

# PHILIPPINE WETLANDS



**F**OUR threatened waterbirds occur in the Philippine archipelago. The freshwater wetlands support the endemic Philippine Duck and the only known non-breeding population of Streaked Reed-warbler. The Philippines also appears to be the main non-breeding area of Chinese Egret, which inhabits coastal beaches, mangrove swamps and estuaries. There were formerly breeding populations of Spot-billed Pelican and Sarus Crane, but these both appear to have declined to extinction.

- **Key habitats** Coastal and freshwater wetlands.
- **Countries and territories** Philippines.

	Threatened species			Total
	CR	EN	VU	
●	—	—	1	1
✈	—	—	—	—
🦢	—	1	2	3
Total	—	1	3	4

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

The Philippine wetlands region is within Conservation International's Philippines Hotspot (see pp.20–21).

*Large areas of mangroves have been cleared in the Philippines, but mangrove plantations on open mudflats actually cause further harm by reducing the feeding habitat available to coastal waterbirds.* PHOTO: SIMBA CHAN





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

IBA name	Status	Territory	Threatened species
1 Candaba Marsh	—	Luzon	A regular site for Philippine Duck and wintering Streaked Reed-warbler, has recently declined in value but could be restored
2 Calituban and Tahong-tahong islands	—	Bohol	Important site for wintering Chinese Egret, with recent counts of several hundred individuals
3 Agusan Marsh WS <sup>F09</sup>	PA <sup>R</sup>	Mindanao	A vast complex of freshwater wetlands, likely to be important for Philippine Duck
4 Liguasan Marsh <sup>F09</sup>	—	Mindanao	A vast complex of freshwater wetlands, likely to be important for Philippine Duck

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: WS = Wildlife Sanctuary.

Status: PA = IBA is a protected area; (PA) = IBA partially protected; — = unprotected; R = IBA is wholly or partially a Ramsar Site (see pp.31–32); F09 = also supports threatened forest birds of region F09.

Table 2. Threatened birds of the Philippine wetlands.

Species		Distribution and population
Chinese Egret <i>Egretta eulophotes</i>	VU	The coastal wetlands of the Philippines appear to be the most important non-breeding grounds of this species
Philippine Duck <i>Anas luzonica</i>	VU	Scarce and declining Philippine endemic; breeds in freshwater wetlands but also occurs in coastal habitats
Spotted Greenshank <i>Tringa guttifer</i>	EN	Rare non-breeding visitor
Streaked Reed-warbler <i>Acrocephalus sorghophilus</i>	VU	Its only known wintering grounds are in freshwater wetlands in the Philippines

Other threatened waterbirds recorded from this region are: Spot-billed Pelican *Pelecanus philippensis* (probably extinct), Oriental Stork *Ciconia boyciana* (rare visitor), Black-faced Spoonbill *Platalea minor* (rare visitor), Baer's Pochard *Aythya baeri* (rare visitor), Sarus Crane *Grus antigone* (probably extinct), Bristle-thighed Curlew *Numenius tahitiensis* (rare visitor), and Spoon-billed Sandpiper *Eurynorhynchus pygmeus* (rare visitor).

= region estimated to support >90% of global breeding population; = region estimated to support >90% of global non-breeding population, = 50–90%, = <10%

## OUTSTANDING IBAs FOR THREATENED BIRDS (see Table 1)

Four IBAs have been selected, which together support important populations of Chinese Egret, Philippine Duck and Streaked Reed-warbler, the species most reliant on Philippine wetlands for their survival.

## CURRENT STATUS OF HABITATS AND THREATENED SPECIES

Large areas of natural freshwater wetland in the Philippines have been converted for cultivation, either through drainage or adoption of wet agriculture. The coastal wetlands have been greatly affected by conversion for aquaculture and cutting of mangroves for firewood, with the area of mangroves estimated to have declined by 67% in the past 60 years. This loss of habitat is one of the main reasons for the declines and extinctions of waterbird populations, but hunting and human disturbance are also likely to have been important factors.

## CONSERVATION ISSUES AND STRATEGIC SOLUTIONS (summarised in Table 3)

### Habitat loss and degradation

#### ■ CONVERSION TO AGRICULTURE

Freshwater wetlands continue to be drained or converted to wet agriculture (rice paddies), severely limiting the amount of habitat available in the dry season. The clearest example is the drainage of Candaba Marsh, once the most important wintering site for Philippine Duck but now too dry to support large numbers. Moreover, the cultivation of rice instead of watermelon at Candaba entails draining the marshes in December or January instead of March or April. Even marsh vegetation is now patchy at the site (to the detriment of Streaked Reed-warbler). Wetland protected areas need to be established and their water levels managed.

#### ■ CONVERSION TO AQUACULTURE

Many coastal wetlands are being converted to shrimp- or fish-ponds, as are freshwater wetlands such as Candaba Marsh. The ongoing loss of coastal mangroves is of particular concern, as this must reduce the wintering habitat available to Chinese Egret, and also affect Philippine Duck, which is commonly found in this habitat. Awareness campaigns are required, targeted at local governments with jurisdiction over important wetlands, to inform them of the importance of these wetlands, and persuade them to control wetland conversion so that sufficient natural habitat remains for threatened birds. The existing laws that ban the conversion of mangroves must be more strictly enforced.

#### ■ CUTTING OF MANGROVES

In addition to the clearance of mangroves for aquaculture, large areas are affected by cutting for fuelwood. The sustainable use of mangroves by local communities should be promoted (including the maintenance of some areas of mature growth where cutting is not allowed), especially near the critical habitats identified under the National Wildlife Act (which include National Integrated Protected Areas System [NIPAS] sites and the 117 IBAs identified by the Haribon Foundation), through education and awareness campaigns.

