

# Numbers and distribution of waterbirds and wetlands in the Asia-Pacific region

Results of the Asian Waterbird Census: 2002 – 2004

David Li Zuo Wei and Taej Mundkur



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Wetlands International

2007



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ISBN 978 90 5882 036 5

This publication should be cited as follows:

Li, Z.W.D. and Mundkur, T. 2007. *Numbers and distribution of waterbirds and wetlands in the Asia-Pacific region. Results of the Asian Waterbird Census: 2002–2004*. Wetlands International, Kuala Lumpur, Malaysia.

Published by Wetlands International  
[www.wetlands.org](http://www.wetlands.org)

Available from Natural History Book Service  
2–3 Wills Road, Totnes, Devon, TQ9 5XN, United Kingdom  
[www.nhbs.co.uk](http://www.nhbs.co.uk)

Cover photograph: Siberian Crane by Yu Changwu.

Cover design by Adrian Toh Yong Kiet.

Printed by CG Print.  
Printed on 128 gsm matt art.

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# Foreword – Convention on Wetlands

Wetlands International acts as one of the five formally-recognised International Organisation Partners (IOPs) of the Convention, and the waterbird information compiled through the International Waterbird Census (IWC) and *Waterbird Population Estimates* (WPE) publications is recognised by the Convention as an important support for Contracting Parties' implementation. The information collected and compiled in the *Asian Waterbird Census 2002–2004* report provides essential support for those working hard on the ground to implement the Ramsar Convention, and it is also important to ensure, as Wetlands International strives to do, that the information gathered through the Asian Waterbird Census (AWC) and other parts of the IWC are made fully available in useful forms to those who can and should be using it.

This updated information in the AWC 2002–2004 report will help governments in the region to continue to identify those wetlands which qualify for designation as Wetlands of International Importance (Ramsar sites), particularly in the application of Ramsar Criteria 5 (sites which regularly support >20,000 waterbirds) and 6 (sites which regularly support 1% or more of a biogeographic population of waterbirds). The *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance*, originally adopted by the Convention in 1999, has as its target the establishment of 'coherent and comprehensive' national and international networks of Ramsar sites. Yet relatively few such sites have been designated for waterbirds by countries in Asia, and there is clearly a long way to go achieve the anticipated comprehensive network for waterbirds in the region, and with many key waterbird sites yet to be designated known to be under severe pressure from land-claim and other land-use pressures which threaten and reduce their capacity to continue to deliver their vital ecosystem service to people.

In addition, the data published in this AWC report makes a vital contribution to the understanding of waterbird status at the biogeographic population scale, notably through the assessment of population sizes and trends for Wetlands International's regularly published *Waterbird Population Estimates*. The information compiled in *Waterbird Population Estimates* provides a unique resource as the basis for innovative analyses of waterbird population status and trends at the flyway scale. Such analyses need to be increasingly undertaken for all waterbird taxa, so as to highlight which flyways are under most pressure, and which waterbird populations should be afforded priority for conservation attention.

The updated information published in the 4<sup>th</sup> edition of *Waterbird Population Estimates* highlights that far more waterbird populations continue to be in decline than are increasing, and recognises that the situation is particularly dire in Asia, where almost 60% of populations of known trend are recorded as declining – a much higher figure than for any other region of the world. But these statistics derive from a poor knowledge-base in Asia, since we only have information on population trends for around 40% of waterbird populations in the region. Furthermore, these trend assessments for many populations have not been updated for some years, so we do not yet have a really clear understanding of the current picture – it could be much worse (or better!).

Improved and up-to-date status and trend information is vital in the light of the major development pressures on coastal and inland wetlands in the region. Although the knowledge-base of coverage of key wetlands by the Asian Waterbird Census is far from complete, and hence applying fully statistically-based trend analyses (such as the TRIM methodology used by the Western Palearctic component of the IWC) is not feasible, there are now many AWC sites for which there is a time-series of counts for at least part of the last 20 years. Some preliminary assessments of this unique time-series data for Asian waterbirds, using different statistical approaches, are underway and are yielding promise that population status and changes to this status may indeed be detectable from the AWC data for at least a number of waterbirds. Such findings will further increase the value and importance of the AWC, including as a contribution to assessing the delivery of the WSSD/CBD 2010 biodiversity target to significantly reduce the rate of loss of biological diversity.

It takes a lot of continuing effort and commitment to maintain and continue such monitoring schemes as the AWC over the long period of years necessary to yield meaningful baselines and identification of changes in the status of waterbird biodiversity. The value and success of the AWC is hugely due to the dedication and immense efforts of its national co-ordinators and their networks of people on the ground prepared to make the effort to count waterbirds regularly in often difficult and inaccessible places, with the support of Wetlands International. Such dedication needs to be as widely and fully recognised as possible. We congratulate all involved for their efforts leading to this important report.

Dr Nick Davidson  
Deputy Secretary General  
Ramsar Convention Secretariat

Dr Lei Guangchun  
Senior Advisor for Asia-Pacific  
Ramsar Convention Secretariat

# Foreword – Convention on Migratory Species

The Secretariat of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) welcomes the publication by Wetlands International of the results of the Asian Waterbird Census (AWC) from 2002 to 2004. I am convinced that the valuable information presented in this report on the status and distribution of waterbird populations will greatly contribute to the conservation of waterbird species and their habitats in the Asiatic region.

Data generated through the AWC and the global International Waterbird Census (IWC) programme provides an important baseline for the work of the Convention in promoting the conservation and management of migratory waterbirds and the habitats on which they depend. Specifically, information collected by the Census contributes to the updating of the status of the species listed in CMS Appendices, and to the identification of new species to be listed, what constitutes the basis for taking action within the Convention.

Data on the status and trend of species have been instrumental in the identification and development of Concerted Actions for selected Appendix I waterfowl species, such as the White headed duck, the Lesser white-fronted goose, the Black-faced spoonbill, the Spoon-billed sandpiper, and the Chinese crested tern. The development of the African-Eurasian Migratory Waterbird Agreement (AEWA), the most extensive Agreement established so far under the Convention, was, and still is, largely based on data gathered through the IWC. The same applies to the development of a Regional Agreement under CMS for the Central Asian Flyway.

The importance of reliable data on waterfowl populations has become particularly evident in the last couple of years in connection with the spread of the Highly Pathogenic Avian Influenza (HPAI) virus subtype H5N1, particularly as regards risk assessment related to the possible role of waterbirds in the spread, and conversely the impact of the virus on the conservation of wild birds. In this regard, Resolution 8.27 issued by CMS COP8 (Nairobi, 20-25 November 2005) and Res. 3.6 of AEWA MOP3 (Dakar, 23-27 October 2005) requested CMS and other stakeholders to explore possibilities for establishing partnerships in order to support the development of long-term funding for monitoring schemes, including the International Waterbird Census and its derived outputs, that are relevant to the Convention's interests. The CMS Secretariat continues to be engaged in this endeavour.

On behalf of the CMS Secretariat, I would like to thank Wetlands International for its painstaking effort in compiling and producing this report. I would like to strongly encourage the CMS Contracting Parties to use this publication as a reference for their conservation activities nationally.

Robert Hepworth  
Executive Secretary  
CMS Secretariat

# Message from Wetlands International

Wetlands International established the International Waterbird Census (IWC) in Europe in 1967. The IWC has since developed into a global waterbird monitoring programme, and the Asian Waterbird Census (AWC) was initiated in 1987. Wetlands International is pleased to present the tenth summary of results from the AWC, covering the years 2002–2004, in the 20th anniversary year of the AWC.

The AWC 2002–2004 results demonstrate the significant value of the census, which covered 2,032 sites across 22 countries, with nearly 8 million waterbirds recorded in all three years. A total of 459 sites met the criteria for internationally important sites set by the Ramsar Convention on Wetlands. Of the total 274 waterbird and 61 wetland-dependent species recorded, 43 were Globally Threatened species according to IUCN criteria, and 159 were listed in Appendices I and II of the Convention on Migratory Species.

Although it is not yet possible to calculate population trends of the species recorded statistically, due to the inconsistency of site coverage across parts of the region, the data collected by the AWC was the main source of information in the Asia-Pacific region for overall assessment of waterbird numbers and trends through the *Waterbird Population Estimates – Fourth Edition* (Wetlands International 2006). This showed that 62% of waterbird populations with known trends are now decreasing or have become extinct in Asia, and only 10% are increasing. Waterbirds and their wetland habitats in the Asian region are clearly in need of urgent protection, through both on-the-ground conservation activities and policy-based protection measures.

The information collected through the AWC also identified partial or complete reclamation as the biggest threat to wetlands and their use by waterbirds across the Asian region. The most serious known problem occurs in the Yellow Sea region, where the world's largest reclamation project in this century, at Saemangeum in the Republic of Korea was completed in April 2006. This project destroyed a total of 401 square kilometres of intertidal mudflats which were formerly one of the most important wetland sites for migratory waterbirds in Asia, having been of special importance for populations of the Endangered Spoon-billed Sandpiper and Nordmann's Greenshank, in addition to a wide range of other species. The Ramsar Convention 7<sup>th</sup> Conference of the Parties (COP) Resolution VII.21, on "enhancing the conservation and wise use of intertidal wetlands", urges Contracting Parties to conserve and restore intertidal wetlands. The Republic of Korea has committed to play a leading role in migratory waterbird conservation by signing the partnership for the conservation of migratory waterbirds and the sustainable use of their habitats in the East Asian – Australasian Flyway in November 2006. The Republic of Korea will also host the Ramsar COP 10 in October 2008. Wetlands International urges the government of the Republic of Korea to undertake evaluation of its current development policies on the Yellow Sea coast and to commit to a moratorium on intertidal wetlands development. This commitment would provide an example to other countries for the wise use of wetlands and the conservation of waterbirds.

Jane Madgwick  
Chief Executive Officer  
Wetlands International

# Message from Keidanren Nature Conservation Fund

The Keidanren Nature Conservation Fund (KNCF) was established in 1992 in response to the UN Conference on Environment and Development (UNCED), which was held in Rio de Janeiro. KNCF shares the view that companies themselves should tackle nature conservation and environmental preservation, all over the world.

Since then, we have continued to provide support through the Fund for NGO nature conservation activities, mainly those undertaken in the Asia-Pacific region or in Japan.

The Fund receives donations each year from the member companies of the Japan Business Federation (Nippon Keidanren) or from individuals. To date, total project support amounts to 2,200 million yen, with about 700 projects supported.

'The Asian Waterbird Census – promoting waterbird and wetland conservation in the Asia-Pacific region', carried out by Wetlands International – Malaysia Office, is supported by KNCF 2006. The results of the census of waterbird in Asia (AWC) are also reported in Japan as 'The Waterfowl Crisis', contributing to raising awareness of the issue and recognition of the importance of the census.

While expecting that your organization will continue to carry out its valuable work in the future, I pray for your increasing development and prosperity.

Naotake Okubo  
Chairman  
Nippon Keidanren Committee on Nature Conservation

# Acknowledgements

As usual, we begin by thanking the AWC's thousands of volunteers, although we cannot list all their names in the report. Without their active participation we would not have the data to compile this report and make an important volume of information available to a global audience. We acknowledge and would like to express our gratitude for all the efforts they make to undertake the census and report the results to the national and Sub-national Coordinators.

We thank all the AWC Coordinators who organised the census between 2002 and 2004 and sent the data gathered to Wetlands International. Without their great efforts, the AWC could not have been carried out so successfully.

We also thank Abdul Aleem Chaudhry, Asad Rahmani, B.M. Parasharya, Carlo Custodio, Enam Ul Haque, Woei-horng Fang, Ferry Hasudungan, Gandhiv Kafle, Hem Sagar Baral, Hitoha Amano, Hong Chamnan, Igor Fefelov, Leung Va, Lew Yang, M. Zafar-ul Islam, Mark Barter, Mike Crosby, Munir Awan, Nameer Ommer, Nguyen Duc Tu, Nial Moores, Noriko Moriwake, Petch Manopawitr, Philip Round, Pushpa Thambipillai, S. Balachandran, Siraj Taher, Sujoy Chaudhari, Sumit Sen, Thet Zaw Naing, Udaya Sirivardana, Umesh Madhukar Pawar, Yeap Chin Aik, Yu Yat Tung, Yus Rusila Noor and Yutaka Kanai, who all made comments and contributed to the compilation of the report.

We particularly thank our colleagues Simon Delany and Ward Hagemeyer for improving the quality and presentation of the report by their valuable comments and reviews. We would like to thank Rosie Ounsted for editing the report. We are extremely grateful to our volunteers, Nancy Drilling and Laziana binti Ahmad, for helping with the data entry, and to Benedicte Spinewine for helping to produce the maps.

Finally, we thank the Keidanren Nature Conservation Fund for providing the financial resources for the compilation, publication and dissemination of this report.

# Abbreviations

AEWA	African–Eurasian Waterbird Agreement
APMWCS	Asia-Pacific Migratory Waterbird Conservation Strategy
AWC	Asian Waterbird Census
CBD	Convention on Biological Diversity
CMS	Convention on Migratory Species
CP	Central Province, Sri Lanka
CR	Central Region, Nepal
EAAF	East Asian – Australasian Flyway
EP	Eastern Province, Sri Lanka
ER	Eastern Region, Nepal
IBA	Important Bird Area
IUCN	World Conservation Union
IWC	International Waterbird Census
MAB	UNESCO Man and the Biosphere Programme (MAB) Reserve
NCP	North Central Province, Sri Lanka
NP	Northern Province, Sri Lanka
NP	National Park
NR	Nature Reserve
NWFP	North West Frontier Province, Pakistan
NWP	North Western Province, Sri Lanka
R	River
SABP	Sabaragamuwa Province, Sri Lanka
SP	Southern Province, Sri Lanka
WLS	Wildlife Sanctuary
WP	Western Province, Sri Lanka
WPE	Wetlands International's Waterbird Population Estimates programme
WR	Western Region, Nepal
WSSD	World Summit on Sustainable Development
UVAP	Uva Province, Sri Lanka

# Summary

## Background

The Asian Waterbird Census (AWC) was initiated in 1987 and runs in parallel with other waterbird censuses carried out in Africa, Europe, Central and West Asia and Latin America under the umbrella of the International Waterbird Census (IWC), which is organised by Wetlands International. The IWC is the largest and longest running faunal monitoring programme in the world.

The AWC started on the Indian subcontinent in January 1987 and has grown rapidly to cover the rest of Asia, Australasia and eastern Russia. Since 1987, a total of over 6,100 sites in 27 countries have been counted at least once.

The AWC census takes place annually, during the second and third weeks of January, and is carried out by volunteers interested in collecting information on waterbirds and wetlands as a basis for contributing to their conservation.

The data collected by the AWC have been used in various reports and contribute to a range of conservation activities at levels from local to global, including:

- species and site conservation and research programmes and campaigns to raise awareness of the importance of wetlands in many countries;
- the development of national wetland and waterbird conservation Action Plans and Strategies;
- the Ramsar Convention on Wetlands, by identifying wetlands of international importance through regular monitoring of waterbirds and Ramsar List sites;
- the Convention on Migratory Species, by monitoring the status of migratory waterbirds and their habitats;
- the Convention on Biological Diversity's goal of conservation and sustainable use of biodiversity;
- the implementation of the Asia-Pacific Migratory Waterbird Conservation Strategy, through monitoring of waterbirds and their sites, including sites listed under the three East Asian – Australasian Migratory Waterbird Site Networks;
- BirdLife International's Important Bird Area (IBA) programme;
- IUCN/BirdLife's Globally Threatened Birds programme; and
- Wetlands International's Waterbird Population Estimates (WPE) programme.

The data given in this publication represent the results of the AWC from 2002 to 2004.

## Highlights of the 2002–2004 censuses

Twenty-two countries participated in the censuses, and 2,032 sites were covered at least once between 2002 and 2004. Of the sites covered, 79 have been designated as internationally important sites under the Ramsar Convention (as at 31 December 2006), 36 as Migratory Waterbird Network Sites in the East Asian – Australasian Flyway (as at 31 December 2006) and 280 as Important Bird Areas (BirdLife International 2004, 2005).

A total of 459 sites meet two criteria of internationally important sites. Ninety-six sites have been reported to support more than 20,000 waterbirds, and 454 sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

Total numbers of waterbirds counted were 7,964,568 (1,025 sites), 7,763,834 (1,299 sites) and 7,934,809 (1,075 sites) in 2002, 2003 and 2004 respectively.

Totals of 274 species of waterbirds and 61 species of wetland-dependent species (covering five species of sea birds, 33 birds of prey, 12 kingfishers, and 11 wagtails and pipits) were recorded. The 10 most numerous species were Northern Pintail (780,709 in 2003), Mallard (731,459 in 2003), Baikal Teal (VU [BirdLife International 2006], 458,039 in 2004), Common Pochard (369,672 in 2002), Eurasian Wigeon (361,768 in



2004), Common Coot (360,349 in 2002), Common Teal (333,498 in 2004), Spot-billed Duck (316,675 in 2004), Northern Shoveler (293,635 in 2002) and Gadwall (290,781 in 2004).

Forty-three of the species recorded are recognised as globally threatened, according to BirdLife International (2006). They include four Critically Endangered, 13 Endangered and 26 Vulnerable species. In addition, 21 Near Threatened species were recorded. One hundred and fifty-nine of the species covered by the census are listed in the Appendices of the Convention on Migratory Species. Of these, 28 are listed in Appendix I while 131 species are listed in Appendix II. Additionally, 57 species are listed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); 15 and 42 species are listed in Appendices I and II respectively.

Good coverage of at least 27 congregatory species, i.e. Indian Cormorant, Oriental Stork, Indian Black Ibis, Black-faced Spoonbill, Fulvous Whistling Duck, Whooper Swan, Tundra Swan, Swan Goose, Greater White-fronted Goose, Lesser White-fronted Goose, Bean Goose, Bar-headed Goose, Lesser Snow Goose, Falcated Duck, Baikal Teal, Philippine Duck, Red-crested Pochard, Ferruginous Duck, Great Scaup, White-headed Duck, Demoiselle Crane, Siberian Crane, White-naped Crane, Hooded Crane, Common Crane, Red-Crowned Crane and Bronze-winged Jacana, reinforces the value of the census in monitoring the distribution and abundance of waterbirds in the Asia-Pacific region.

Fishing, agricultural development, hunting, excessive cattle grazing, pollution of wetlands through domestic sewage, pesticides and fertilisers, and overgrowth of vegetation are reported as the main on-site uses and threats. Although partial or complete reclamation was reported at only 7% (145) of the sites, this activity can cause a total loss of waterbird habitat, therefore it is believed to be the most destructive cumulative threat to the wetlands and their use by waterbirds. Improved reporting of information on uses and threats at all sites is being promoted to provide a more comprehensive mechanism to increase our knowledge base and to enable preventive action to be undertaken in a timely manner through local and international efforts.

