), Croaking Gourami (*Trichopsis vittatus*), Nile Tilapia *Oreochromis niloticus*, *Notopterus notopterus*, *Badis badis*, *Ambassis siamensis*, and *Pristolepis fasciatus*.

19 SOCIAL AND CULTURAL VALUES :

Nong Bong Kai is a fishing ground providing fishery resources for surrounding communities. Lotus flower and lotus fruit are also harvested from the lake. Orchards and resorts surrounding the lake area are also providing job opportunity and income for local people.

20 LAND TENURE/OWNERSHIP OF :

Nong Bong Kai Non-Hunting Area has total area of public land of 2,711 rai including 1,725 rai of fishing ground listed by the Department of Fisheries. Two government land deeds have been issued for these areas. One land deed for the area of 350 rai (56 ha) of the old Nong Bong Kai and another land deed for 1,375 rai (220 ha) of surrounding forest area. These government land deeds are now lost and the Department of Lands is in the process of doing a new survey in order to issue new government land deeds. All surrounding areas including small lakes and reservoirs are privately owned

21. CURRENT LAND USE :

Nong Bong Kai Non-Hunting Area are public land that conserved for wildlife conservation. Land surrounding are agriculture land.

22. FACTORS (PAST, PRESENT OR POTENTIAL) ADVERSELY AFFECTING THE SITE'S ECOLOGICAL CHARACTER, INCLUDING CHANGES IN LAND USE AND DEVELOPMENT PROJECT :

Land surrounding Nong Bong Kai are being developed for constructing houses, resorts and facilities for recreation purposes as same as in the hilly areas surrounding water bodies. Some small lakes and swamps are being rented out to be used for other purposes which some time creating problems. Low hills around Chiang Saen lake are privately occupied and being used for housing and agricultural activities.

The construction of houses and resorts for recreation purpose surrounding Nong Bong Kai disturb local and migratory birds because of electrical light and other activities. It also has a lot of impact on other wildlife and lake ecosystem.

23. CONSERVATION MEASURES TAKEN :

An area of 2,711 rai of Nong Bong Kai was declared as non-hunting area since 1991 but fishing are still allowed for local people. The Government by Royal Forest Department has declared this area to be non-hunting area in 1985.

According to the Wildlife Protection Act (1992), Article 42, the Royal Forest Department and the Department of Fisheries are responsible for the protection of wildlife and aquatic fauna in the area by prohibiting

- 1) hunting or performing any activities harmful to protected species.
- 2) Collection or destroying of the nest of protected species.
- 3) Land encroachment, tree cutting, changing water way and other activities which may be harmful to wild animals

24. CONSERVATION MEASURES PROPOSED BUT NOT YET IMPLEMENTED :

Considering from the problems facing Nong Bong Kai Non-Hunting Area and Chiang Sean lake, it is recommended that the government land deed should be urgently issued. Measures should also be taken to lessen down the disturbance on waterbirds by various activities in surrounding areas. It is also recommended that non-hunting area should be expanded to cover surrounding privately owned wetland areas which are habitat for waterbirds and are spawning and nursing ground for aquatic fauna.

25. CURRENT SCIENTIFIC RESEARCH AND FACILITIES :

Scientific report on bird diversity and its relationships to various habitats at the Nong Bong Kai Non-hunting Area by Detch Pongkhamfuei (1992).

26. CURRENT CONSERVATION EDUCATION :

There is a study on conservation and management of Nong Bong Kai by a graduate student of Mahidol University.

27. CURRENT RECREATION AND TOURISM :

Nong Bong Kai is one of the most popular recreation area especially for bird watching

28. JURISDICTION :

According to the Wildlife Protection Act (1992), Article 42, the Royal Forest Department and the Department of Fisheries are responsible for the protection of wildlife and aquatic fauna in an area of 2,711 rai of Nong Bong Kai Non-Hunting Area, by prohibiting

- 1) hunting or performing any activities harmful to protected species.
- 2) collection or destroying of the nest of protected species
- 3) land encroachment, tree cutting, changing water way and other activities which may be harmful to wild animals.

The Department of Fisheries, according to the Fisheries Act (1947), is also responsible for management, conservation, and habitat protection of aquatic fauna. Government agencies concerned in Chiang Saen Basin are District Fisheries offices of Chiang Saen.

29. MANAGEMENT AUTHORITY :

- Nong Bong Kai Non-hunting area Office
Wildlife Conservation Division, Royal Forest Department
Ban Ku Tao, Moo 3 , Chiang Saen District,
Chiang Rai Province, 57150
- The Local Administration Unit of Chiang Rai Province
Chiang Rai Administrative Office,
Rittiprasart Road, Muang district

Chiang Rai Province, 57000

30. BIBLIOGRAPHICAL REFERENCES :

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