#### ■ POLLUTION

Many Philippine wetlands are affected by pollution, including from untreated domestic sewage, industrial effluent, toxic chemicals used in aquaculture and agrochemical run-off from farmland. The existing laws to control pollution need to be more strictly enforced by the Department of Environment and National Resources (DENR).

#### ■ DEVELOPMENT (URBAN, INDUSTRIAL, ETC.)

Wetland habitat in many lowland areas has been converted to industrial use, or encroached by housing, tourist infrastructure or roads. A site selection process should be followed

*The endemic Philippine Duck is under pressure from both habitat loss and hunting for food and sport.*



PHOTO: JOE BLOSSOM/WWF

for new roads and other proposed development projects, with the aim of avoiding new development in important wetlands, notably the critical habitats identified under the National Wildlife Act (including NIPAS sites and IBAs).

### Protected areas coverage and management

#### ■ GAPS IN PROTECTED AREAS SYSTEM

The protected areas system in the Philippines is currently being redeveloped through the National Integrated Protected Area System (NIPAS) process, and the recent Local Government Code legislation is likely to be a vital mechanism for the conservation of many sites (see F09 for details). There are currently few wetland protected areas in the Philippines, and more need to be proposed under NIPAS or designated and managed as local protected areas under the Local Government Code. The Haribon Foundation's IBA analysis identifies several unprotected wetlands that are important for threatened birds, notably the outstanding IBAs listed in Table 1. However, given the general lack of data on waterbirds, a new survey initiative is required to identify further sites of importance for

threatened waterbirds; the results could be used to produce a new national wetlands directory, to form the basis for the designation of more wetland reserves.

#### ■ WEAKNESSES IN RESERVE MANAGEMENT

Most sites being designated under NIPAS do not yet have large-scale funding, and a major challenge is to provide the resources and infrastructure necessary to ensure that they are adequately protected. The capacity and resources of the Protected Areas and Wildlife Bureau (PAWB) need to be increased at all levels, especially so that local offices have the capacity to protect NIPAS sites under their jurisdiction.

### Exploitation of birds

#### ■ HUNTING

Hunting for food and sport is a major problem in the Philippines, and may have been the main reason for the decline in the Philippine Duck and the national extinction of Spot-billed Pelican and Sarus Crane. Hunting of all bird species is illegal, but the mechanisms for real enforcement are lacking, and local people in many areas are likely to resist any attempts at strict enforcement of hunting laws. Concerted programmes of education and awareness are needed in and around important wetlands, to improve understanding of the effects of hunting on threatened birds and the relevant laws.

### Gaps in knowledge

#### ■ INADEQUATE DATA ON THREATENED BIRDS

Relatively little research has been conducted on waterbirds in the Philippines, and there are important gaps in knowledge of the distribution and ecology of the threatened species. Much more information is required about the Philippine Duck, including the identification (and subsequent protection) of the most important breeding and non-breeding areas, and detailed ecological and life-history studies to help determine the most appropriate management strategies. In particular (when the security situation allows), surveys are urgently required of the vast Agusan and Liguasan marshes on Mindanao. Studies are also required to identify the most important sites for non-breeding Chinese Egret, Streaked Reed-warbler and shorebirds, including work on the current status and habitat requirements of the warbler at Candaba Marsh. A small flock of Black-faced Spoonbill was located on the Batanes islands in the northern Philippines in winter 2001/2002, and monitoring is required to determine whether this is a regular site for the species.

*The Philippines appears to be the main wintering area of Chinese Egret, but further research is required there to clarify its numbers and key sites.*



PHOTO: MARTIN HALE

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

Conservation issues	Strategic solutions
<b>Habitat loss and degradation</b>	
<ul style="list-style-type: none"> <li>■ CONVERSION TO AGRICULTURE</li> <li>■ CONVERSION TO AQUACULTURE</li> <li>■ CUTTING OF MANGROVES</li> <li>■ POLLUTION</li> <li>■ DEVELOPMENT (URBAN, INDUSTRIAL, ETC.)</li> </ul>	<ul style="list-style-type: none"> <li>➤ Manage water levels in key wetlands to improve conditions for threatened waterbirds</li> <li>➤ Minimise wetland conversion, and strictly enforce laws banning the conversion of mangroves</li> <li>➤ Promote the sustainable use of mangroves by local communities</li> <li>➤ Improve enforcement of laws to control pollution</li> <li>➤ Avoid siting new roads and other developments in key wetlands</li> </ul>
<b>Protected areas coverage and management</b>	
<ul style="list-style-type: none"> <li>■ GAPS IN PROTECTED AREAS SYSTEM</li> <li>■ WEAKNESSES IN RESERVE MANAGEMENT</li> </ul>	<ul style="list-style-type: none"> <li>➤ Establish new wetland reserves under NIPAS or the Local Government Code</li> <li>➤ Produce a new directory of Philippine wetlands</li> <li>➤ Increase the capacity of the Protected Areas and Wildlife Bureau, especially local offices</li> </ul>
<b>Exploitation of birds</b>	
<ul style="list-style-type: none"> <li>■ HUNTING</li> </ul>	<ul style="list-style-type: none"> <li>➤ Conduct education and awareness programmes around key wetlands, to reduce hunting of threatened species</li> </ul>
<b>Gaps in knowledge</b>	
<ul style="list-style-type: none"> <li>■ INADEQUATE DATA ON THREATENED BIRDS</li> </ul>	<ul style="list-style-type: none"> <li>➤ Survey Philippine Duck and wintering Chinese Egret, Streaked Reed-warbler and shorebirds, with ecological studies to help determine the most appropriate management strategies</li> </ul>