The collection of data was coordinated and carried out by a dedicated volunteer network of National/Sub-national Coordinators and over 1,000 volunteers in 22 countries.

The AWC covers the following four main regions: South Asia, Southeast Asia, East Asia and Australasia.

#### **South Asia** (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka)

A total of 1,205 sites in South Asia were counted at least once; count information was provided by all countries. Total numbers of waterbirds counted were 3,941,894 (518 sites), 3,544,755 (735 sites), 3,014,246 (548 sites) in 2002, 2003 and 2004 respectively. Totals of 170 species of waterbirds and 39 species of wetland-dependent birds were counted, 16 of which are globally threatened and 14 of which are Near Threatened.

#### **Southeast Asia** (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Timor Leste and Vietnam)

A total of 408 sites in Southeast Asia were counted at least once; count information was provided by all countries except Lao PDR and Timor Leste. Total numbers of waterbirds counted were 307,319 (202 sites), 272,061 (243 sites) and 466,403 (180 sites) in 2002, 2003 and 2004 respectively. Totals of 180 waterbird and 30 wetland-dependent species were counted, 22 of which are globally threatened and 15 of which are Near Threatened.

#### **East Asia** (mainland China, Hong Kong, Macao, Taiwan, Japan, Republic of Korea, Democratic People's Republic of Korea, Mongolia and eastern Russia)

A total of 388 sites in East Asia were counted at least once, with no information provided from the Democratic People's Republic of Korea or Macao. Total numbers of waterbirds counted were 3,366,770 (276 sites), 3,582,202 (292 sites) and 4,180,979 (321 sites) in 2002, 2003 and 2004 respectively. Totals of 165 species of waterbirds and 35 species of wetland-dependent birds were counted, 24 of which are globally threatened and seven of which are Near Threatened.

## **Australasia** (Australia, New Zealand and Papua New Guinea)

Information, relating mainly to shorebirds, was received from Australia only. Thirty-one sites were counted at least once during 2002–2004. Total numbers of waterbirds counted were 348,585 (29 sites), 364,816 (29 sites) and 273,181 (26 sites) in 2002, 2003 and 2004 respectively. Forty-seven species of shorebirds were counted, and five Near Threatened species were recorded.

## **Status and distribution of species**

Individual status reports are presented for a selection of 211 species (202 maps), including 42 globally threatened and 19 Near Threatened species for which relatively significant data are available. Internationally important sites for each species were identified according to the 1% criterion provided in *Waterbird Population Estimates – Fourth Edition* (Wetlands International 2006).

## **Forward planning**

The report outlines plans to be implemented during 2007–2015 as a follow up to the *Strategy for the Development of the Asian Waterbird Census: 2004–2006*. These include actions to enhance geographic and site coverage, ensure high quality of the AWC data, strengthen communication and public awareness, build the capacity of national networks, support improved decision making for waterbird and wetland conservation and develop a coordination mechanism for effective operation and targeting of the AWC.



# 1. Introduction

The AWC is part of a global volunteer-based programme to monitor the distribution and abundance of the waterbirds of the region and their habitats. This section gives an overview and explains the relevance of monitoring waterbirds and the IWC and AWC programmes. The information on the IWC presented in sections 1.1 and 1.2 is extracted from the latest publication on the waterbird census for the Western Palearctic and Southwest Asia (Gilissen *et al.* 2002). The remaining sections are largely extracted from the previous AWC report, which covered 1997–2001 (Li and Mundkur 2004).

## 1.1 Why monitor waterbirds?

Waterbirds are one of the most remarkable components of global biodiversity. Their long migrations and tendency to concentrate in large numbers on particular wetlands make them both visible and charismatic. They are important indicators of the ecological condition and productivity of wetland ecosystems, and their presence is widely valued by numerous stakeholders including local human populations, tourists, associated enterprises, hunters (both sport and subsistence) and research biologists throughout the world. The presence of waterbirds also offers many opportunities for using wetlands sustainably, particularly through eco-tourism. This is particularly important for developing countries, since protecting waterbird habitats may impose an additional resource burden on them.

Waterbirds are readily counted because many species congregate conspicuously. No other group of birds has been so comprehensively and frequently surveyed. There is a strong tradition in Europe and North America, and a growing tradition in other parts of the world, of using long-term waterbird census data as a basis for estimating the sizes and trends of waterbird populations. The IWC is one of the longest running and most extensive harmonised biodiversity monitoring programmes in the world. The information obtained from the IWC has considerable conservation value at the local, national and international levels and a growing scientific impact. In recent years, the data collected by the IWC are finding new applications in understanding the interactions between wild birds, domestic poultry and the spread of avian influenza and are contributing to the development of a global early warning system.

## 1.2 Organisation of the IWC

### 1.2.1 Global organisation of the IWC

The IWC is a site-based counting scheme for monitoring waterbird numbers, organised by Wetlands International. The census comprises four separate surveys:

- The AWC, which covers Asia (including eastern Russia) and Australasia and which is the subject of this report, is coordinated from the Wetlands International office in Kuala Lumpur, Malaysia (see e.g. Li and Mundkur 2004).
- The counts in the Western Palearctic and Southwest Asia (IWC–WP&SWA) are coordinated and compiled by the Wetlands International office in Wageningen, The Netherlands (see e.g. Gilissen *et al.* 2002 and Solokha 2006).
- The African Waterbird Census (AfWC) is coordinated from the Wetlands International office in Dakar, Senegal (see e.g. Dodman and Diagana 2003).
- In South and Central America, the Neotropical Waterbird Census (NWC) is coordinated by the Wetlands International office in Buenos Aires, Argentina (see e.g. Lopez-Lanus and Blanco 2005).

### 1.2.2 Plans for the Future

The strategic plans of the IWC include, as recommendations for the future, to:

- continue expansion of the census towards a global survey;

- finalise the new database programme, merging taxonomical databases, and have it adopted in all regions, which will facilitate exchange of data between the regional databases;
- disseminate the results of the IWC more regularly, especially through the internet;
- increase coverage of species, sites, seasons and sources;
- increase capacity to deliver products that meet the needs of conventions and their contracting parties, mainly through the increase in coverage of species, sites and seasons;
- increase cooperation with organisations working towards the conservation of waterbirds (e.g. BirdLife International: IBA Programme, hunting organisations);
- link the database with a Geographic Information System (GIS), to standardise geographical definition of sites; and
- extend the scope of application of the data, for example with research on climate change.

The major change in the direction proposed for the IWC is the development of a more global character and closer interaction of the regional schemes in terms of standardisation and data management.

### 1.2.3 The role of Wetlands International's Specialist Groups

The Specialist Groups are an important element of Wetlands International's networks of experts. The Specialist Groups are formally linked to the global umbrella of the Species Survival Commission (SSC) of the IUCN. Mostly initiated in the 1980s, when they were known as Research Groups, the groups with strong links to the IWC are the Swan, Goose, Duck, Seaduck, Wader, Flamingo, Crane and Threatened Waterfowl Specialist Groups. The Specialist Groups play an important role in providing information and advice to the IWC and the Waterbird Population Estimates programme (see 1.4.4 for further information).

The Wader Study Group is the largest and longest established of the Specialist Groups; its *Bulletin* appears three times a year. The Swan, Goose, Duck, Seaduck, Flamingo, Crane and Threatened Waterfowl Specialist Groups also produce high quality bulletins at regular intervals; most of these bulletins are also available on the internet.

## 1.3 Organisation and development of the AWC

The AWC is an international programme initiated in 1987 to monitor the status of waterbird populations, their distribution and the status of wetlands in Asia. The AWC runs in parallel with other international census programmes for waterbirds in West and Central Asia, Africa, Europe and the Neotropics under the umbrella of the IWC, coordinated by Wetlands International. The census aims to contribute to the conservation of waterbirds and their wetland habitats by:

- providing the basis for estimates of waterbird populations;
- monitoring changes in waterbird numbers and distribution by regular, standardised counts of representative wetlands;
- improving knowledge of little-known waterbird species and wetland sites;
- identifying and monitoring (networks of) sites that are important for waterbirds in general and, more specifically, identifying and monitoring sites that qualify as Wetlands of International Importance under the Ramsar Convention on Wetlands;
- providing information on the conservation status of waterbird species, for use by international agreements;
- increasing awareness of the importance of waterbirds and their wetland habitats at local, national and international levels.

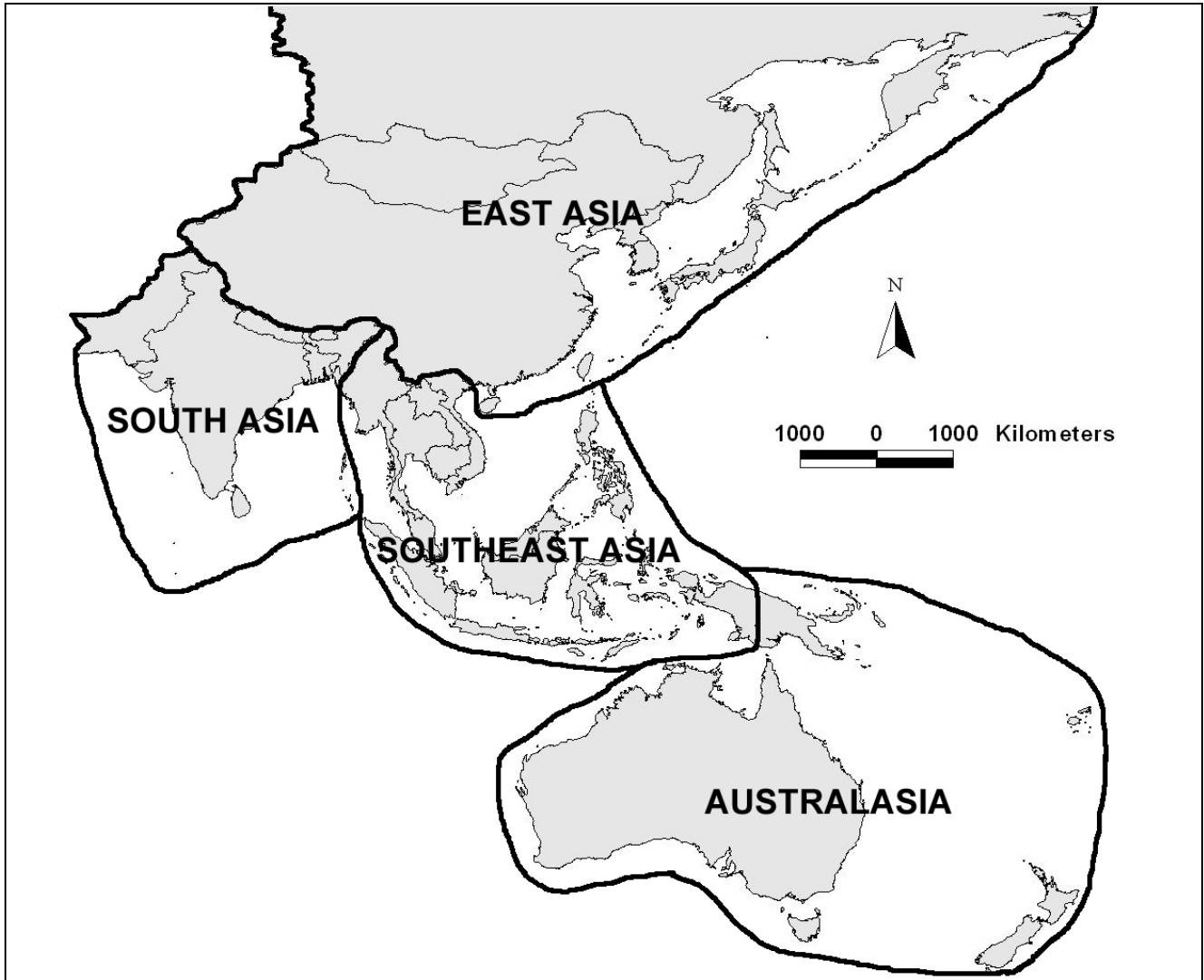
The AWC also aims to build and strengthen national networks of enthusiastic volunteers and facilitate their training.

The AWC takes place once a year, during the second and third weeks of January. The census was initiated in 1987 on the Indian subcontinent, and has grown rapidly to cover most of the countries of South Asia, East Asia and Southeast Asia, as well as Australasia and eastern Russia (see Figure 1).

The census is carried out primarily by volunteers. It is normally coordinated by a volunteer National Coordinator in each country (supported by Sub-national or State Coordinators in countries with a large number of participants) who is responsible for maintaining the local volunteer networks who undertaking the counts (see Appendix I for details). The coordinators are required to send out count forms, liaise with participants and receive completed

forms after the census as well as to compile a national report and disseminate it locally to support and promote conservation action. In addition, the National Coordinators are required to forward count data to the International Coordinator, and this information forms the basis of regional reports such as this.

**Figure 1: The AWC regions**



Information collected by the censuses made from 1987 to 1993 was published in a series of annual reports (van der Ven 1987, 1988; Scott and Rose 1989; Perennou *et al.* 1990; Perennou and Mundkur 1991, 1992; Mundkur and Taylor 1993). In addition to these annual reports, results from the years 1987 to 1991 were analysed to define species distribution and to identify important wetlands in a comprehensive report by Perennou *et al.* (1994). Results from 1994, 1995 and 1996 were compiled in a 3-year report by Lopez and Mundkur (1997). Data from 1997, 1998, 1999, 2000 and 2001 were compiled in a 5-year report by Li and Mundkur (2004).

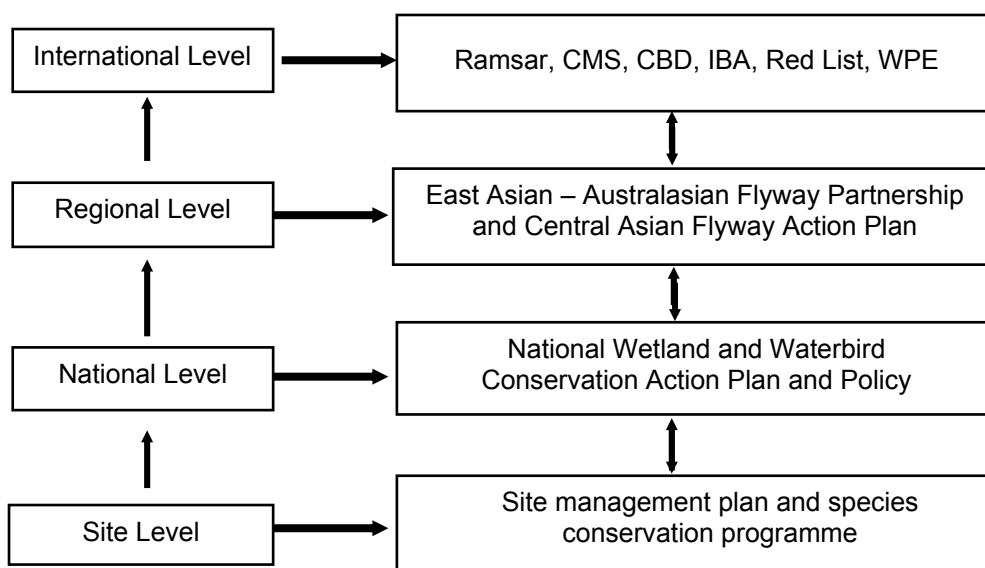
Over the last 20 years, the AWC has established itself well in certain countries and regions, having achieved its objectives of monitoring waterbird populations in, for example, Hong Kong, Republic of Korea, Japan and Taiwan, where the census has been conducted every year with consistent coverage of a large proportion of wetland sites. However, in some countries, e.g. Bhutan, Lao PDR, Democratic People's Republic of Korea, Maldives, Mongolia and Papua New Guinea, the census has been conducted only occasionally, with data provided by individual counters or local bird groups. Therefore the national networks need to be developed further in these countries in order for the census to achieve its aims of undertaking counts consistently at important wetlands.

In October 2003, the first meeting of the AWC National Coordinators was held in Malaysia. A *Strategy for the Development of the Asian Waterbird Census: 2004–2006* was the major output of the meeting and has provided a clear direction for the AWC at the regional and national levels. The Strategy was reviewed at the second AWC National Coordinators' meeting held in October 2006 in the Philippines. A long-term strategy that aims to guide and provide the overall long-term direction to the AWC programme was developed and is highlighted in Section 4 of this report.

## 1.4 How the results of the AWC are used

The activities undertaken by the AWC and the data gathered have generated strong support and contribute to a range of waterbird and wetland management and conservation activities undertaken on levels from local to global (Figure 2).

**Figure 2: The AWC's contribution to national and international conservation frameworks**



**Key:** Ramsar – Convention on Wetlands, CMS – Convention on Migratory Species, CBD – Convention on Biological Diversity, IBA – BirdLife International's *Important Bird Area Programme*, Red List – IUCN Red List/BirdLife International's *Global Species Programme*, WPE – Wetlands International's *Waterbird Population Estimates programme*.

### 1.4.1 Conservation of waterbirds and wetlands

Waterbirds are one of the key attributes of the biodiversity of many wetlands, and waterbird counts form one of several elements that are used to identify important wetlands. It is widely accepted that the number of waterbirds using a wetland site is a good indicator of that site's biological importance (e.g. Scott 1980), and waterbird counts have been especially influential in the identification and conservation of important wetlands. Bird counts can also provide vital evidence of the need to protect wetlands, should they become threatened. Kushlan (1993) assessed the value of waterbirds as bio-indicators of wetland change, and one of his conclusions was that "population level data show special promise as sentinel bio-indicators".

### 1.4.2 The Convention on Wetlands (The Ramsar Convention)

[www.ramsar.org](http://www.ramsar.org)

The Convention on Wetlands (Ramsar, Iran, 1971) provides the intergovernmental framework to promote the conservation of wetlands worldwide. The Ramsar Convention has grown rapidly since its establishment in 1971 and, as at 31 January 2007, 154 countries had become signatories to the Convention. Contracting Parties are required "to recognise and conserve any internationally important wetlands", by designating them as Ramsar sites; the Ramsar List of wetlands of international importance comprised 1,636 sites worldwide

covering more than 145.7 million hectares in January 2007. The majority of sites are designated based on their importance for waterbirds according to data generated through the AWC and similar programmes.

The Convention has adopted nine criteria for identifying wetlands of international importance, three of which relate to waterbirds:

Criterion 2: A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.

Criterion 5: A wetland should be considered internationally important if it regularly supports 20,000 or more waterbirds.

