

THAILAND WETLANDS



THIS region includes the wetlands on the floodplains of the Chao Phraya river and its tributaries, and on the Gulf of Thailand coast. It once supported populations of large waterbirds such as Spot-billed Pelican, Giant Ibis and Sarus Crane, but these now occur as vagrants only, or not at all, mainly because their habitat has been lost. The enigmatic White-eyed River-martin is known from a single site in this region, Bung Boraphet, but it is possible that the species survives in riverine habitats in Thailand or a neighbouring country.

■ **Key habitats** Freshwater wetlands on riverine plains, coastal wetlands.

■ **Countries and territories** **Thailand.**

	Threatened species			Total
	CR	EN	VU	
●	1	—	—	1
✈	—	—	—	—
🐦	—	2	5	7
Total	1	2	5	8

Key: ● = breeding in this wetland region.
✈ = passage migrant.
🐦 = non-breeding visitor.

The Thailand wetlands region is within Conservation International's Indo-Burma Hotspot (see pp.20–21).

The coastal wetlands in Khao Sam Roi Yot National Park face many pressures, including conversion to aquaculture and plantations. PHOTO: MIKE CROSBY/BIRDLIFE



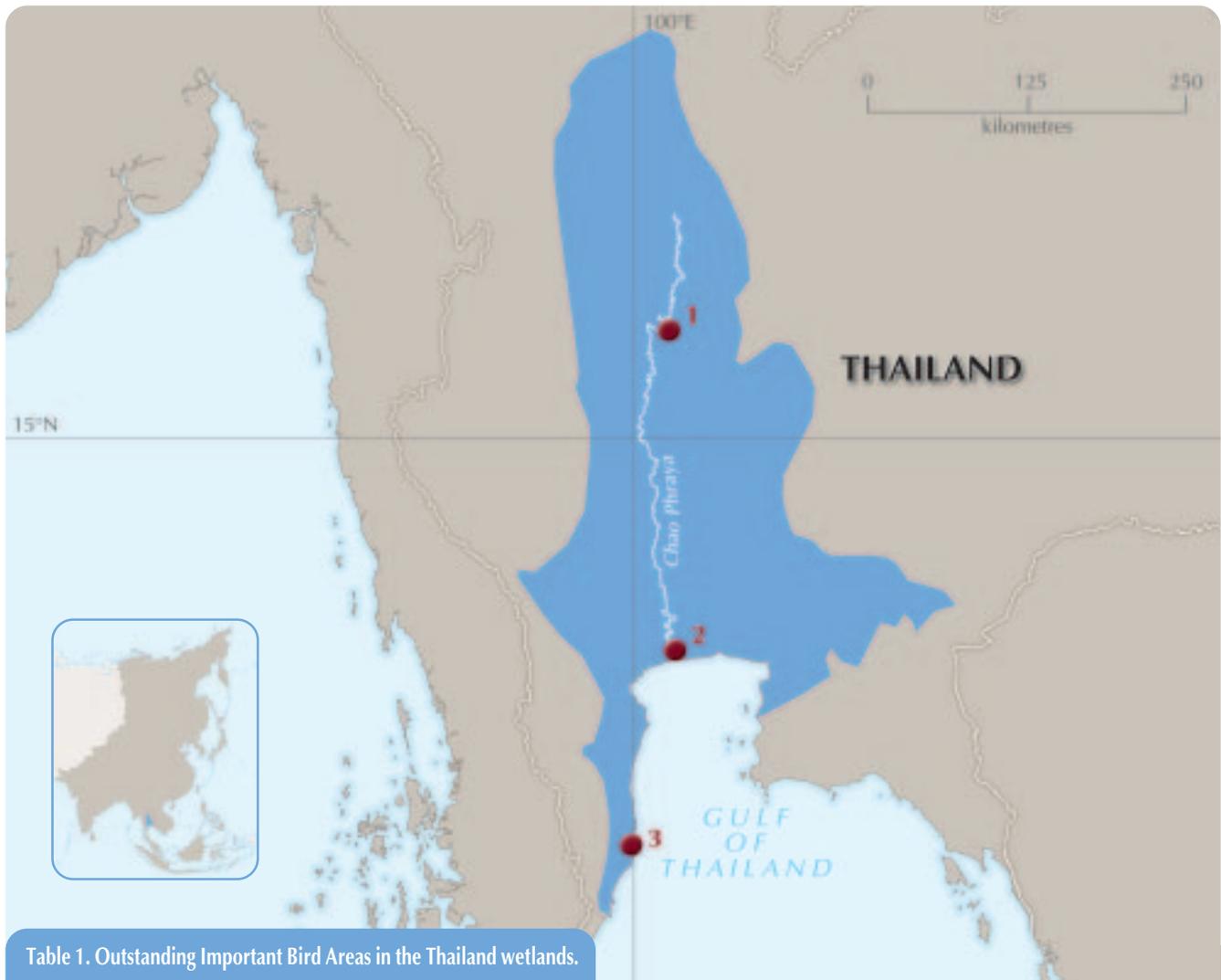


Table 1. Outstanding Important Bird Areas in the Thailand wetlands.

IBA name	Status	Territory	Threatened species
1 Bung Boraphet NHA	PA	Thailand	Only known site for White-eyed River-martin, also wintering Baer's Pochard
2 Samut Sakhon	—	Thailand	Small numbers of Spoon-billed Sandpiper and Spotted Greenshank on passage, and occasionally in winter
3 Khao Sam Roi Yot NP	PA	Thailand	Wintering Spotted Greenshank and Manchurian Reed-warbler

Note that more IBAs in this region will be included in the *Important Bird Areas in Asia*, due to be published in early 2004.

Key IBA name: NHA = non-hunting area; NP = National Park.
 Status: PA = IBA is a protected area; (PA) = IBA partially protected; — = unprotected.

Table 2. Threatened birds of the Thailand wetlands.

Species		Distribution and population
Spot-billed Pelican <i>Pelecanus philippensis</i>	VU	Scarce non-breeding visitor
Lesser Adjutant <i>Leptoptilos javanicus</i>	VU	Scarce non-breeding visitor
Greater Adjutant <i>Leptoptilos dubius</i>	EN	Rare but almost annual visitor
Baer's Pochard <i>Aythya baeri</i>	VU	Winters at several lakes, usually in small numbers
Spotted Greenshank <i>Tringa guttifer</i>	EN	Scarce on passage, small numbers overwinter
Spoon-billed Sandpiper <i>Eurynorhynchus pygmeus</i>	VU	Scarce on passage and in winter
White-eyed River-martin <i>Eurychelidon sirintarae</i>	? CR	Discovered at Bung Boraphet in central Thailand in 1968, but no confirmed records since the 1970s and perhaps extinct
Manchurian Reed-warbler <i>Acrocephalus tangorum</i>	VU	Small numbers winter in reed-swamps at Khao Sam Roi Yot National Park

Other threatened waterbirds recorded from this region as rare visitors are: Chinese Egret *Egretta eulophotes*, Milky Stork *Mycteria cinerea*, Black-faced Spoonbill *Platalea minor*, Baikal Teal *Anas formosa*, Sarus Crane *Grus antigone* and Indian Skimmer *Rynchops albicollis*. Giant Ibis *Thaumatibis gigantea* formerly occurred in Thailand, but is now extinct there. In addition to the waterbirds, Greater Spotted Eagle *Aquila clanga* (VU; see F01) and Imperial Eagle *A. heliaca* (VU; see G01) occur in winter. Note that two species which occur in forested wetlands in Thailand, White-winged Duck *Cairina scutulata* and Masked Finfoot *Heliopais personata*, are covered in region F06.

● = region estimated to support >90% of global breeding population; = region estimated to support <10% of global non-breeding population; = proportion of global non-breeding population unknown

OUTSTANDING IBAs FOR THREATENED BIRDS (see Table 1)

Three IBAs have been selected in the region, including the only known site for White-eyed River-martin, and important non-breeding localities for several other threatened waterbirds.

CURRENT STATUS OF HABITATS AND THREATENED SPECIES

Huge areas of Thailand would formerly have been covered by wetlands, notably in the central plains, but most freshwater wetlands were converted for agriculture during the nineteenth and twentieth centuries and few natural areas remain. This process has led to the extinction of the national breeding populations of most large waterbirds, including threatened species such as Giant Ibis and Sarus Crane. Several threatened species occur on the remaining freshwater wetlands, including on reservoirs, and in the coastal wetlands on the Gulf of Thailand. However, they are under pressure from habitat loss and degradation, disturbance, pesticide use and other threats.

CONSERVATION ISSUES AND STRATEGIC SOLUTIONS (summarised in Table 3)

Habitat loss and degradation

■ CONVERSION TO AGRICULTURE

Most natural wetlands in Thailand have already been converted to agricultural land, and many remaining sites are under pressure. The numerous irrigation projects divert river water away from wetlands, leaving them shallower, overgrown and more easily drained. Reedbeds are encroached by settlements and crops, such that very few are left in the country; the most important reedbed in Thailand (which supports a large wintering population of Manchurian Reed-warbler), within Khao Sam Roi Yot National Park, is being replaced by plantations of casuarinas, eucalyptus and coconut palms. The changes in land use in Khao Sam Roi Yot National Park have proved difficult to oppose, and the laws protecting habitat within reserves therefore need to be tightened and strictly enforced.