Criterion 6: A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

The Ramsar Convention encourages Contracting Parties to monitor waterbirds regularly as the basis for the identification of wetlands of international importance. More information about the Ramsar List and descriptions of the Ramsar sites are available on the Convention's website: [www.ramsar.org/key\\_guide\\_list2006\\_e.htm](http://www.ramsar.org/key_guide_list2006_e.htm)

During the 6<sup>th</sup> meeting of the Conference of the Contracting Parties (COP), held in Brisbane, Australia, in 1996, the Parties passed a resolution recognising the value of waterbird monitoring (Res.VI.4: Adoption of population estimates for operation of the specific criteria based on waterfowl; see Appendix II for full text). The resolution urged Wetlands International to continue to develop the International Waterfowl Census (now the International Waterbird Census – IWC) and to enhance its global coverage as an important basis for the application of Ramsar Criteria on waterbirds.

Subsequently, at the 8<sup>th</sup> COP, held in Valencia, Spain, in 2002, the Parties reiterated the value of using data collected through the IWC and other programmes as a basis for generating and updating the population estimates of waterbirds and identifying sites of international importance (Res.VIII.38: Waterbird population estimates and the identification and designation of Wetlands of International Importance; see Appendix III for full text). The Contracting Parties further requested Wetlands International to update the best available waterbird population estimates regularly at each of their triennial conferences, and, every nine years, to revise the 1% thresholds for each waterbird population (see 1.4.4 below).

The *Ramsar Strategic Plan 2003–2008* identified as a priority the need to “Promote and disseminate research into the population dynamics and sustainable harvesting of wetland dependent species, especially migratory waterbirds” (operational objective 12.2.4; see the Ramsar Convention website for details). The AWC provides a mechanism to generate information on the population dynamics of migratory and resident waterbirds in the Asian region on an annual basis and to contribute to efforts to determine sustainable harvesting limits for individual species.

### 1.4.3 The Convention on Migratory Species (CMS)

[www.cms.int](http://www.cms.int)

The Convention on the Conservation of Migratory Species of Wild Animals (CMS, Bonn, 1983) provides an international framework for the conservation of migratory species, which include many species of waterbirds. The Convention requires the Contracting Parties to promote, cooperate with and support research relating to migratory species to avoid any migratory species becoming endangered. Although at present only six countries (Bangladesh, India, Mongolia, Pakistan, Philippines and Sri Lanka) in Asia (as defined for the AWC) are Contracting Parties to the CMS, any state can sign a CMS agreement for single or multiple species (indeed, several additional Asian countries already do this).

The waterbird monitoring data generated by the AWC provide a valuable information base for the Convention and its Contracting Parties to decide on a change in conservation status of a waterbird species and whether it should be added to or removed from the lists of species of concern to the Convention (CMS Appendices I and II), which determine whether there is a need to take additional action to protect the species (or population). The full list of species covered by the Appendices is available on the CMS website [www.cms.int/documents/index.htm](http://www.cms.int/documents/index.htm) .



#### 1.4.4 Waterbird Population Estimates (WPE)

[www.wetlands.org](http://www.wetlands.org)

Wetlands International collates information on the status of the populations of waterbirds around the world and publishes *Waterbird Population Estimates*, which is the authoritative source for the identification of Wetlands of International Importance based on the 1% criterion of the Ramsar Convention and the species on the CMS Appendices (see 1.4.2 and 1.4.3 above).

The fourth edition of *Waterbird Population Estimates* was published in 2006 (Wetlands International 2006). It identifies 815 populations in Asia and notes the lack of population trends for 56% of these; for populations with trend information, 62% are decreasing or extinct, 27% are stable and only 10% are increasing. It calls for the collection of new information, recognising the absence of updated and reliable estimates for a high proportion of Asian species. It also notes that the Asian region holds more globally threatened waterbird populations than does any other region of the world.

The wealth of data collected through the AWC serves as a basis for collating and evaluating information on waterbird populations and trends for inclusion in *Waterbird Population Estimates*.

#### 1.4.5 East Asian – Australasian Flyway Partnership for the Conservation of Migratory Waterbirds

The East Asian – Australasian Flyway Partnership initiative has evolved from the *Asia-Pacific Migratory Waterbird Conservation Strategy* (APMWCS) 1996–2000 (Anonymous 1996) and 2001–2005 (Asia-Pacific Migratory Waterbird Conservation Committee 2001). The APMWCS served as an international cooperative conservation initiative for waterbirds and wetlands in the Asia-Pacific region from 1996 to 2006. The Strategy has been very successful in conserving migratory waterbirds and their habitats through a range of activities such as international cooperation, development and implementation of species action plans and site networks. The implementation of the Strategy was supported by government agencies, the Ramsar Convention, CMS, non-government organisations (NGOs) and technical experts in the region. As a development of the APMWCS, a flyway partnership initiative in the East Asian – Australasian Flyway (launched in November 2006) and an Action Plan for the Central Asian Flyway (finalised by CMS and Wetlands International in 2006) have been developed to supersede the APMWCS after 2006.

The East Asian – Australasian Flyway partnership initiative focuses on 1) development of the flyway network of sites of international importance for the conservation of migratory waterbirds, building on the achievements of the APMWCS networks (95 sites in 14 countries, as at 31 December 2006); 2) enhancing communication, education and public awareness of the values of migratory waterbirds and their habitats; 3) enhancing flyway research and monitoring activities, building knowledge and promoting exchange of information on waterbirds and their habitats; 4) building the habitat and waterbird management capacity of natural resource managers, decision makers and local stakeholders; and 5) developing, especially for priority species and habitats, flyway-wide approaches to enhance the conservation status of migratory waterbirds. The waterbird monitoring data generated by the AWC have contributed to the identification of network sites and provide a framework for ongoing monitoring of these sites.

#### 1.4.6 Central Asian Flyway Action Plan for the Conservation of Migratory Waterbirds and their Habitats

[www.cms.int/bodies/meetings/regional/caf/caf\\_meeting.htm](http://www.cms.int/bodies/meetings/regional/caf/caf_meeting.htm)

The *Action Plan for Migratory Waterbirds and their Habitats in the Central Asian Flyway* was finalised in 2005 and covers conservation of species, conservation and management of habitats and management of human activities. It states that, "Range States shall endeavour to be involved in regular monitoring programmes, such as the International Waterbird Census, complemented by surveys of important breeding grounds, staging and non-breeding (wintering) sites. The results of such surveys shall be published and disseminated widely. The results will also be sent to appropriate international organisations, to enable reviews of population status and trends".

### 1.4.7 Important Bird Area (IBA) Programme

[www.birdlife.org/action/science/sites/index.html](http://www.birdlife.org/action/science/sites/index.html)

BirdLife International's IBA Programme is a worldwide initiative aimed at identifying, documenting and protecting a network of sites critical for the conservation of the world's birds. These sites are selected as IBAs under one or more of the following four global IBA criteria: A1: a site regularly holds significant numbers of a globally threatened species, or other species of global conservation concern; A2: a site holds a significant component of the restricted-range species whose breeding distributions define an Endemic Bird Area (EBA) or Secondary Area (SA); A3: a site holds a significant component of the group of species whose distributions are largely or wholly confined to one biome; A4: a site holds on a regular basis >1% of the biogeographic population of a congregatory waterbird, seabird or terrestrial species, or more than 20,000 waterbirds or seabirds of one or more species. A total of 2,293 IBAs have been identified in 28 countries and territories in the Asian region (BirdLife International 2004). Of these, 1,111 IBAs were identified that contain areas that qualify under the Ramsar Criteria as potential Ramsar sites (BirdLife International 2005).

A significant proportion of the wetland sites covered in the AWC meet criteria A1 and/or A4, and the AWC counts have been the primary source of data to support the identification of many of these wetland IBA sites. BirdLife International recently developed an IBA Monitoring Framework, which presents techniques that will be used by the BirdLife Partnership to monitor the status of IBAs worldwide. This is currently being adopted by the BirdLife Asia Partnership, and there is potential in the future to strengthen coordination of IBA monitoring with the wetland monitoring that is conducted as part of the AWC.

### 1.4.8 Globally threatened waterbirds

[www.birdlife.org/action/science/species/global\\_species\\_programme/gtb\\_forums.html](http://www.birdlife.org/action/science/species/global_species_programme/gtb_forums.html)

BirdLife International leads on the update of the status of the world's threatened birds. It is the official Red Listing Authority on birds and supplies this information for the IUCN (World Conservation Union) Red List of Threatened Species. It collates information from a global network of experts and from published and unpublished sources to assess the extinction risk to each species using standard quantitative techniques. The four main types of criteria used to identify threatened species are: (a) rapid population reduction, (b) small range and fragmented, declining or fluctuating population trend, (c) small population and declining, and (d) very small population or range. Species are assigned a Red List Category based on the standard IUCN Red List Categories (IUCN 2001) as follows: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD) and Not Evaluated (NE).

The detailed, long-term monitoring of waterbirds at wetlands, one of the world's most damaged and vulnerable groups of habitats, has already provided the basis for much important work by conservation practitioners at local, national and international levels. Important (and perhaps the most urgent) targets of conservation action are species in danger of extinction, as documented in the publications *Threatened Birds of the World* (BirdLife International 2000), *Threatened Birds of Asia* (BirdLife International 2001) and in the Data Zone on the BirdLife International website. A Globally Threatened Bird Forum for Asia has been set up on the BirdLife International website, jointly with Wetlands International for the waterbirds, to facilitate the annual update of the IUCN Red List. Asia supports more globally threatened waterbird species, including a large number of relatively widespread species, than does any other region of the world (Crosby and Chan 2006), and the AWC data have been used extensively to document and update the Red List status of these threatened waterbirds.

Whilst the AWC is able to provide information that is useful for the conservation of these threatened species, its main aim is to monitor the trends of more numerous and widespread species for which changes in status and distribution would otherwise go unnoticed.

### 1.4.9 National wetland and waterbird conservation

The AWC has provided a powerful stimulus for the establishment and strengthening of national and local networks of volunteers to collect information on waterbirds and wetland activities in most Asian countries over the last two decades. Data collected by the programme have been used to provide valuable baseline information on

waterbird and wetland status and to support the development of national wetland and waterbird conservation policies and action plans. At the site level, the information is being used to identify important wetlands and strengthen actions to protect them, to develop or update site conservation and management plans. The international coverage of the programme provides a strong leverage to stimulate the involvement of a wide cross section of participants and to promote local activities. The AWC also provides a mechanism to raise public awareness on wetland and waterbird conservation through the active participation of the public and the media, and it is being used effectively to generate support for the conservation of important sites in many countries.

## 2. Methods

### 2.1 Geographic and temporal coverage

The geographic coverage of the AWC includes the following four main regions: South Asia (Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka), Southeast Asia (Brunei Darussalam, Cambodia, Timor Leste, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam), East Asia (mainland China, Taiwan, Hong Kong, Macao, Japan, Democratic People's Republic of Korea, Republic of Korea, Mongolia and eastern Russia) and Australasia (Australia, New Zealand and Papua New Guinea). In mainland China, Hong Kong and Taiwan the AWC has been coordinated separately, therefore the information has been presented separately for these regions in this report.

The waterbird data presented in this report cover the years 2002, 2003 and 2004. Information was not received from Democratic People's Republic of Korea, Lao PDR, New Zealand, Papua New Guinea and Timor Leste.

Western Asia, covering the Arabian Peninsula, Central Asian Republics and Iran, lies on the crossroads of two flyways: the Central Asian Flyway and the East African – Eurasian Flyway. This region is largely covered under the African–Eurasian Waterbird Agreement (AEWA), and information from these countries is included in the reports of the Western Palearctic and Southwest Asian Waterbird Census (see e.g. Gilissen *et al.* 2002 and Solokha 2006).

### 2.2 Timing of the count

The AWC takes place once a year, during the second and third weeks of January. The official dates recommended were 5–20 January, 11–26 January and 10–25 January respectively for 2002, 2003 and 2004. However, logistical difficulties in some countries or limited volunteer capacity mean that counts made at any time during January are accepted for the AWC database. In some countries, counts made during the northern (boreal) winter period from December to February are accepted if no January data are available and it is evident that the populations of birds are stable in this area during this period.

### 2.3 Wetland sites and species coverage

The AWC sites represent all types of natural and man-made wetlands, including rivers, lakes, reservoirs, ponds, freshwater swamps, mangroves and tidal mudflats, coral reefs, rice fields, sewage farms, etc. that are covered by the Ramsar Convention.

All waterbird groups encountered in the region as recognised by the Ramsar Convention are covered by the census (grebes, cormorants, pelicans, herons, egrets, storks, ibises, spoonbills, flamingos, ducks, geese, swans, cranes, rails, jacanas, shorebirds, gulls and terns).

In addition, counts of other wetland-dependent species (including sea birds, raptors, kingfishers, wagtails and pipits) that are regularly encountered at wetlands have been included as several of these species depend largely on the food resources provided by these habitats. This will give a greater indication of the true importance of the wide diversity and abundance of these sites, even though it is expected that the diversity and abundance of such species is not yet adequately recorded by participants.

The sequence and nomenclature of waterbird species used in this report follow those used in *Waterbird Population Estimates – Fourth Edition* (Wetlands International 2006), which is based on del Hoyo *et al.* 1992 and 1996.

The taxonomy of 'large white-headed gulls' in the region, i.e. *Larus argentatus*, *L. cachinnans*, *L. heuglini*, *L. barabensis* and *L. fuscus* (see, e.g. Buchheim 2006), is an ornithological problem that remains to be solved. Differences in the way that this group is treated in the various field guides means that a species may be identified differently by different observers. For the purposes of the AWC, a taxon is assigned to one of the

four species if its range does not overlap with that of another of these species. Where ranges overlap and identification remains unclear, the taxon is assigned to a 'complex' of the two (or more) species.

## **2.4 Data collection and management**

### **2.4.1 Participation and coordination**

The AWC is carried out primarily by volunteers from all walks of life including university and school staff and students, nature club members, amateur and professional ornithologists, and government and non-governmental agencies related to forestry, wildlife or wetland conservation. In many countries professionals carry out much of the fieldwork. The major contributors to waterbird monitoring participate because they find counting birds enjoyable and rewarding.

In most countries the census is coordinated in a professional manner, and by one or more coordinators, on a voluntary basis (see Appendix: List of Coordinators). In countries where the coverage is poor and there is no coordinator, information is sent directly to Wetlands International by the individual field counters.

### **2.4.2 Data collection and maintenance**

One of the most important principles in the AWC methodology is standardisation, so that the same sites are covered in the same way each January, maximising the validity of comparisons of counts from site to site and from year to year. Standardisation is ensured by the use of rigorously designed recording forms and a network of National Coordinators who liaise with counters and ensure that optimum coverage is maintained. At the national level, responsibility is often divided amongst a number of sub-national/state coordinators. At large sites, which are divided into sub-sites, good organisation and team work play an important part in the success of counts.

The annual waterbird count data and site information are recorded on standardised AWC Count and Site Forms by participants. A single count is made at each site. The information is sent to the coordinators, who have to check and collate it; in most cases this feeds into the preparation of an annual country report. The National Coordinators then forward the data to Wetlands International, where it is checked and entered into standard databases using customised Microsoft Access® programmes at the Wetlands International office in Malaysia.

### **2.4.3 Data checking and quality of information**

Wetlands International aims to maintain a high standard in the quality of information it collates and provides through the census. It makes every attempt to verify ambiguous data received from coordinators and participants. In some cases, where unusual records have been received (of threatened species, vagrants or large numbers) and where no supporting information is forthcoming from coordinators or participants, Wetlands International checks with coordinators. This usually solves any problems and a decision can be made as to whether the record can be attributed to a transcription error on the form or to some other reason; these records are either included in the 'unidentified waterbird' category or deleted. For this reason, there may be a discrepancy between the information published in this report and other nationally generated outputs.

It is recognised that the AWC is a voluntary programme that is undertaken largely in developing countries with growing but as yet limited human capacity and inadequate resources. This means that data must be identified and checked by National Coordinators, as inaccurate data are occasionally received from volunteers who may be inexperienced in identification or lack good birding equipment (such as binoculars, a telescope or a good field guide). With the passage of time, the experience of some networks has greatly improved, although new recruits still require training and practice. General access to high quality equipment and field guides has also improved, complemented by the efforts of the AWC Coordinators to distribute the high quality *A Field Guide to the Waterbirds of Asia* (Sonobe and Usui 1993) to the network in the mid 1990s. The continued need to strengthen local networks is identified as a priority issue in the *Strategy for Development of the Asian Waterbird Census: 2007-2015* (outlined in Section 4) that will need to be addressed through improved census planning effort and the development of training activities.

Participants are urged to authenticate all new and unusual observations made during the census with relevant national organisations and to publish them in appropriate national and/or regional ornithological publications.

## 2.5 Counting and reporting methods

Participants are provided with basic instructions on methods and guidelines for participating in the census and making the counts. They are requested to:

- cover the most important waterbird sites (including wetland sanctuaries, Ramsar sites, IBAs and EAAF Network sites);
- visit all sites that were visited in the previous year, and use the same site names for them;
- count or estimate the number of all waterbirds present;
- provide a figure for the number of individuals of each species present. Terms such as ‘hundreds’ and ‘thousands’ are not valid;
- avoid giving ranges, e.g. 100–200, and instead provide the figure considered to be the best minimum estimate;
- where waterbirds cannot be identified to species level, list them under their group (e.g. unidentified egrets);
- report the absence of waterbirds at a wetland which is known to have held significant numbers of birds in the past by completing a census form nevertheless and noting that no birds were present. If possible, give the reason for the absence of birds (e.g. wetland completely dry, wetland frozen over or site very disturbed by hunters);
- avoid duplication of effort – occasionally two or more censuses are conducted at the same site on different dates. Whenever possible, counters should liaise with one other and agree on ONE census form that gives the results of their combined efforts;
- double check all the entries on the count forms. In particular, check to see that the figures are not inadvertently inserted on the wrong line, and that species’ names are not confused;
- if any species of waterbird which is not listed on the count form for the region has been observed, counters are required to add its name in the space provided at the end of the list and give additional information on its identification in the ‘Comments’ section of the form;
- write as clearly as possible and be sure to give the counter’s full name and address on the Waterbird Count Form;
- in the event that the counter feels that the wetland that has been counted is under severe threat of destruction or degradation, he/she should inform the National Coordinator and develop a plan of action to raise awareness of the importance of the site and to conserve it. The National Coordinator may be able to advise whether international action involving Wetlands International and others is necessary.

The detailed guidelines for participants and coordinators are also available on the Wetlands International website.

## 2.6 Interpretation of waterbird counts

The interpretation of waterbird counts that contribute to the AWC is in line with that of the global IWC programme. With the exception of the last paragraph of subsection 2.6.2, the remainder of section 2.6 is extracted verbatim from the latest publication on the waterbird census for the western Palearctic and southwest Asia (Gilissen *et al.* 2002).

Waterbird counts are long established and internationally recognised as an objective and scientifically valid method of assessing the sizes of waterbird populations and the importance of wetlands, but the interpretation of waterbird count data nevertheless requires considerable caution.

### 2.6.1 Counting errors

Counting birds, as is the case with all scientific recording methods, is subject to error. Experienced counters are able to enumerate high numbers of birds under pressure of time with considerable accuracy. Prater (1979) conducted experiments with observers viewing photographs of flocks of flying birds and concluded that there may be a tendency for observers counting flocks of between 100 and 1,000 birds to under-estimate slightly (on average, 8%), and for counts of bigger flocks of a few thousand upward to be slightly over-estimated. Rappoldt *et*

*al.* (1985) compared estimated numbers with real flock sizes and concluded that, on average, counting errors cancel one another out and that estimates are usually correct. Counting errors can be considerable and Rappoldt *et al.* (1985) reported average counting errors of waders in flight of 17%, and of birds concentrated densely in roosts of up to 37%. Summaries of count data at national and international levels often comprise estimates made at hundreds, even thousands of sites, where it is reasonable to assume that random counting errors to some extent cancel one another out. Research on counting errors has been minimal, and it would be valuable to conduct more detailed experiments with counters of varying experience.

The method of counting has a big influence on the accuracy of species identification and the recorded numbers. Aerial and boat surveys on large wetlands are generally limited by difficulties in identifying big or mixed flocks of birds, due to disturbance and the distance from the flocks.

## 2.6.2 Factors that cause inaccurate counts

The behaviour of some species makes them difficult to count. Snipe and rails, for example, are inclined to skulk in dense vegetation, and a high proportion may be missed by normal counting methods. Some species habitually feed at non-wetland sites; geese, swans, Northern Lapwing and Ruff are conspicuous examples in Asia. Other waterbird species, for example divers and seaducks, e.g. *Gavia*, *Melanitta* and *Somateria* species, spend a great deal of time far out at sea beyond the range of telescopes, or, if feeding, remain much of the time below the water surface. At large tidal sites, unless the areas used by roosting waterbirds, particularly shorebirds or waders, are known, birds are easily missed at high tide. If the roosts are known and accessible, however, high tide (or during the incoming tide) is often the best time to count such sites.

Migratory waterbirds pass through many wetlands *en route* to their breeding or non-breeding (wintering) grounds and although, as a result of this turnover, the number of birds present at any one time may never exceed 20,000 birds or 1% of a population the wetland may still be supporting internationally important numbers of birds. Davidson *et al.* (1991) reviewed the question of turnover at individual estuaries in Britain and concluded that, “in general, a larger, and sometimes a very much larger, proportion of each waterfowl population than is apparent at any one time depends on each estuary in the network used during the non-breeding season”. And that, “Overall the implication is that many estuaries which fall below the 1% criterion on the basis of peak monthly counts alone, in reality support more than 1% of the relevant populations during the course of a year and so will qualify as nationally or internationally important”. One reason why IWC concentrates on counts made in the month of January is to minimise the effects on the counts of turnover, since this is the time of least between-site movement by most waterbird species in the northern latitudes. Close international synchronisation of counts also ensures that the effects of turnover are minimised.

On a national level, organisers and observers decide which sites to count on the basis of their perceived importance for waterbirds and on practical factors such as accessibility. Inaccessible sites and those which are perceived to be unimportant for waterbirds thus produce an unknown element in the national waterbird totals each season. Moser (1987) was able to calculate upward revisions of most species of shorebird spending the non-breeding period in the UK following a major survey which covered almost the entire coastline. Similar analysis of calculating waterbird numbers based on complete counts of wetlands in countries in Asia would be useful in order to provide more realistic population estimates. Achieving such comprehensive coverage would require much larger networks of participants in most countries; unless extra efforts to build local capacity are greatly strengthened and the resource base to support surveys of all wetlands is secured is unlikely that such a target could be met within the next decade.

These factors mean that counts may be under-estimates of the number of birds using a site, and this is why maximum counts are often used when assessing the importance of a site or the size of a waterbird population. Factors causing under-estimation can often be assumed to be constant over a range of sites and years, so that while under-estimates may occur, comparisons between sites and years usually remain valid.

The movement of birds in different time periods during the northern winter period between December and February (the rationale for extending the count period is explained in section 2.2) and in different tidal conditions may cause double counting, and may result in over-estimation of the total number of some waterbird species in a country. For example, the 66,009 Swan Geese recorded in Poyang Lake in Jiang Xi Province in China at the end of December (Ji *et al.* 2004) had decreased to 29,378 in the late-January/early February count (Barter *et al.* 2004) and it is considered likely that the bulk of the remaining birds may have moved into the neighbouring Anhui Province, to the Anqingyanjiang Nature Reserve and Shengjin Hu, where a total of 31,197 Swan Geese were recorded at the same time (Barter *et al.* 2004).

### 2.6.3 Delimitation of site boundaries

Another factor which can cause problems when interpreting waterbird count data is the delimitation of site boundaries. Sites such as large lakes and estuaries are usually self-contained and have fairly obvious physical boundaries, but in some areas the best boundaries to use are not clear-cut. Vinogradov (1996) described an immense network of wetlands in Siberia where the delimitation of 'sites' is not very meaningful. This is an extreme example, but rivers, stretches of open coast, and groups of small lakes are more frequently encountered examples of the type of area where site boundaries may be difficult to define. Coverage of these sites may not have been the same in different years, but it can be difficult to discern at what point in time changes in coverage occurred. Political boundaries often follow rivers and lakes, and this can complicate organisation and reporting of counts at the sites affected, resulting in partial or disjointed coverage, or double counting. The encouragement of mapping and careful keeping of records of count site boundaries have in recent years led to improvements in site definition which will continue in future. A need still exists to establish and maintain inventories (including detailed maps) of the geographical units that form the basis of every national waterbird monitoring scheme.

Inconsistent use of site names by counters can lead to the loss of valuable data. Changes in counters and organisers and transliterations into English from other languages and scripts can result in the site appearing several times in the database under slightly different names. It is incumbent on participants and coordinators to ensure consistency in use of site names. For the purpose of this report, the authors have attempted to identify such sites in consultation with coordinators.

The problems with obtaining consistent site coverage and consistent site definition are the most important threats to the scientific quality of the IWC data. Wetlands International is developing plans to further extend and standardise the geographical coverage and improve the data management, for instance through use of a GIS.

## 2.7 Methods used in the analyses

### 2.7.1 Species and site totals

Species totals have been used to analyse the total population of each species of each country and region. To summarise the count totals, data collected in January were used in the vast majority of cases, but occasionally only data from December and February were available. In these cases counts from December and February are included in the results.

Site totals have been used for identification of internationally important wetlands for waterbirds based on Criterion 5 ( $\geq 20,000$  waterbirds) of the Ramsar Convention. As the AWC is carried out during January, the middle of the northern winter, some sites that are very important in the migration period and breeding season but less important in January might be undervalued if AWC data alone are used.

Internationally important sites that meet the 1% criterion for a waterbird population (based on *Waterbird Population Estimates – Fourth Edition* (Wetlands International 2006)) have been identified for each country in order to support efforts to have these sites nominated under the Ramsar Convention based on Criterion 6 (regularly supports 1% of the individuals in a population of one species or subspecies of waterbird) (section 3.6).

### 2.7.2 Coverage and distribution maps

Maps of AWC site coverage and species distribution are presented to illustrate information collected during the annual counts. For most sites, geographical (central) coordinates are included in the database and have been used for plotting count results on maps using a mapping programme. However, for those sites for which coordinates are not available, it is not possible to plot information on a map. The site coverage maps are produced to show which sites were counted in 2002, 2003 and 2004. The dots on the species distribution maps represent the maximum count at each site over the 3-year period. Thus, the maps show a 'maximum' distribution, without specific information on distribution and numbers at a site in separate years.

On all the maps, countries within the region with data available from 2002 to 2004 are shown in grey, countries with no data available from 2002 to 2004 are in light grey, and coastal waters and marine areas are in white.



### **2.7.3 Information on uses of and threats to wetlands**

Data on uses and threats at sites were collected on the standardised AWC Count Forms; this information is presented in the country tables. A summary of the uses and threats reported at wetlands is also provided in the text relating to each country/region.

## 3. Results

### 3.1 Overview

#### 3.1.1 Geographic and site coverage

Since the AWC began in 1987, a total of over 6,100 sites in 27 countries have been counted at least once. During 2002–2004, a total of 22 countries participated in the census and 2,032 sites were covered at least once (Figures 3, 4 and Table 1); data were received from Maldives and Macao for the first time. Of the sites covered, 79 have been designated as internationally important sites under the Ramsar Convention (as at 31 December 2006), 36 as Migratory Waterbird Network Sites in the East Asian – Australasian Flyway (as at 31 December 2006), four were UNESCO World Heritage Sites, six were UNESCO MAB (Man and the Biosphere Programme) Reserves and 280 were Important Bird Areas (IBAs) (BirdLife International 2004, 2005) (Table 2).

**Table 1: Total numbers of sites counted for the AWC, 1987–2004**

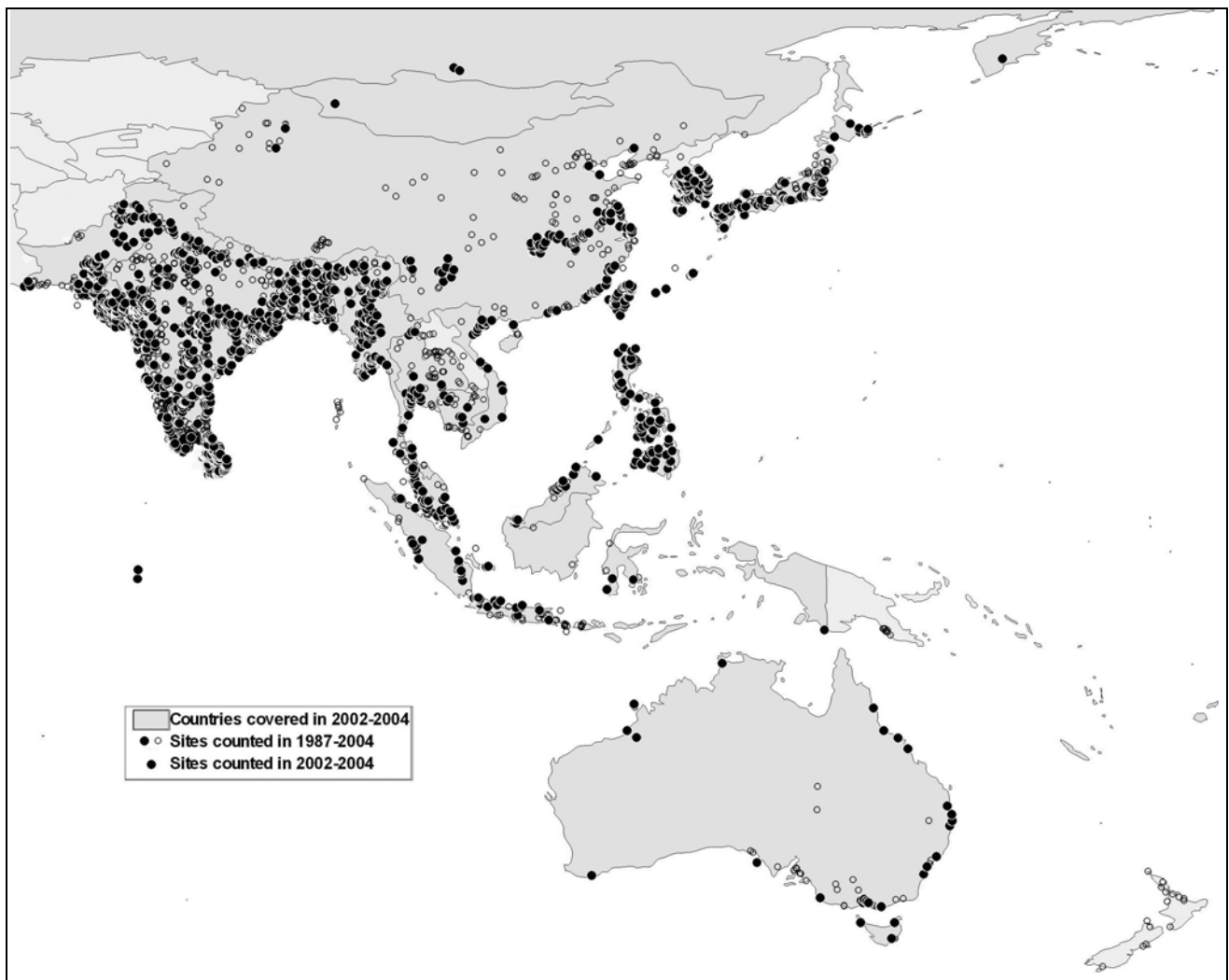
Country	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total 02–04	Total 87–04	
Bangladesh	8	12	22	19	35	59	57	40	34	46	6	25	12	13	29	33	30	42	61	192	
Bhutan														18	3	6				6	18
India	181	427	625	643	780	784	722	981	576	574	34	65	176	17	193	341	549	407	904	3,227	
Maldives																			2	2	2
Nepal	8	11	2	10	8	15	12	7	12	4				11	8	3	3	9	11	41	
Pakistan	65	141	186	140	175	254	264	33	32	15	42	37	42	42	55	68	87	23	109	535	
Sri Lanka	67	99	109	115	105	67	64	58	53	42	44	67	53	61	37	67	66	65	112	367	
<b>South Asia</b>	<b>329</b>	<b>690</b>	<b>944</b>	<b>927</b>	<b>1,103</b>	<b>1,179</b>	<b>1,119</b>	<b>1,119</b>	<b>707</b>	<b>681</b>	<b>126</b>	<b>194</b>	<b>283</b>	<b>162</b>	<b>325</b>	<b>518</b>	<b>735</b>	<b>548</b>	<b>1,205</b>	<b>4,382</b>	
Brunei Darussalam				4	4			4	4	4	4	5	5				9			9	13
Cambodia								10						12	12	11	5	1	6	7	30
Indonesia			1	19	8	17	18	15	19	16				47	12	10	40	34	14	69	200
Lao PDR			2	4	5	3	2	1						14	1						23
Malaysia			69	78	105	92	17	10	7	10				20	25	25	25	43	42	61	217
Myanmar	5	3	12	17	16	21	21	14	13	3	4	2		10	33	49	75	24	114	166	
Philippines				21	25	37	41	49		40	29	32	35	46	40	48	50	60	72	127	
Singapore				4	12	17	16	13	15	10	10	6	11	10	10	1	9	9	10	22	
Thailand	9	3	21	26	12	23	16	18	5	9	3	1		7	3	9	27	21	49	121	
Timor Leste						1															1
Vietnam			2	2		1	4		1	1		1	8	2	2	16	4	4	17	28	
<b>Southeast Asia</b>	<b>14</b>	<b>6</b>	<b>107</b>	<b>175</b>	<b>187</b>	<b>212</b>	<b>149</b>	<b>124</b>	<b>64</b>	<b>93</b>	<b>51</b>	<b>47</b>	<b>133</b>	<b>138</b>	<b>135</b>	<b>202</b>	<b>243</b>	<b>180</b>	<b>408</b>	<b>948</b>	
China																					
Mainland	1	36	12	62	69	76	30	7	14	6	12	18	17	11	7	18	43	72	95	266	
Hong Kong	1	1	1	1	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Macao																	1	1	1	1	1
Taiwan			32	28	32	34		33	30	38	38	40	52	38	40	33	23	33	42	77	
Japan*			53	39	53	47	22	50	40	47	37	41	37	108	112	101	107	95	122	203	
DPR Korea																					
Republic of Korea		11	12	23	20	10	15	10	23	26	22	15	69	100	112	118	113	115	121	166	
Mongolia														1			1		1	1	1
Eastern Russia											2	1	2	1	1	2	1	2	3	4	4
<b>East Asia</b>	<b>2</b>	<b>48</b>	<b>110</b>	<b>153</b>	<b>176</b>	<b>169</b>	<b>70</b>	<b>103</b>	<b>110</b>	<b>120</b>	<b>114</b>	<b>118</b>	<b>180</b>	<b>262</b>	<b>275</b>	<b>276</b>	<b>292</b>	<b>321</b>	<b>388</b>	<b>721</b>	
Australia				16	19	20	21	31	28	23	26	27	28	34	29	29	26	31	58		58
New Zealand						20	20														24
Papua New Guinea				8	8	7		6													11
<b>Australasia</b>				<b>8</b>	<b>24</b>	<b>46</b>	<b>40</b>	<b>27</b>	<b>31</b>	<b>28</b>	<b>23</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>34</b>	<b>29</b>	<b>29</b>	<b>26</b>	<b>31</b>	<b>93</b>	
<b>Total No. of Sites</b>	<b>345</b>	<b>744</b>	<b>1,161</b>	<b>1,263</b>	<b>1,490</b>	<b>1,606</b>	<b>1,378</b>	<b>1,373</b>	<b>912</b>	<b>922</b>	<b>314</b>	<b>385</b>	<b>623</b>	<b>590</b>	<b>769</b>	<b>1,025</b>	<b>1,299</b>	<b>1,075</b>	<b>2,032</b>	<b>6,144</b>	

#### Notes:

- The number of sites presented in this table may differ from the number presented in earlier reports. The figures in this table represent the number of sites actually recorded on the AWC database. Some sites may have been combined into larger sites for standardisation. A small number of site counts have unfortunately been misplaced.
- Japan\* – Annual count data were received from a small number of selected wetland sites for all waterbird species during 1989–2004; the increase in site numbers during 2000–2004 related to the addition of the shorebird count. Totals for Anatidae and cranes were received during 2002–2004 (see section 3.4.3), but no site details were provided.

**Figure 3: Sites covered by the AWC, 1987–2004**

Geographical coordinates were unavailable for 1,100 sites during the period 1987–2004: for the period 2002–2004 coordinates were unavailable for 110 sites.



Total numbers of waterbirds counted (including subspecies, birds not identified to the species level and non-native species) were 7,964,568 (1,025 sites), 7,763,834 (1,299 sites) and 7,934,809 (1,075 sites) in 2002, 2003 and 2004 respectively. However, inadequate consistency of annual site coverage and lack of annual coverage of some sites that normally hold large numbers of waterbirds were noted in several countries. Of the total of 2,032 sites surveyed in 2002–2004, only 463 sites (22.8%) were covered in all three years; in India, only 90 (10%) of the 904 sites surveyed during 2002–2004 were covered in all three years. Chilika Lake in India was counted in all three years, with a large difference in the numbers recorded in 2002 (1,349,587), 2003 (482,366) and 2004 (773,649); no clear reason was provided for the large variation at this important site.