■ CONVERSION TO AQUACULTURE AND SALT-PRODUCTION

Prawn-ponds and saltpans are proliferating along the Gulf of Thailand coast, greatly reducing the available area of foraging habitat for shorebirds. At Khao Sam Roi Yot, prawn farms take up large areas of land and pump saline water into previously freshwater areas. Inland wetlands are converted to lotus production and fish farms, with associated vegetation clearance, infrastructural development and disturbance. Aquacultural development should be prohibited within existing protected areas, and more tightly regulated in other important wetlands. An education and awareness programme—managed by the Wildlife Conservation Division—is needed to inform decision-making bodies and local communities about the importance of healthy wetlands in maintaining water quality and preserving fish stocks.

■ LOSS OF NESTING HABITAT

A major constraint on the use of wetlands by large waterbirds appears to be the lack of undisturbed nesting habitat near suitable swampy feeding sites. Existing waterbird colonies should be protected, and these and former nesting sites enhanced by planting suitable tree species for nesting (or even by constructing artificial nest platforms) and by reducing human disturbance. Given that several threatened species that formerly bred in Thailand still visit, breeding colonies could re-establish themselves should suitable conditions become available.

■ DEVELOPMENT (URBAN, INDUSTRIAL, ETC.)

Coastal areas are threatened by industrial and urban growth. At Khao Sam Roi Yot, coastal plots are being sold to property developers; if this continues, it will destroy shorebird habitat inside the national park. Shorebird wintering areas in the Inner Gulf, such as Bang Poo and Samut Sakhon, were reduced and degraded by industrial development during the 1990s. Inland, lakes and rivers are affected by new roads, dams and tourist facilities. Development projects affecting wetlands need tighter control through the application of land-use laws and policies, with environmental impact assessments conducted and mitigation enforced.

■ DISTURBANCE

Coastal wetlands, such as Pattani bay and Ko Libong, are disturbed by large numbers of fishermen and collectors of bivalves, anemones, sea cucumbers and crabs, reducing their value to migrant shorebirds. Lakes and reservoirs are heavily used by fishermen, hunters, reed-cutters, etc. In the 1980s, around 30,000 people lived around the margins of Bung Boraphet, causing considerable disturbance. However, it is rivers that are perhaps the most disturbed aquatic habitat in Thailand, with whole communities of nesting riverine birds having vanished from large segments of their ranges because of constant use and navigation of rivers, and associated habitat modification and hunting. Human use of important wetlands (particularly within protected areas) therefore needs to be managed, keeping some areas undisturbed to maintain populations of wildlife and aquatic resources.

■ POLLUTION/PESTICIDES

Pesticides use and pollution are widespread in Thailand, and are probably affecting threatened waterbirds populations. Although persistent pesticides are apparently little used in rice-growing areas, organochlorines used

Healthy wetlands are vital in maintaining water quality and preserving fish stocks.



PHOTO: PHIL BENSTEAD

extensively on the nearby upland cotton crops could contaminate the Bung Boraphet basin. Intertidal areas at Pattani bay and Ko Libong are being polluted by heavy metals and chlorinated hydrocarbons, mostly as a direct result of local industrial activities, agricultural run-off and local dumping of waste. Existing laws to control the release of toxic chemicals into the environment need to be strictly enforced, and new legislation introduced if necessary.

Protected areas coverage and management

■ GAPS IN PROTECTED AREAS SYSTEM

Several protected areas in Thailand include important wetland habitats, but some wetland types are not well represented, such as freshwater swamp. A number of IBAs which include these wetland habitats should be considered for establishment as new nature reserves. Wetlands and swamps are relatively easy to rehabilitate, developing in only a few years to attractive habitats for waterbirds, so even degraded wetlands could be designated as protected areas if this can be followed by appropriate habitat management.

■ WEAKNESSES IN RESERVE MANAGEMENT

There are serious management problems in the wetland areas in and around Khao Sam Roi Yot National Park, with rapid encroachment, and community support for the park suppressed by the activities of wealthy landlords. The other wetland reserves in the country are also understaffed, underfunded and poorly equipped to deal with the intense competition for the aquatic resources they are designed to protect. It is necessary to strengthen management in important wetland reserves through better training, pay and equipment for reserve staff, and by the preparation of management plans which incorporate ecological management with the needs of local people. Measures to improve reserve management may include more intensive patrolling and stricter enforcement of environmental laws.