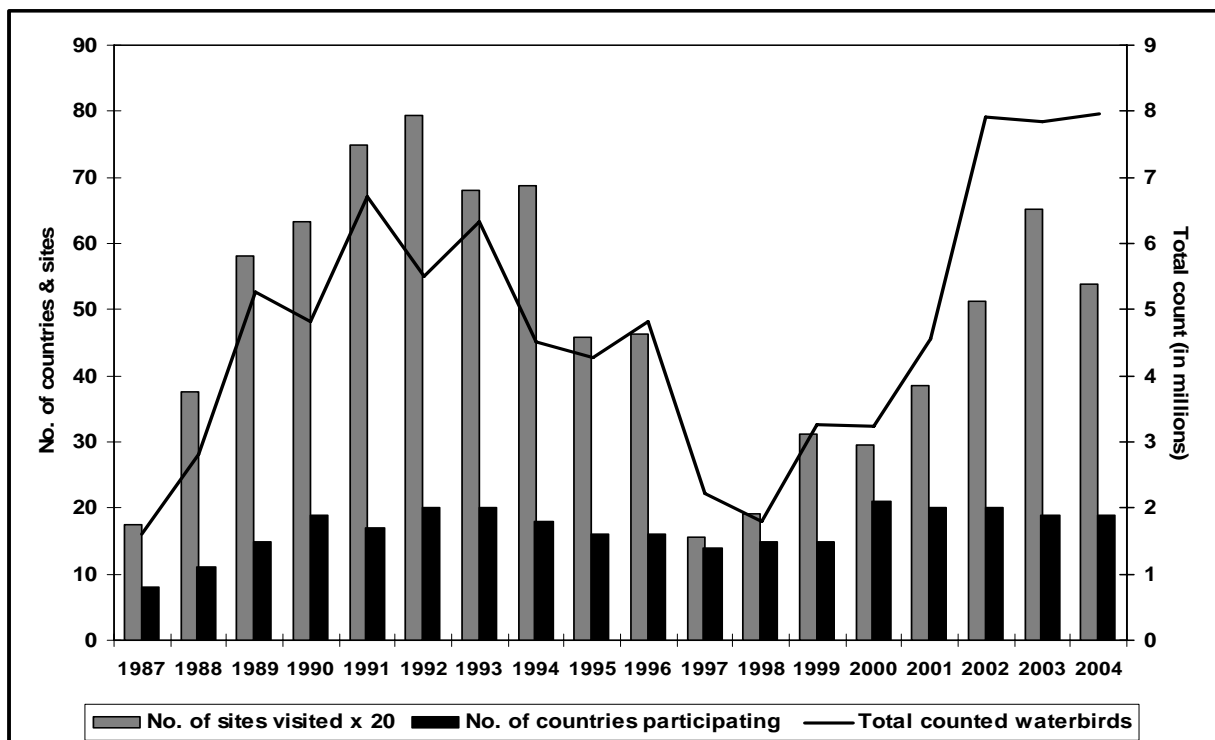
The level of development of the AWC differs in each country and region and, along with this coverage of sites also varies. Coverage and count results in Bangladesh, Sri Lanka, Malaysia, the Philippines, Singapore, Hong Kong, Taiwan, Japan, Republic of Korea and Australia during this period were generally very good. Coverage in Pakistan, Indonesia, Myanmar, Thailand and mainland China has increased substantially compared to the number of sites surveyed during the 1997–2001 period. While an increase is also reflected in information received from India during this period, the number of sites covered in India in the last decade is smaller than the nearly 1,000 sites covered in 1994, which was achieved when a large number of very small sites were also counted by a larger network of participants.

Table 2: Summary of sites surveyed in AWC 2002–2004 in the Asia-Pacific region

Country	AWC Sites in 2002–2004	Ramsar Sites	World Heritage Sites	MAB Reserves	Important Bird Areas*	EAAF Waterbird Network Sites	Sites with > 20,000 Waterbirds	No. of Sites Meeting >1% Criterion
Bangladesh	61	2	1		8		5	22
Bhutan	6				1			1
India	904	11	1		63		43	172
Maldives	2							
Nepal	11	2	1		3			3
Pakistan	109	16			23		5	18
Sri Lanka	112	2			13		6	23
<b>South Asia</b>	<b>1,205</b>	<b>33</b>	<b>3</b>		<b>111</b>		<b>59</b>	<b>239</b>
Brunei	9				3			
Cambodia	7		1	1	5		1	2
Indonesia	69	1			6			3
Malaysia	61	1			7	1		8
Myanmar	114	1			11		1	17
Philippines	72	3			10	2		22
Singapore	10				2	1		
Thailand	49	3			8	1	2	8
Vietnam	17	2		2	6			2
<b>Southeast Asia</b>	<b>408</b>	<b>11</b>	<b>1</b>	<b>3</b>	<b>58</b>	<b>5</b>	<b>4</b>	<b>62</b>
China								
Mainland	95	12		1	23	9	7	38
Hong Kong	3	1			1	1	1	1
Macao	1				1			1
Taiwan	42				18			12
Japan	122	12			37	12	5	27
Republic of Korea	121	2		1	28	4	12	54
Mongolia	1	1			1			
Eastern Russia	3				2			
<b>East Asia</b>	<b>388</b>	<b>28</b>		<b>2</b>	<b>111</b>	<b>26</b>	<b>25</b>	<b>133</b>
<b>Australia</b>	<b>31</b>	<b>7</b>		<b>1</b>	<b>*</b>	<b>5</b>	<b>8</b>	<b>20</b>
<b>Total</b>	<b>2,032</b>	<b>79</b>	<b>4</b>	<b>6</b>	<b>280</b>	<b>36</b>	<b>96</b>	<b>454</b>

Note: \* IBAs of Australia are being compiled by Birds Australia.

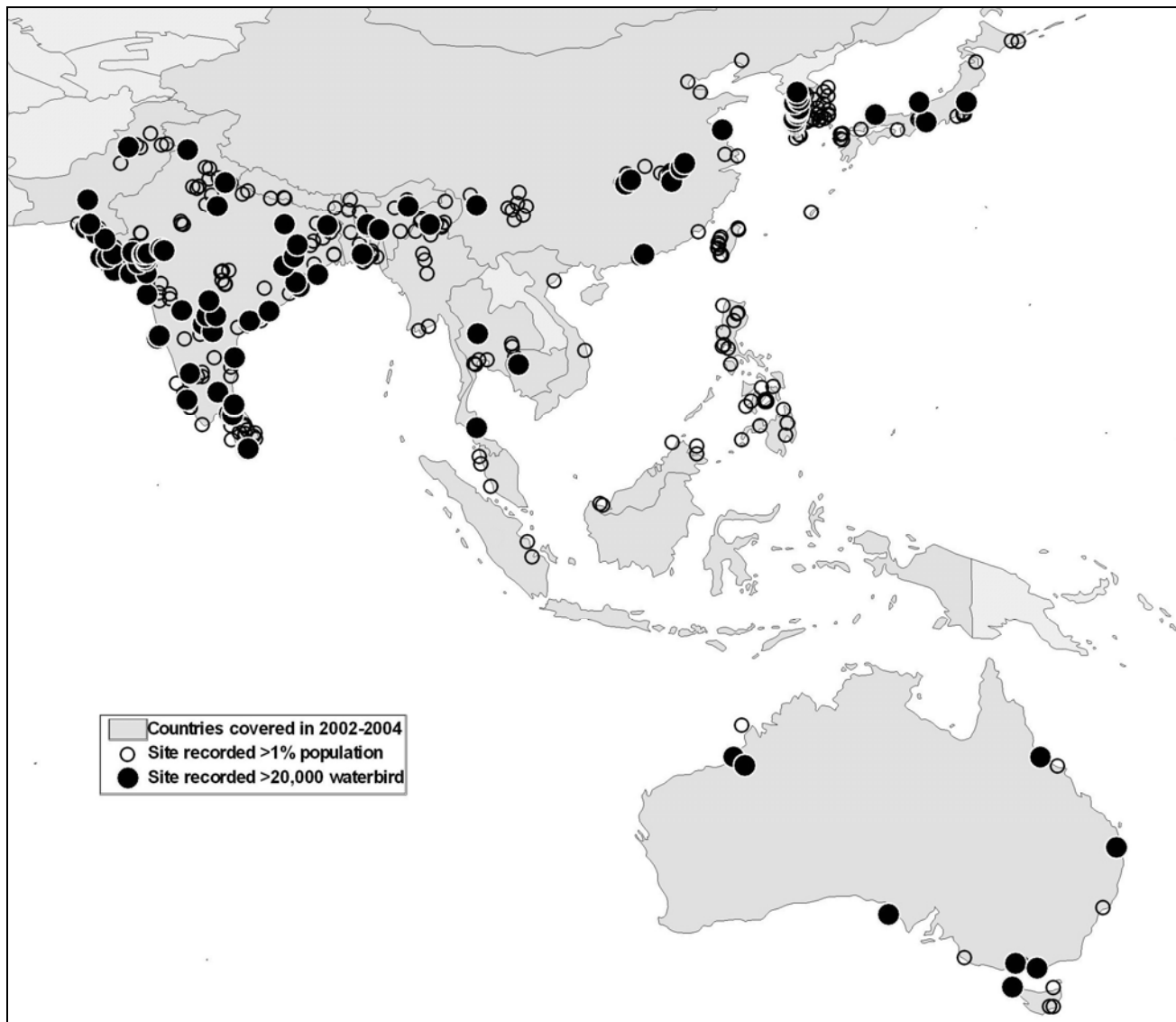
Figure 4: Number of countries and sites covered by the AWC and total numbers of waterbirds counted, 1987–2004



### 3.1.2 Internationally important waterbird sites

A total of 459 sites meet two criteria for international importance (Figure 5 and Table 3), however only 10% (45 sites) of these sites have been nominated as Ramsar sites. Ninety-six sites, about 4.7% of the total number covered, have been reported each to support more than 20,000 birds, however of these sites only 22% (21 sites) have been nominated as Ramsar sites. Four hundred and fifty-four sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

**Figure 5: Location of sites meeting international importance criteria during the AWC, 2002–2004**



**Table 3: List of internationally important sites surveyed for AWC 2002–2004 in the Asia-Pacific region**

Country	Region	Site Name	Coordinates	No. of Species Meeting 1% Criteria	>20,000 Waterbirds Recorded	Status*
Australia	New South Wales	Hunter Estuary	S32°50', E152°00'	2		R,S
Australia	Queensland	Bowen	S20°00', E148°14'	5		
Australia	Queensland	Moreton Bay	S27°15', E153°06'	8	YES	R,S
Australia	Queensland	Townsville	S19°15', E146°49'	7	YES	
Australia	South Australia	South East Coast – South Australia	S37°40', E140°30'	1		
Australia	South Australia	Western Eyre Peninsula	S33°30', E134°15'	7	YES	
Australia	Tasmania	Cape Portland	S40°45', E147°52'	1		

## Results

Country	Region	Site Name	Coordinates	No. of Species Meeting 1% Criteria	>20,000 Waterbirds Recorded	Status*
Australia	Tasmania	East Derwent (Pittwater)	S42°48', E147°35'	2		pR
Australia	Tasmania	Marion Bay	S42°48', E147°53'	1		
Australia	Tasmania	Tasmania – North West Coast	S40°45', E144°30'	6	YES	
Australia	Victoria	Altona	S37°52', E144°51'	1		
Australia	Victoria	Bellarine Peninsula	S38°16', E144°46'	3	YES	
Australia	Victoria	Corner Inlet East	S38°45', E146°31'	6	YES	R,S
Australia	Victoria	Corner Inlet West	S38°45', E146°33'	2		
Australia	Victoria	Eastern Port Phillip	S38°05', E145°05'	1		R,S
Australia	Victoria	Werribee	S38°02', E144°32'	4		
Australia	Victoria	Westernport Bay	S38°15', E145°17'	4		R,S,pM
Australia	Western Australia	Eighty Mile Beach	S19°14', E121°25'	12	YES	R
Australia	Western Australia	Broome	S19°58', E122°20'	9	YES	
Australia	Western Australia	Swan River	S16°31', E122°04'	1		
Bangladesh	Barisal	Banger Char	N22°39', E090°44'	1		
Bangladesh	Barisal	Doba Char	N22°38', E090°50'	1		
Bangladesh	Barisal	Gazipur Char	N22°46', E090°40'	4		
Bangladesh	Barisal	Kalkiny Char	N21°50', E090°49'	1		
Bangladesh	Barisal	Kazir Char	N22°44', E090°31'	1		
Bangladesh	Barisal	Mudflat in East of Moulovir Char	N22°26', E091°28'	1		
Bangladesh	Barisal	Shahjalal Char	N21°52', E090°46'	1		
Bangladesh	Barisal	Tagrar Char	N22°32', E090°40'	4	YES	
Bangladesh	Barisal	Urir Char	N22°35', E091°24'	2		
Bangladesh	Chittagong	Jahajmara	N22°04', E091°01'	1		
Bangladesh	Chittagong	Muhuri Dam	N22°50', E091°28'	1		I
Bangladesh	Chittagong	Patenga Beach	N22°18', E091°52'	1		I
Bangladesh	Dhaka	Dighirpar	N23°25', E090°27'	1		
Bangladesh	Rajshahi	Sirajganj (Jamuna River)	N24°29', E089°44'	1		
Bangladesh	Sylhet	Aila Beel	N24°53', E091°13'	4	YES	I
Bangladesh	Sylhet	Chatidhara Beel	N24°59', E091°08'	1	YES	
Bangladesh	Sylhet	Hakaluki Haors	N24°40', E092°05'	2	YES	I
Bangladesh	Sylhet	Pana Beel	N25°07', E091°06'	1		
Bangladesh	Sylhet	Pashua Haor	N25°02', E091°05'	1		
Bangladesh	Sylhet	Rowa Beel	N25°08', E091°06'	1		
Bangladesh	Sylhet	Shonir Haor	N25°02', E091°09'	1		
Bangladesh	Sylhet	Tanqua Haor Complex	N25°08', E091°06'	13	YES	R,I
Bhutan	Thimphu	Babesa Sewerage Station	N27°26', E089°40'	1		
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	N13°47', E103°18'	9		I
Cambodia	Battambang	Prek Toal	N13°08', E103°38'	9	YES	I
China	Mainland, Anhui	Anqingyanjiang NR: Baidang Hu	N30°47', E117°22'	3	YES	I,S
China	Mainland, Anhui	Anqingyanjiang NR: Bo Hu	N30°10', E116°30'	4		
China	Mainland, Anhui	Anqingyanjiang NR: Caizi Hu	N30°49', E117°05'	6		
China	Mainland, Anhui	Anqingyanjiang NR: Dagan Hu	N30°05', E116°17'	2		
China	Mainland, Anhui	Anqingyanjiang NR: Fengsha Hu	N30°55', E117°36'	2		
China	Mainland, Anhui	Anqingyanjiang NR: Huang Hu	N30°01', E116°29'	1		
China	Mainland, Anhui	Anqingyanjiang NR: Long Gan Hu	N30°08', E116°12'	1		
China	Mainland, Anhui	Anqingyanjiang NR: Qili He	N30°32', E116°58'	1		
China	Mainland, Anhui	Anqingyanjiang NR: Wuchang Hu	N30°17', E116°42'	4		
China	Mainland, Anhui	Sheng Jin Hu NR	N30°21', E117°05'	9	YES	I,C,S
China	Mainland, Guizhou	Caohai NR	N26°50', E104°15'	4		I,C
China	Mainland, Hubei	Changjiangudao Baijitan NR	N29°50', E112°35'	1		
China	Mainland, Hubei	Chen Hu NR	N30°31', E114°05'	5		I
China	Mainland, Hubei	Long Gan Hu	N29°50', E116°08'	1		I
China	Mainland, Hubei	Tian Er Zhou Milu NR	N29°48', E112°33'	1		I
China	Mainland, Hubei	Wang Hu And Supo Hu	N29°52', E115°22'	3		
China	Mainland, Hunan	East Dongting Lake NR	N29°15', E112°55'	14	YES	R,I
China	Mainland, Hunan	Heng Ling Hu – He Ye Hu	N28°50', E112°42'	2		
China	Mainland, Hunan	Kongjia Hu	N28°51', E112°13'	1		
China	Mainland, Hunan	South Dongting Lake NR	N28°50', E112°30'	4	YES	R
China	Mainland, Hunan	Taibai Hu	N29°03', E112°09'	1		
China	Mainland, Hunan	West Dongting Lake NR	N29°01', E112°05'	3		R
China	Mainland, Jiangsu	Shang Hu	N31°39', E120°41'	1		
China	Mainland, Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	N34°00', E120°30'	11	YES	R,I,C,S,M
China	Mainland, Jiangxi	Poyang Lake	N29°05', E116°17'	21	YES	R,I,C
China	Mainland, Jiangxi	Sai Cheng Hu	N29°40', E115°50'	4		
China	Mainland, Liaoning	Shuangtai Hekou NR	N41°05', E122°05'	1		R,I,C,S
China	Mainland, Shandong	Yellow River Delta NR	N37°45', E118°40'	1		I,C,S
China	Mainland, Shanghai	Chongming Island NR	N31°30', E121°45'	2		R,I,S
China	Mainland, Tianjin	Tianjin Haibin Yuchang Fish Farm	N38°50', E117°37'	1		
China	Mainland, Yunnan	Dashanbao NR	N26°00', E104°00'	1		R,I,C

Country	Region	Site Name	Coordinates	No. of Species Meeting 1% Criteria	>20,000 Waterbirds Recorded	Status*
China	Mainland, Yunnan	Huize County	N26°30', E103°05'	4		I
China	Mainland, Yunnan	Lashihai Lake NR	N26°53', E100°09'	3	YES	R,I
China	Mainland, Yunnan	Ludian County	N27°05', E103°30'	1		
China	Mainland, Yunnan	Napahai NR	N27°52', E099°38'	3		R,I
China	Mainland, Yunnan	Qiaojia County	N26°40', E102°45'	1		
China	Mainland, Yunnan	Xundian County	N25°34', E103°15'	2		
China	Mainland, Yunnan	Yongshan County	N28°05', E103°40'	1		
China	Hong Kong	Deep Bay	N22°32', E114°00'	10	YES	R,I,A,S
China	Macao	Taipa – Coloane Mudflat	N22°12', E113°33'	1		I
China	Taiwan Changhua	Han-Pao	N24°03', E120°22'	4		I
China	Taiwan Changhua	Hsi-Kang (Ta Cheng)	N23°51', E120°16'	1		I
China	Taiwan Chiayi	Ao-Ku	N23°31', E120°08'	4		I
China	Taiwan Chiayi	Pu-Tai	N23°21', E120°10'	3		I
China	Taiwan Chinmen	Chin-Men Island	N24°30', E118°30'	2		I
China	Taiwan Ilan	Chu-An	N24°50', E121°48'	2		I
China	Taiwan Ilan	Lan-Yang-Hsi (River)	N24°43', E121°49'	3		I
China	Taiwan Kaohsiung	Feng-Shan Reservoir	N22°33', E120°23'	1		I
China	Taiwan Kaohsiung	Kao-Ping-Hsi (River)	N22°30', E120°20'	2		I
China	Taiwan Pingtung	Tung Kung	N22°27', E120°27'	1		I
China	Taiwan Tainan	Szu-Tsao	N23°03', E120°09'	3		I
China	Taiwan Tainan	Tseng-Wen Hsi (River) / Chi Ku	N23°05', E120°05'	4		I
India	Andhra Pradesh	Anantaram Tank		1		
India	Andhra Pradesh	Chikkadapally		3		
India	Andhra Pradesh	Chinatumbulum Tank	N15°40', E077°15'	4		
India	Andhra Pradesh	Coringa Wildlife Sanctuary	N16°50', E082°17'	3		pl
India	Andhra Pradesh	Kulleru Wetland: Godavari River	N16°47', E081°23'	2	YES	R,I
India	Andhra Pradesh	Kolleru Wetland: Penumaka Lanka	N16°30', E081°05'	4		
India	Andhra Pradesh	Ibrahimpatan Lake	N17°12', E078°35'		YES	
India	Andhra Pradesh	Jamukula – Dinni		1		
India	Andhra Pradesh	Kandukuru	N13°44', E078°25'	1		
India	Andhra Pradesh	Kondakarla Lake	N17°36', E082°59'	3		
India	Andhra Pradesh	Laknapur Project	N17°12', E077°50'		YES	
India	Andhra Pradesh	Manjira Wildlife Sanctuary	N17°36', E082°59'	13	YES	I
India	Andhra Pradesh	Mittakodur Tank	N16°30', E077°30'	2	YES	
India	Andhra Pradesh	Nellapattu Pelican Sanctuary	N13°50', E079°57'	4		I
India	Andhra Pradesh	Nizamsagar Dam	N18°30', E078°00'		YES	
India	Andhra Pradesh	Pulicat Lake Bird Sanctuary	N13°42', E080°08'	4	YES	I
India	Andhra Pradesh	Sangameshwara	N15°53', E078°18'	7	YES	
India	Andhra Pradesh	Somasila Tank		1		
India	Andhra Pradesh	Telineela Puram	N19°07', E084°40'	1		I
India	Andhra Pradesh	Thalamudupi	N15°52', E078°16'	1		
India	Andhra Pradesh	Uppalapadu Water Tank	N16°16', E080°22'	4		I
India	Andhra Pradesh	Velamavari Palwem		1		
India	Assam	Bordoloni	N27°25', E094°23'	1		pl
India	Assam	Chenamari Beel	N26°45', E094°13'	3		
India	Assam	Dhir Beel	N26°17', E090°27'	1		
India	Assam	Kaziranga National Park	N26°40', E093°21'	1		I,W
India	Assam	Kuarbari-Dalani	N27°04', E094°15'	2		I
India	Assam	Kokilamukh	N27°13', E094°28'	1		
India	Assam	Misamari Beel	N26°48', E094°30'	3	YES	
India	Bihar	Vikramshila Ganga Dolphin Sanctuary	N25°17', E086°56'	1		I
India	Delhi/U.P	Yamuna River: Okhla Barrage Bird Sanctuary	N28°40', E077°10'	1		I
India	Goa	Chapora Estuary: Marjim – 'Tembwado' Coastline	N15°18', E073°44'	1	YES	
India	Goa	Curtorim Lake	N15°16', E075°57'	1		
India	Goa	Macasana Tanks	N15°15', E073°59'	2		
India	Goa	Mandovi Estuary	N15°32', E073°53'	2	YES	
India	Gujarat	Amipur Tank	N21°05', E070°10'	5	YES	
India	Gujarat	Boriyala Tank	N22°37', E072°56'	1		
India	Gujarat	Charakla Saltworks	N22°20', E069°05'	2		I
India	Gujarat	Chhari Dhandh	N23°10', E069°45'	2		pl
India	Gujarat	Chhaya Creek (Sewerage)	N21°37', E069°35'	1		
India	Gujarat	Dedadra Talav	N22°42', E071°40'	1		
India	Gujarat	Dev Dam	N23°00', E074°00'	2	YES	
India	Gujarat	Dholi Dhaja Dam	N22°45', E071°40'	1		
India	Gujarat	Great Rann of Kachchh	N23°51', E069°24'	7	YES	
India	Gujarat	Guneli	N22°30', E073°25'	1		
India	Gujarat	Hamirsar Tank	N23°10', E069°45'	1		
India	Gujarat	Hathab (Via Koliyak) – Sea Shore	N21°36', E072°16'	1		
India	Gujarat	Heranj	N22°40', E072°42'	1		

## Results

Country	Region	Site Name	Coordinates	No. of Species Meeting 1% Criteria	>20,000 Waterbirds Recorded	Status*
India	Gujarat	Jafarabad Coast (Salt Works)	N20°50', E071°30'	1	YES	
India	Gujarat	Jamnagar District: Dhrol Taluka wetlands	N22°35', E070°25'	1		
India	Gujarat	Jamnagar District: Dwaraka Taluka wetlands	N22°15', E069°02'	5	YES	
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	N22°30', E070°05'	7	YES	
India	Gujarat	Jamnagar District: Jodiya Taluka wetlands	N22°42', E070°18'	1		
India	Gujarat	Jamnagar District: Kalyanpur Taluka wetlands	N22°10', E069°25'	1		
India	Gujarat	Jamnagar District: Khambhalia Taluka wetlands	N22°12', E069°37'	5	YES	
India	Gujarat	Jesola	N22°30', E073°25'	2		
India	Gujarat	Kabutni Dam	N22°58', E073°56'	1		
India	Gujarat	Kalubhar Dam	N21°45', E072°10'	1		
India	Gujarat	Kanewal	N22°28', E072°32'	2	YES	
India	Gujarat	Karli Dam	N21°37', E069°35'	1		
India	Gujarat	Khirjog	N22°47', E071°30'	1		
India	Gujarat	Korda Sandher	N24°25', E072°20'	1		
India	Gujarat	Krushnakunj Lake	N21°35', E073°05'	2		
India	Gujarat	Kumbharwada Sewage Pond	N21°46', E072°11'	1		
India	Gujarat	Lakhota Lake	N22°30', E070°05'	1		
India	Gujarat	Lambhvel Sewage Pond	N22°35', E072°57'	5	YES	
India	Gujarat	Machhan Nala Dam	N22°50', E074°14'	2		
India	Gujarat	Madhavpura Marsh	N22°45', E072°45'	2		
India	Gujarat	Mahi River Estuary: Sarod 'J' Point	N22°01', E072°45'	1	YES	
India	Gujarat	Medha Creek	N21°37', E069°35'	1		
India	Gujarat	Morva Hadaf Dam (Patangdi)	N22°49', E074°16'	3	YES	
India	Gujarat	Nagarala Pond	N22°53', E074°19'	1		
India	Gujarat	Nagarama Village Pond	N22°37', E072°39'	1		
India	Gujarat	Naika Dam	N22°45', E071°40'	3		
India	Gujarat	Nakti Creek (New Kandla)	N23°10', E070°10'	1		
India	Gujarat	Nani Kakrad	N20°51', E072°50'	3	YES	
India	Gujarat	Narda Tank	N22°30', E073°00'	2		
India	Gujarat	Narmada Main Canal		2		
India	Gujarat	Nava Talao	N23°15', E071°45'	4		
India	Gujarat	New Port Salt pans, Bhavnagar	N21°49', E072°23'	6		
India	Gujarat	Nikol Bandhara	N21°04', E071°50'	2		
India	Gujarat	Nyari-I	N22°09', E070°42'	2		
India	Gujarat	Onchal Lake	N20°46', E072°59'	2		
India	Gujarat	Par	N24°23', E072°21'	2		
India	Gujarat	Pariej	N22°33', E072°38'	3	YES	
India	Gujarat	Phophal-I	N21°45', E070°25'	2		
India	Gujarat	Pipalava Bandhara (Kaj Lake)	N22°15', E072°40'	6	YES	I
India	Gujarat	Ratneshvar Tank	N23°00', E074°06'	1		
India	Gujarat	Sorathi Dam	N21°36', E069°35'	1		
India	Gujarat	Sudamda Ponds	N22°30', E071°28'	2		
India	Gujarat	Tapi River at Surat Causeway	N21°02', E072°52'	1		
India	Gujarat	Timbi Tank	N22°30', E069°30'	1		
India	Gujarat	Veri Dam	N21°09', E070°09'	1		
India	Gujarat	Victor (Bherai) Salt Pans and Coastal Area	N21°43', E072°10'	4	YES	
India	Gujarat	Victor (Bherai) and Sakriya Hanuman Pond	N21°06', E079°37'	2		
India	Gujarat	Whadhvana	N22°42', E071°41'	2	YES	
India	Haryana	Basai Wetlands	N28°29', E076°59'	1		I
India	Haryana	Bhindawas Lake Bird Sanctuary	N28°37', E076°40'	1		I
India	Himachal Pradesh	Pong Dam Bird Sanctuary	N32°04', E076°13'	9	YES	R,I
India	Jharkhand	Roka Lake	N23°21', E085°19'	1	YES	
India	Karnataka	Byramangala Reservoir	N12°30', E077°26'	1		
India	Karnataka	Dadada Halli Tank	N12°12', E076°38'	1		
India	Karnataka	Hadinarli	N12°10', E076°45'	1		
India	Karnataka	Kallur Tank	N12°09', E077°03'	1		
India	Karnataka	Karigala Tank	N12°08', E077°25'	1		
India	Karnataka	Krishna River – Karnataka	N16°21', E077°24'	1		
India	Karnataka	Krishnaraja Sagar Reservoir	N12°24', E076°25'	1	YES	I
India	Karnataka	Kunthur Tank	N12°08', E077°02'	1		
India	Kerala	Kattampally	N11°35', E075°20'	1		I
India	Kerala	Kole Wetlands	N10°12', E076°10'	9	YES	I
India	Kerala	Purathur (Bharatapuza) Estuary	N10°46', E075°56'	1		
India	Kerala	Vembanad: Kumarakom Tourist Complex	N09°36', E076°26'	1		
India	Kerala	Vembanad: Thollairam Kayal	N09°33', E076°25'	1		
India	Kerala	Vembanad: Vembanad Lake	N09°35', E076°25'	1		R,I
India	Maharashtra	Ambazari Reservoir	N21°00', E079°00'	1		
India	Maharashtra	Ashband	N19°55', E079°20'	1		
India	Maharashtra	Asolamendha Tank	N19°57', E079°17'	1		



Country	Region	Site Name	Coordinates	No. of Species Meeting 1% Criteria	>20,000 Waterbirds Recorded	Status*
India	Maharashtra	Chargaon Lake	N20°15', E079°05'	1		
India	Maharashtra	Hipparga Tank	N17°40', E075°45'	3	YES	
India	Maharashtra	Irai Dam	N19°58', E079°20'	1		
India	Maharashtra	Kangaon-Nangaon	N18°32', E073°52'	4		
India	Maharashtra	Nandur Madhameshwar Wildlife Sanctuary	N20°00', E074°01'	4		I
India	Maharashtra	Pedgaon (Bhima River)	N19°05', E074°44'	2		
India	Maharashtra	Pipriya Lake, Pench Tiger Project	N21°00', E079°03'	1		
India	Maharashtra	Sewree Jetty	N19°01', E072°52'	4	YES	
India	Maharashtra	Shimpore – Khed		2		
India	Maharashtra	Thane Creek (Thane-Ulhas Estuary)	N19°10', E073°50'	1		I
India	Maharashtra	Visapur Tank	N18°41', E074°44'	1		
India	Maharashtra	Wadgaon	N21°04', E079°06'	1		
India	Manipur	Ithai Wapokpi – Nongma Ikhong	N24°34', E093°49'	1		
India	Manipur	Logtak Lake	N24°35', E093°50'	1		R,I
India	Orissa	Bhitarkanika Mangrove	N20°45', E087°00'	16	YES	R,I
India	Orissa	Chilika Lake	N19°42', E085°28'	54	YES	R,I
India	Orissa	Denua	N19°48', E085°50'	1		
India	Orissa	Ekamrakanan Tank	N20°12', E084°55'	1		
India	Orissa	Harabhangi	N25°10', E084°15'	8	YES	
India	Orissa	Hirakud Reservoir	N21°30', E084°10'	13	YES	
India	Orissa	Kalo Reservoir	N21°40', E086°41'	1		
India	Orissa	Kamarkhunti Dam	N20°20', E085°32'	1		
India	Orissa	Mandira Reservoir	N22°25', E084°60'	1		
India	Orissa	Mukutmonipur		2		
India	Orissa	Pampalo	N20°04', E085°10'	1	YES	
India	Orissa	Rengali	N22°16', E085°02'	4	YES	
India	Orissa	Sundar Dam	N19°35', E082°35'	1		
India	Rajasthan	Bardha Dam	N25°27', E075°39'	1		I
India	Rajasthan	Kishore Sagar	N25°09', E075°52'	1		
India	Rajasthan	Vardha Dam	N25°14', E075°42'	3		
India	Tamil Nadu	Andi Odai Tank	N10°58', E078°55'	1		
India	Tamil Nadu	Kaliveli Tank	N12°10', E079°50'	1		pl
India	Tamil Nadu	Karavetty Tank	N10°50', E078°45'	5	YES	I
India	Tamil Nadu	Koonthankulam Bird Sanctuary	N08°28', E077°44'	1		I
India	Tamil Nadu	Suchindram Tank	N08°09', E077°27'	1		I
India	Tamil Nadu	Tenneri Tanks	N12°55', E079°50'	1		
India	Uttar Pradesh	Ashpan	N27°52', E078°12'	1		
India	Uttar Pradesh	Baadi Taal	N27°57', E080°46'	1		
India	Uttar Pradesh	Katernia Ghat Sanctuary	N28°14', E081°11'	2		I
India	Uttar Pradesh	Nanakmata Reservoir	N28°57', E079°50'	2		I
India	Uttar Pradesh	National Chambal Wildlife Sanctuary	N26°49', E078°41'	5	YES	I
India	Uttar Pradesh	Pili Dam	N29°22', E078°00'	1		
India	Uttar Pradesh	Sur Sarovar Bird Sanctuary	N27°00', E077°45'	4		I
India	Uttarakhand	Asan Barrage	N30°26', E077°42'	2		I
India	Uttarakhand	Baur Reservoir	N29°00', E079°10'	1		
India	Uttarakhand	Dehra Dun	N30°19', E078°02'	1		
India	Uttarakhand	Hariपुरa Reservoir	N29°00', E079°20'	1	YES	
India	Uttarakhand	Tumeria Dam	N29°27', E078°46'	1		
India	West Bengal	Alipore Zoological Gardens	N22°32', E088°20'	1		
India	West Bengal	Baghar Beel	N24°27', E088°03'	1		
India	West Bengal	Ballavpur Wildlife Sanctuary	N22°30', E088°20'	1		
India	West Bengal	Farakka Barrage (Ganges River)	N25°05', E087°48'	6	YES	I
India	West Bengal	Gajaldoba Teesta Barrage	N26°40', E088°25'	1		
India	West Bengal	Naya Bandh Bill	N24°55', E088°19'	1		I
India	West Bengal	Panchet Dam	N23°40', E086°40'	1		
India	West Bengal	Saheb Bandh	N23°20', E086°22'	1		
India	West Bengal	Satbeki Bill	N26°29', E089°32'	1		
India	West Bengal	Tilpara Barrage	N23°58', E087°26'	1		
Indonesia	Jambi	Berbak National Park	S01°23', E104°20'	2		pR,I
Indonesia	Jambi	Sungai Cemara Beach	S01°05', E101°40'	2		I
Indonesia	Sumatra South	Banyuasin Delta	S02°37', E104°45'	1		I
Japan	Aichi	Kiso River Mouth	N35°04', E136°40'	3		
Japan	Aichi	Shio Kawa Tideland	N34°42', E137°17'	1		I
Japan	Aichi	Toyokawa River Mouth	N34°46', E137°23'	1	YES	
Japan	Aichi	Uno Pond	N34°48', E136°53'	1		
Japan	Aomori	Ogawara Lake	N40°56', E141°28'	2		pl
Japan	Chiba	Banzu	N35°20', E139°55'	1		pl
Japan	Chiba	Iioka Kaigan	N35°42', E140°27'	1		
Japan	Chiba	Magame-Gawa, Sakuda-Gawa	N35°31', E140°27'	1		