Exploitation of birds

■ HUNTING

In Thailand, large birds, including ducks, storks, cranes and pelicans, are frequently shot or trapped for food, pets or sale to zoos and markets. Eggs and young are liable to be taken from any nests that are found. It is unlikely that these waterbirds could return in any numbers given such persecution. In coastal regions, shorebirds are netted in large numbers for food. Even the White-eyed River-martin may have been hunted to extinction by swallow-trappers working with nets at Bung Boraphet to supply local food markets. Hunting and trapping of all threatened bird species should be banned, and wetland protected areas more intensively patrolled to intercept hunters. Gun and net ownership should be controlled at important sites. The plight of large waterbirds and the laws protecting them also need to be widely and clearly communicated, with a view to reducing persecution and disturbance.

Gaps in knowledge

■ INADEQUATE DATA ON THREATENED BIRDS

White-eyed River-martin is one of the most enigmatic birds in the world, known only from Bung Boraphet in Thailand, at which it apparently no longer occurs. It is likely to breed along rivers, like the related African River-martin *Pseudochelidon eurystomina*, but might conceivably utilise some entirely different habitat, or even be semi-nocturnal. Apart from continued vigilance at Bung Boraphet, searches in its putative breeding range in Thailand and adjacent countries should be continued with a broader outlook.

White-eyed River-martin is known only from Bung Boraphet in Thailand.

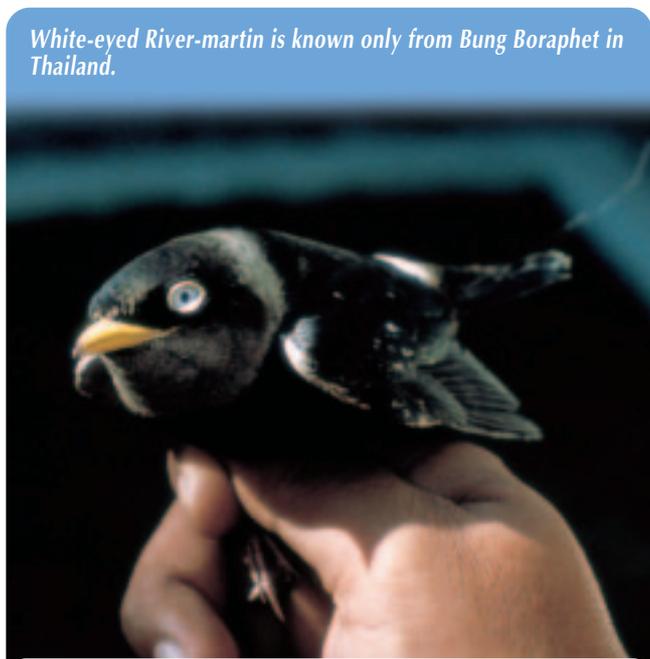


PHOTO: H. E. McCURE/BIRDLIFE

Table 3. Conservation issues and strategic solutions for birds of the Thailand wetlands.

Conservation issues	Strategic solutions
Habitat loss and degradation	
<ul style="list-style-type: none"> ■ CONVERSION TO AGRICULTURE ■ CONVERSION TO AQUACULTURE AND SALT PRODUCTION ■ LOSS OF NESTING HABITAT ■ DEVELOPMENT (URBAN, INDUSTRIAL, ETC.) ■ DISTURBANCE ■ POLLUTION/PESTICIDES 	<ul style="list-style-type: none"> ➤ Strengthen and enforce laws to prevent conversion for agriculture and aquaculture within protected areas ➤ Protect active waterbird colonies, and plant nest trees or erect artificial nest platforms to encourage recolonisation of former sites ➤ Assess the impact of development projects that could affect important wetlands ➤ Regulate human activities at key wetlands to minimise disturbance ➤ Enforce laws to control wetland pollution
Protected areas coverage and management	
<ul style="list-style-type: none"> ■ GAPS IN PROTECTED AREAS SYSTEM ■ WEAKNESSES IN RESERVE MANAGEMENT 	<ul style="list-style-type: none"> ➤ Improve coverage of all wetland habitat types in Thailand by establishing new protected areas ➤ Strengthen reserve management through improved funding, infrastructure and staff training ➤ Formulate and implement management plans for Khao Sam Roi Yot and other wetland protected areas
Exploitation of birds	
<ul style="list-style-type: none"> ■ HUNTING 	<ul style="list-style-type: none"> ➤ Ban hunting and trapping of all threatened bird species ➤ Patrol protected areas, and control gun and net ownership at key sites
Gaps in knowledge	
<ul style="list-style-type: none"> ■ INADEQUATE DATA ON THREATENED BIRDS 	<ul style="list-style-type: none"> ➤ Search for White-eyed River-martin in Thailand and adjacent countries