Results

Country	Region	Site Name	Coordinates	No. of Species Meeting 1% Criteria	>20,000 Waterbirds Recorded	Status*
Japan	Chiba	Sakuda-Gawa, Kido-Gawa	N35°33', E140°30'	1		
Japan	Fukuoka	East Region of Ariake Sea	N33°05', E130°25'	1		pl
Japan	Fukuoka	East Region of Hakata Bay	N33°35', E130°20'	2		pl
Japan	Fukuoka	Imazu	N33°36', E130°15'	2		
Japan	Fukuoka	Wajiro Higata	N33°41', E130°25'	1		
Japan	Gifu	Nagara River	N35°16', E136°48'	1		R
Japan	Hokkaido	Kushiro Marsh and surrounding Rivers	N43°10', E144°25'	1		R,I,A,C
Japan	Hokkaido	Kushiro: Akkeshi Lake	N43°09', E144°59'	1		
Japan	Ibaragi	Kitaura	N36°12', E140°40'	1		
Japan	Ibaraki	Kasumigaura	N36°45', E140°41'	5	YES	I
Japan	Ishikawa	Kahokugata	N36°44', E136°47'	3	YES	I
Japan	Ishikawa	Takamatsu, Kahoku Kaigan	N36°45', E136°44'	1		
Japan	Okinawa	Awase Higata	N26°18', E127°49'	1		I
Japan	Okinawa	Hiyagon Shicchi	N26°18', E127°49'	1		
Japan	Osaka	Yodogawa River	N34°00', E135°00'	2		
Japan	Saga	Daijugarami	N33°10', E130°16'	1		
Japan	Shimane	Shinji Lake	N35°32', E133°04'	3	YES	R
Japan	Shimane/Tottori	Nakaumi	N35°28', E133°11'	3	YES	R,I
Japan	Yamaguchi	Yashiro	N34°05', E131°57'	1		C
Korea	Busan	Nakdong Estuary	N35°08', E1285°5'	6		I
Korea	Busan	Lower Nakdong River	N35°09', E128°58'	2		
Korea	Chungbuk	Chungju Reservoir	N37°00', E128°06'	1		
Korea	Chungnam	Bunam Reservoir	N36°40', E126°21'	2		
Korea	Chungnam	Daechung Reservoir	N36°25', E127°29'	1		
Korea	Chungnam	Daeho Lake	N36°50', E126°25'	2		
Korea	Chungnam	Ganwol Reservoir	N36°39', E126°27'	5	YES	
Korea	Chungnam	Geum River Estuary	N36°00', E126°42'	3	YES	I
Korea	Chungnam	Geum River Reservoir	N36°04', E126°49'	5	YES	
Korea	Chungnam	Janghang Coast	N36°00', E126°45'	4		
Korea	Chungnam	Nonsan Reservoir	N36°20', E127°10'	1		
Korea	Chungnam	Sapkyo Lake	N36°53', E126°51'	2	YES	pl
Korea	Chungnam	Sekmun Reclaimed Area	N37°00', E126°38'	1		
Korea	Chungnam	Tapjeong Reservoir	N36°11', E127°10'	1		
Korea	Chungnam	Yubu Island	N35°59', E126°36'	4		I
Korea	Gangwon	Cheolwon Basin	N38°15', E129°13'	4		I,C
Korea	Gangwon	Gangneung – Jumunjin Coast	N37°49', E128°53'	1		
Korea	Gyeongbuk	Andong Reservoir	N36°35', E128°50'	1		
Korea	Gyeongbuk	Haepyong, Gumi City	N36°10', E128°22'	2		I
Korea	Gyeongbuk	Wondeok – Samcheok Coast	N37°24', E129°13'	1		
Korea	Gyeonggi	Asan Lake	N36°51', E126°54'	1		pl
Korea	Gyeonggi	Han River (Haengju Bridge – Paland Dam)	N37°30', E127°00'	1		I
Korea	Gyeonggi	Han River Estuary	N37°44', E126°40'	7	YES	I,C
Korea	Gyeonggi	Jungrang Stream	N37°34', E127°02'	1		
Korea	Gyeonggi	Namhan River	N37°30', E127°27'	1		
Korea	Gyeonggi	Paldang Dam	N37°32', E127°15'	1		
Korea	Gyeonggi	Siwha Reservoir	N37°18', E126°42'	8	YES	I
Korea	Gyeongnam	Angae Reservoir	N35°15', E127°06'	1		
Korea	Gyeongnam	Dangdong Bay	N34°55', E128°30'	1		
Korea	Gyeongnam	Dongpan Reservoir	N35°19', E128°41'	4		
Korea	Gyeongnam	Hoiya Reservoir	N35°28', E129°17'	1		
Korea	Gyeongnam	Hyongsan River	N36°00', E129°15'	1		
Korea	Gyeongnam	Jinyang Reservoir	N35°11', E127°59'	1		
Korea	Gyeongnam	Junam Reservoirs	N35°18', E128°41'	1		I
Korea	Gyeongnam	Sacheon Bay	N35°04', E128°03'	1		
Korea	Gyeongnam	Taehwa River	N35°33', E129°15'	1		
Korea	Gyeongnam	Upo Marsh	N35°33', E128°25'	1		R,I
Korea	Incheon	Gangwha Island: South Coast	N37°35', E126°30'	2		
Korea	Incheon	Youngjong Island	N37°22', E126°23'	1		I
Korea	Jeju	Hamduck – Hadori Coast	N33°33', E126°50'	1		pM
Korea	Jeju	Seoguipo – Anduck Coast	N33°14', E126°36'	1		pM
Korea	Jeju	Seongsanpo Lake	N33°29', E126°55'	1		I,pM
Korea	Jeonbuk	Dongjin River Estuary	N35°49', E126°42'	4	YES	I,S
Korea	Jeonbuk	Dongrim (Dongnim) Reservoir	N35°33', E126°42'	1	YES	I
Korea	Jeonbuk	Mangyung River Estuary	N35°53', E126°44'	4	YES	I
Korea	Jeonnam	Gangjin Bay	N34°32', E126°46'	1		I
Korea	Jeonnam	Gocheonam Reservoir	N34°33', E126°29'	2	YES	I
Korea	Jeonnam	Gunnæ Reclaimed Area	N34°34', E126°15'	1		
Korea	Jeonnam	Gwangyang and Galsa Bay	N34°58', E127°45'	3		
Korea	Jeonnam	Hyungyungmyun, Muangun	N35°03', E126°25'	1	YES	

Country	Region	Site Name	Coordinates	No. of Species Meeting 1% Criteria	>20,000 Waterbirds Recorded	Status*
Korea	Jeonnam	Suncheon Bay	N34°52', E127°30'	3		R,I,C
Korea	Jeonnam	Yeuja Bay	N34°48', E127°26'	4		
Korea	Jeonnam	Youngsan Reservoir (Estuary)	N34°47', E126°28'	4	YES	
Korea	Jeonnam	Yungam Reservoir	N34°38', E126°23'	2		I
Malaysia	Penang	Kuala Bekah (Telok Air Tawar) – Kuala Muda	N05°31', E100°23'	1		I
Malaysia	Perak	Matang Forest	N04°55', E100°29'	2		I
Malaysia	Sabah	Kinabatangan: Lower Floodplain	N06°23', E118°21'	1		I
Malaysia	Sabah	Kinabatangan: Terusan Kinabatangan	N05°45', E118°23'	1		
Malaysia	Sabah	Mantanani Island	N06°42', E116°20'	1		I
Malaysia	Sarawak	Bako – Buntal Bay and surrounding areas	N01°42', E110°21'	1		I
Malaysia	Sarawak	K Samarahan – K Sadong (Asajaya – Pendam)	N01°35', E110°35'	1		
Malaysia	Selangor	Kapar Power Station Ash Ponds	N03°08', E101°20'	5		pl
Myanmar	Ayeyarwady	Meinmahla Kyun Wildlife Sanctuary	N16°00', E095°20'	1		
Myanmar	Kachin	Byee Lake	N24°15', E096°21'	1		
Myanmar	Kachin	Indaw R: Changgwa – Kahtangyaung	N25°16', E096°27'	1		
Myanmar	Kachin	Indaw R: Shwetaung – Chaungwa	N25°13', E096°23'	1		
Myanmar	Kachin	Indaw-Gyi Lake	N25°09', E096°17'	5	YES	I
Myanmar	Kachin	Irrawaddy R: Myitkyina to Sinbo	N25°05', E097°15'	9		I
Myanmar	Kachin	Nam Lah, Nam Yah Rivers (around Putao)	N27°17', E097°34'	1		
Myanmar	Kachin	Nam Sam Chaung (near Ayeyarwady)	N24°57', E097°15'	1		I
Myanmar	Kachin	Sahmaw	N25°15', E096°49'	1		
Myanmar	Kachin	Yaimaw	N25°21', E097°27'	1		
Myanmar	Mandalay	Minhla-Nyaung Yan Lake	N20°50', E096°02'	2		
Myanmar	Sagaing	Chindwin R: Kalewa – Hkamti and to the north	N24°35', E095°05'	6		
Myanmar	Sagaing	Maha Nandar Lake	N22°36', E095°41'	1		I
Myanmar	Sagaing	Nan Ezu Stream (Htamanthi Wildlife Sanctuary)	N25°30', E095°31'	1		
Myanmar	Sagaing	Nga Yant In Lake	N25°42', E095°33'	1		
Myanmar	Sagaing	Yemyetkyi Inn	N22°01', E095°52'	1		
Myanmar	Yangon	Leikok Kon	N16°20', E096°10'	1		
Nepal	CR: Narayani	Chitwan National Park (CNP): Narayani River: Amaltari Ghat – Tribeni Ghat	N27°36', E083°05'	1		I,W
Nepal	CR: Narayani	CNP: Narayani River: Sigraulti – Amaltari Ghat	N27°38', E084°10'	2		
Nepal	CR: Narayani	CNP: Rapti River: Gaight/Kasara – Narayani Confl	N27°34', E084°15'	2		
Pakistan	Baluchistan	Aakra River Estuary (on Arabian Sea)	N25°13', E067°08'	1		
Pakistan	Baluchistan	Dasht Hor	N25°25', E060°25'	1		
Pakistan	Islamabad	Rawal Lake	N33°40', E073°10'	1		
Pakistan	Punjab	Head Marala Barrage	N32°40', E074°30'	1		
Pakistan	Punjab	Head Qadirabad	N32°35', E074°05'	1		I
Pakistan	Punjab	Taunsa Barrage	N30°50', E070°40'	1		R,I
Pakistan	Punjab	Ucchali Wetland Complex: Jahlar Lake	N32°20', E072°20'	1		R,I
Pakistan	Punjab	Ucchali Wetland Complex: Ucchali Lake	N32°33', E072°00'	1		
Pakistan	Punjab/NWFP	Chashma Barrage Reservoir	N32°20', E071°20'	7	YES	R,I
Pakistan	Sindh	Drigh Lake	N27°34', E067°54'	1		R,I
Pakistan	Sindh	Haleji Lake	N24°48', E067°47'	3	YES	R,I
Pakistan	Sindh	Hamal (Katchri) Lake	N27°24', E067°38'	1		I
Pakistan	Sindh	Hudero Lake	N24°50', E067°52'	1		
Pakistan	Sindh	Jabho Lake	N24°18', E068°36'	1		R,I
Pakistan	Sindh	Keenjhar Lake	N25°12', E068°08'	2	YES	R,I
Pakistan	Sindh	Lungh Lake	N27°26', E067°57'	3	YES	
Pakistan	Sindh	Nur-Ri Lake	N24°20', E068°40'	6	YES	R,I
Pakistan	Sindh	Phoosna	N24°51', E068°53'	3		I
Philippines	Luzon	Coastal Road Lagoons at Paranaque	N14°29', E120°59'	1		
Philippines	Luzon	Carague Lake	N17°30', E121°47'	1		
Philippines	Luzon	Magat Dam	N16°50', E121°25'	2		
Philippines	Luzon	Malasi Lake	N17°24', E121°41'	1		
Philippines	Luzon	Manila Bay: Puerto Rivas, Balanga	N14°40', E120°30'	2		I
Philippines	Luzon	Naujan Lake	N13°10', E121°11'	2		R,A,I
Philippines	Luzon	Paitan Lake	N15°52', E120°35'	1		
Philippines	Luzon	Paoay Lake National Park	N18°07', E120°32'	1		
Philippines	Luzon	Subic Bay	N14°48', E120°38'	1		
Philippines	Mindanao	Agusan Marsh Wildlife Sanctuary	N08°17', E125°52'	1		R,I
Philippines	Mindanao	Bonifacio Wetland	N08°03', E123°37'	1		
Philippines	Mindanao	Brgy. Lapaz, Carmen	N07°18', E125°43'	1		
Philippines	Mindanao	Lake Mainit	N09°26', E125°32'	2		
Philippines	Mindanao	Mampang Tugbungan Area	N06°54', E122°06'	1		
Philippines	Visayas	Bantayan Island Wilderness Area	N11°13', E123°43'	1		
Philippines	Visayas	Calituban and Tahong Island	N10°10', E124°10'	1		I
Philippines	Visayas	Carigara Bay Wetlands	N11°19', E124°40'	1		
Philippines	Visayas	Cordova Wetland	N10°04', E124°00'	1		

Country	Region	Site Name	Coordinates	No. of Species Meeting 1% Criteria	>20,000 Waterbirds Recorded	Status*
Philippines	Visayas	Himamaylan, Kabankalan and Ileig Wetland	N10°06', E122°53'	1		
Philippines	Visayas	Mahaba Island	N10°05', E124°10'	1		
Philippines	Visayas	Olango Island Wildlife Sanctuary	N10°14', E124°02'	1		R,S,I
Philippines	Visayas	Sipalay Hinoba-An Wetland	N09°40', E122°25'	1		
Sri Lanka	CP	Minipe Canal	N07°25', E081°00'	2		
Sri Lanka	EP	Akkaraipattu to Batticaloa	N07°28', E081°48'	1		
Sri Lanka	EP	Akkaraipattu to Panama	N07°00', E081°50'	1		
Sri Lanka	EP	Ampara	N07°12', E081°41'	1		
Sri Lanka	NCP	Kaudulla Tank	N08°08', E080°55'	1		pl
Sri Lanka	NCP	Minneriya National Park	N08°02', E080°51'	1		pl
Sri Lanka	NCP	Pimburettawa Tank	N07°42', E081°10'	1		I
Sri Lanka	NCP	Wasgomuwa National Park	N07°30', E080°30'	2		
Sri Lanka	NP	Adam's Bridge Islands	N09°04', E079°41'	2	YES	
Sri Lanka	NP	Delft Island	N09°31', E079°41'	1		
Sri Lanka	NP	Giant's Tank	N08°51', E080°02'	1		I
Sri Lanka	NP	Kattaiadampan	N08°47', E080°05'	1		
Sri Lanka	NP	Kayts Island and Mandaitivu	N09°44', E079°52'	1		I
Sri Lanka	NP	Kora Kulam	N09°00', E079°53'	1		
Sri Lanka	NP	Mannar Causeway	N08°57', E079°54'	2		
Sri Lanka	NP	Uppu Aru Lagoon	N09°42', E080°05'	1	YES	
Sri Lanka	NP	Vadamaradchi Lagoon	N09°47', E080°05'	1	YES	
Sri Lanka	NP	Vankalai Triangle	N08°55', E079°56'	3	YES	
Sri Lanka	NWP	Puttalam Salt Pans	N08°03', E079°48'	1		
Sri Lanka	SP	Bundala National Park	N06°09', E081°14'	1	YES	
Sri Lanka	SP	Hambantota Wetlands	N06°08', E081°07'	6	YES	
Sri Lanka	SP	Palatupana Saltern	N06°16', E081°24'	1		
Sri Lanka	SP	Ruhuna National Park: Block I	N06°18', E081°28'	1		I
Sri Lanka	SP	Tangalla Mangrove	N06°04', E080°51'	1		
Sri Lanka	WP	Beira Lake	N06°55', E079°52'	1		
Thailand	Buriram	Huai Talat Non-Hunting Area	N14°53', E103°03'	1		
Thailand	Buriram	Sanambin Non-Hunting Area	N14°38', E103°05'	2		I
Thailand	Nakhon Sawan	Bung Boraphet	N15°42', E100°15'	5	YES	I
Thailand	Pattalung	Thale Noi Non-Hunting Area	N07°53', E100°10'	3	YES	R,I
Thailand	Petchaburi	Pak Thale (Laem Phak Bia), Inner Gulf	N13°09', E100°03'	2		I
Thailand	Petchaburi	Wat Khao Takhrao, Inner Gulf	N13°13', E099°56'	1		
Thailand	Samut Prakan	Bang Pu, Inner Gulf	N13°33', E101°00'	2		
Thailand	Samut Sakhon	Khok Kham, Inner Gulf	N13°31', E100°19'	1		
Vietnam	Binh Dinh	Tra O Lagoon	N14°18', E109°06'	1		
Vietnam	Nam Dinh	Xuan Thuy Ramsar Site	N20°13', E106°33'	1		R,I,pM

**Note:**

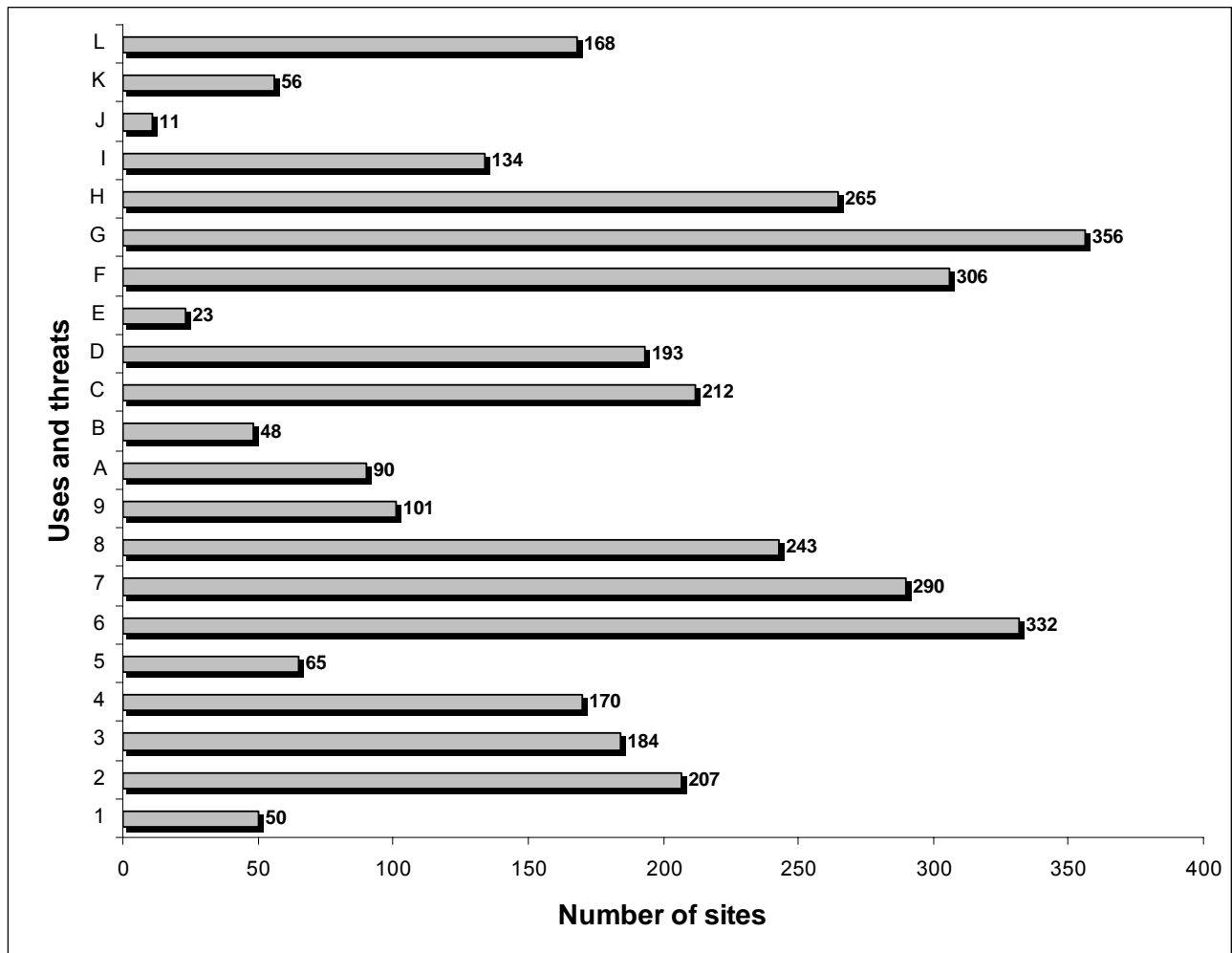
Status\*: R – Ramsar site, pR – part of a Ramsar site, I – Wetland IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), W – UNESCO World Heritage Site, pW – part of a UNESCO World Heritage Site, M – MAB Biosphere Reserve, pM – part of a MAB Biosphere Reserve, A – Anatidae site of the Migratory Waterbird Network in the East Asian – Australasian Flyway, C – Crane site of the Migratory Waterbird Network in the North East Asian Flyway, S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway.

### 3.1.3 Uses of and threats to wetlands and threats to waterbirds in the region

A review of the data on uses of and threats to sites is provided for 1,040 of the 2,032 sites (51%) shown in Figure 6. The information reveals strong anthropogenic influences on these sites, which may have a significant role in controlling the abundance and diversity of waterbirds. Fishing, agricultural development, hunting, excessive cattle grazing, pollution of wetlands through domestic sewage, pesticides and fertilisers, and overgrowth of vegetation are reported as the main on-site uses and threats. Although partial or complete reclamation was reported at only 7% (145) of the sites, reclamation can cause a total loss of waterbird habitat, hence it is considered the most destructive cumulative threat to the wetlands and their use by waterbirds.

**Figure 6: Uses of and threats to sites surveyed during the AWC, 2002–2004**

Data on uses and threats summarised for 1,040 of 2,032 sites (51%) for which data were provided.



**Note:**

Uses and threats: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

**3.1.4 Species coverage**

Totals of 274 species of waterbirds and 61 species of wetland-dependent species (covering five species of sea birds, 33 birds of prey (raptors), 12 kingfishers, 11 wagtails and pipits) were recorded during the AWC from 2002 to 2004 (Tables 4 and 5). The status of the selected species and maps of the distribution of counts are presented in Section 3.6. However, the numbers for wetland-dependent birds do not represent the real number of such species at all AWC sites as these species are reported from a limited number of countries only.

The 20 most numerous species for which more than 100,000 individuals were reported were Northern Pintail (780,709 in 2003), Mallard (731,459 in 2003), Baikal Teal (VU, 458,039 in 2004), Common Pochard (369,672 in 2002), Eurasian Wigeon (361,768 in 2004), Common Coot (360,349 in 2002), Common Teal (333,498 in 2003), Spot-billed Duck (316,675 in 2004), Northern Shoveler (293,635 in 2002), Gadwall (290,781 in 2004), Greater Scaup (272,309 in 2004), Lesser Whistling Duck (201,679 in 2002), Tufted Duck (217,672 in 2002), Greater White-fronted Goose (182,918 in 2003), Black-tailed Godwit (NT, 131,430 in 2003), Bean Goose (127,245 in 2004), Garganey (111,635 in 2003), Demoiselle Crane (121,772 in 2003), Dunlin (121,175 in 2003) and Red-necked Stint (105,299 in 2003).

**Table 4: Summary of waterbird and wetland-dependent bird species groups reported in the AWC, 2002–2004**

Family	Scientific Name	No. of Species	2002	2003	2004
<b>Waterbirds (26 families)</b>		<b>274</b>	<b>7,964,568</b>	<b>7,763,834</b>	<b>7,934,809</b>
Divers	Gaviidae	4	529	158	112
Grebes	Podicipedidae	5	25,919	27,321	34,806
Pelicans	Pelecanidae	4	9,077	15,123	12,999
Cormorants	Phalacrocoracidae	7	114,799	107,359	108,194
Darters	Anhingidae	1	1,107	3,326	1,998
Hérons, Egrets & Bitterns	Ardeidea	27	268,902	235,134	243,104
Storks	Ciconiidae	11	73,276	36,348	84,020
Ibises & Spoonbills	Threskiornithidae	6	35,103	27,844	30,904
Flamingos	Phoenicopteridae	2	39,582	98,315	84,280
Swans, Geese & Ducks	Anatidae	55	5,528,340	5,203,875	5,629,514
Cranes	Gruidae	8	39,519	230,646	104,337
Rails, Gallinules & Coots	Rallidae	18	456,140	362,429	388,032
Finfoots	Heliornithidae	1	4	1	4
Jacanas	Jacaniidae	2	59,520	12,299	9,450
Painted-Snipe	Rostratulidae	1	135	446	151
Crab Plover	Dromadidae	1	5	6,957	8
Oystercatcher	Haematopodidae	3	9,207	12,821	7,284
Ibisbill	Ibidorhynchidae	1	121		8
Stilts & Avocets	Recurvirostridae	4	60,179	101,953	69,687
Thick-knees	Burhinidae	4	578	307	307
Coursers & Pratincoles	Glareolidae	5	8,830	7,021	8,091
Plovers	Charadriidae	25	153,600	169,639	178,962
Snipe, Sandpipers & Phalaropes	Scolopacidae	44	598,321	716,528	540,914
Gulls	Laridae	18	130,772	207,918	172,077
Terns	Sternidae	16	74,872	102,599	92,204
Skimmers	Rynchopidae	1	975	663	1,001
unidentified shorebirds			269,546	76,804	132,361
unidentified waterbirds			5,610		
<b>Other Wetland-dependent Species (8 families)</b>		<b>61</b>	<b>2,979</b>	<b>27,190</b>	<b>19,198</b>
Albatrosses	Diomedidae	1			1
Frigatebirds	Fregatidae	2	2	2,700	60
Auks	Alcidae	2	313	36	2
Osprey, Kites, Hawks & Eagles	Accipitridae	30	1,767	3,534	2,476
Falcons	Falconidae	3	90	147	143
unidentified raptors			1	13	29
Kingfishers	Alcedinidae	12	677	5,200	2,534
Wagtails and Pipits	Motacillidae	11	129	15,560	13,953

Of the 274 species of waterbirds and 61 species of wetland-dependent birds counted by the AWC in 2002–2004, 64 species are of conservation concern according to BirdLife International (2006): counts were made of four Critically Endangered, 13 Endangered, 26 Vulnerable and 21 Near Threatened species (Table 5).

Based on available population estimates (Wetlands International 2006), the AWC is able to cover more than 50% of the estimated populations of 22 congregatory species (e.g. Indian Cormorant, Oriental Stork, Indian Black Ibis, Black-faced Spoonbill, Fulvous Whistling Duck, Whooper Swan, Bean Goose, Lesser White-fronted Goose, Bar-headed Goose, Lesser Snow Goose, Falcated Duck, Baikal Teal, Philippine Duck, Red-crested Pochard, Ferruginous Duck, White-headed Duck, Demoiselle Crane, Siberian Crane, White-naped Crane, Common Crane, Red-Crowned Crane and Bronze-winged Jacana). Additionally, the counts of Tundra Swan, Swan Goose, Greater White-fronted Goose, Greater Scaup and Hooded Crane exceed the current population estimates, which illustrate the importance of this census for monitoring threatened species in addition to the more abundant species.

Of the waterbird and wetland-dependent species covered by the census, 159 species are listed by the CMS: 28 and 131 species in Appendices I and II respectively. Additionally, 57 species are listed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); 15 and 42 species are listed in Appendices I and II respectively. The AWC provides a useful mechanism for contributing to the monitoring of these species of international concern.

**Table 5: Numbers of all waterbird and wetland-dependent species reported to the AWC, 2002–2004**

English Name <sup>1</sup>	Scientific Name	T <sup>2</sup>	CMS <sup>3</sup>	CITES <sup>4</sup>	2002	2003	2004	Estimated Asian Population <sup>5</sup>
<b>DIVERS</b>	<b>Gaviidae</b>							
Red-throated Diver	<i>Gavia stellata</i>				18	21	50	10,000–100,000
Black-throated Diver	<i>Gavia arctica</i>				484	97	48	25,000–1,000,000
Pacific Diver	<i>Gavia pacifica</i>				27	19	13	25,000–100,000
White-billed Diver	<i>Gavia adamsii</i>						1	Vagrant
unidentified divers	Gaviidae spp.					21		
<b>GREBES</b>	<b>Podicipedidae</b>							
Little Grebe	<i>Tachybaptus ruficollis</i>				20,543	21,542	24,873	200,000–2,000,000+?
Red-necked Grebe	<i>Podiceps grisegena</i>		II		10	56	52	60,000
Great Crested Grebe	<i>Podiceps cristatus</i>				3,274	2,954	6,408	35,000–75,000
Horned Grebe	<i>Podiceps auritus</i>				67	71	226	20,000–50,000
Black-necked Grebe	<i>Podiceps nigricollis</i>				1,969	1,133	2,565	10,000–100,000+(25,000)
unidentified grebes	Podicipedidae spp.				56	1,565	682	
<b>PELICANS</b>	<b>Pelecanidae</b>							
Great White Pelican*	<i>Pelecanus onocrotalus</i>		I		4,446	7,435	8,461	15,000–30,000
Spot-billed Pelican	<i>Pelecanus philippensis</i>	VU			3,461	6,640	3,947	13,000–17,000
Dalmatian Pelican	<i>Pelecanus crispus</i>	VU	I	I	1,150	280	585	(6,000–9,000)+50
Australian Pelican	<i>Pelecanus conspicillatus</i>					1	2	(100,000–1,000,000)
unidentified pelicans	Pelecanidae spp.				20	767	4	
<b>CORMORANTS</b>	<b>Phalacrocoracidae</b>							
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>				3,170	5		?
Great Cormorant	<i>Phalacrocorax carbo</i>				30,559	31,153	36,877	100,000–260,000
Indian Cormorant*	<i>Phalacrocorax fuscicollis</i>				8,115	13,941	20,968	30,000
Japanese Cormorant	<i>Phalacrocorax capillatus</i>				852	701	797	25,000–100,000
Pelagic Cormorant	<i>Phalacrocorax pelagicus</i>				123	81	533	?
Little Pied Cormorant	<i>Phalacrocorax melanoleucos</i>					2	1	?
Little Cormorant	<i>Phalacrocorax niger</i>				63,320	54,355	39,888	275,000–350,000
unidentified cormorants	Phalacrocoracidae spp.				8,660	7,121	9,130	
<b>DARTERS</b>	<b>Anhingidae</b>							
Oriental Darter	<i>Anhinga melanogaster</i>	NT			1,107	3,326	1,998	14,000
<b>HERONS, EGRETS &amp; BITTERNS</b>	<b>Ardeidae</b>							
Grey Heron	<i>Ardea cinerea</i>				13,956	16,316	24,465	201,000–1,102,000
Eastern Great Egret	<i>Ardea modesta</i>				9,616	20,271	22,691	35,000–200,000 +?
Intermediate Egret	<i>Ardea intermedia</i>				16,379	25,112	17,189	50,000–200,000+ (100,000–1,000,000)
White-bellied (Imperial) Heron	<i>Ardea insignis</i>	EN			1			250–1000
Great-billed Heron	<i>Ardea sumatrana</i>				7	42	8	10,000–100,000
Goliath Heron	<i>Ardea goliath</i>				1	3	4	20
Purple Heron	<i>Ardea purpurea</i>				5,057	3,156	2,661	35,000–125,000
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>				91,522	68,964	64,980	200,000→2,000,000
Green-backed Heron	<i>Butorides striatus</i>				460	1,103	563	35,000–125,000+?
Indian Pond Heron	<i>Ardeola grayii</i>				35,717	22,147	15,884	(100,000–1,000,000)+?
Chinese Pond Heron	<i>Ardeola bacchus</i>				2,263	3,964	3,579	25,000–1,000,000
Javan Pond Heron	<i>Ardeola speciosa</i>				179	235	232	10,000–100,000
unidentified Pond herons	<i>Ardeola</i> spp.				1,654	3,047	1,278	
Pied Heron	<i>Egretta picata</i>						1	(25,000–100,000)
Little Egret	<i>Egretta garzetta</i>				67,266	40,833	50,659	225,000–2,200,000
Western Reef Egret	<i>Egretta gularis</i>				646	637	254	
Chinese Egret	<i>Egretta eulophotes</i>	VU	I		188	411	1,004	2,600–3,400
Eastern Reef Heron	<i>Egretta sacra</i>				80	128	276	100,000–1,000,000
unidentified egrets	<i>Egretta/Bubulcus</i> spp.				1,451	4,189	1,121	
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>				9,366	13,169	18,222	200,000–1,150,000
Rufous Night-heron	<i>Nycticorax caledonicus</i>				2	331	1	?
Japanese Night-heron	<i>Gorsachius gossagi</i>	EN	I		7			250–1,000
Malayan Night-heron	<i>Gorsachius melanolophus</i>				27		1	<20,000+?
unidentified night-heron	<i>Nycticorax</i> spp.						1	
Eurasian Bittern	<i>Botaurus stellaris</i>				3	49	29	25,000–100,000+?
Little Bittern	<i>Ixobrychus minutus</i>					7		10,000–25,000
Yellow Bittern	<i>Ixobrychus sinensis</i>				217	335	320	100,000–1,000,000+?
Schrenck's Bittern	<i>Ixobrychus eurhythmus</i>				1		4	<10,000–25,000
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>				167	177	212	125,000–2,000,000
Black Bittern	<i>Ixobrychus flavicollis</i>				94	226	107	35,000–200,000
unidentified bitterns	<i>Ixobrychus</i> spp.				1	35	41	
unidentified Ardeidae	Ardeidae spp.				12,574	10,247	17,317	
<b>STORKS</b>	<b>Ciconiidae</b>							

## Results

English Name <sup>1</sup>	Scientific Name	T <sup>2</sup>	CMS <sup>3</sup>	CITES <sup>4</sup>	2002	2003	2004	Estimated Asian Population <sup>5</sup>
Milky Stork	<i>Mycteria cinerea</i>	VU		I	133	42	10	<5,000
Painted Stork	<i>Mycteria leucocephala</i>	NT			6,663	9,485	7,728	<35,000
Asian Openbill	<i>Anastomus oscitans</i>				63,292	23,376	72,107	300,000
Black Stork	<i>Ciconia nigra</i>		II	II	410	156	437	<10,500
Woolly-necked Stork	<i>Ciconia episcopus</i>				415	600	565	<20,000–<35,000
Storm's Stork	<i>Ciconia stormi</i>	EN			16		13	250–500
Eurasian White Stork	<i>Ciconia ciconia</i>		II		135	69	75	(4,350)
Oriental Stork	<i>Ciconia boyciana</i>	EN	I	I	1,435	1,946	2,463	3,000
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT			41	92	23	1,000
Greater Adjutant	<i>Leptoptilos dubius</i>	EN			21	27	93	800–1,000
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU			348	529	492	5,000
unidentified storks	Ciconiidae spp.				367	26	14	
<b>IBISES &amp; SPOONBILLS</b>	<b>Threskiornithidae</b>							
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT			4,858	5,951	5,705	<35,000
Indian Black Ibis*	<i>Pseudibis papillosa</i>				3,230	2,413	2,928	10,000
White-shouldered Ibis	<i>Pseudibis davisoni</i>	CR					2	<100–300
Glossy Ibis*	<i>Plegadis falcinellus</i>		II		5,528	5,228	7,307	10,000–25,000
unidentified ibises	Threskiornithidae spp.				9,800	5		
Eurasian Spoonbill	<i>Platalea leucorodia</i>		II	II	10,753	13,472	14,044	(25,000–100,000) +10,000
Black-faced Spoonbill	<i>Platalea minor</i>	EN	I		934	775	908	1,500
unidentified spoonbills	<i>Platalea</i> spp.						10	
<b>FLAMINGOS</b>	<b>Phoenicopteridae</b>							
Greater Flamingo	<i>Phoenicopterus ruber</i>		II	II	20,339	43,439	12,590	(240,000)
Lesser Flamingo	<i>Phoeniconaias minor</i>	NT	II	II	13,019	54,623	71,690	390,000
unidentified Flamingos	Phoenicopteridae spp.				6,224	253		
<b>SWANS, GEESE &amp; DUCKS</b>	<b>Anatidae</b>							
Fulvous Whistling Duck*	<i>Dendrocygna bicolor</i>				20,982	40,183	8,083	50,000
Wandering Whistling Duck	<i>Dendrocygna arcuata</i>				7,638	1,574	4,158	100,000–1,000,000
Lesser Whistling Duck*	<i>Dendrocygna javanica</i>				201,679	164,355	181,366	200,000–2,000,000
Mute Swan	<i>Cygnus olor</i>		II		255	160	138	
Whooper Swan	<i>Cygnus cygnus</i>		II		35,046	36,660	37,704	60,000
Tundra (Whistling) Swan*	<i>Cygnus columbianus</i>		II		36,737	63,963	95,535	92,000
unidentified swans	<i>Cygnus</i> spp.				14,023	158	27	
Swan Goose*	<i>Anser cygnoides</i>	EN	I		45,572	55,169	98,116	60,000–100,000
Bean Goose	<i>Anser fabalis</i>		II		55,620	70,224	127,245	150,000
Greater White-fronted Goose*	<i>Anser albifrons</i>		II		124,753	182,918	172,968	150,000–200,000
Lesser White-fronted Goose	<i>Anser erythropus</i>	VU	I		5	16,555	16,956	20,000
Greylag Goose	<i>Anser anser</i>		II		3,238	10,708	7,550	50,000–100,000+ (25,000)
Bar-headed Goose	<i>Anser indicus</i>		II		17,089	28,125	28,084	52,000–60,000
Lesser Snow Goose	<i>Chen (Anser) caerulescens</i>		II		18	12	13	20–30
unidentified grey geese	<i>Anser</i> spp.				43,383	2,548	5,458	
Canada Goose	<i>Branta canadensis</i>		II		31	28	10	Vagrant
Brent Goose	<i>Branta bernicla</i>		II		715	693	840	5,000
Red-breasted Goose	<i>Branta ruficollis</i>	VU	I	II			1	Vagrant
Ruddy Shelduck*	<i>Tadorna ferruginea</i>		II		46,128	41,895	42,499	100,000–150,000
Common Shelduck	<i>Tadorna tadorna</i>		II		26,963	32,034	44,488	125,000–250,000
Radjah Shelduck	<i>Tadorna radjah</i>				68			(10,000–100,000)
White-winged Duck	<i>Cairina scutulata</i>	EN		I	8	11	7	800
Comb Duck	<i>Sarkidiornis melanotos</i>		II	II	2,711	860	4,517	10,000–25,000
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>				58,640	29,961	30,833	125,000–1,100,000
Mandarin Duck	<i>Aix galericulata</i>		II		27,680	30,510	25,770	65,500
Eurasian Wigeon*	<i>Anas penelope</i>		II		348,082	309,329	361,768	750,000–1,250,000
American Wigeon	<i>Anas americana</i>		II		63	92	52	Vagrant
Falcated Duck*	<i>Anas falcata</i>	NT	II		10,334	16,329	30,004	35,000
Gadwall*	<i>Anas strepera</i>		II		251,300	220,375	290,781	800,000–1,300,000
Baikal Teal	<i>Anas formosa</i>	VU	I	II	290,482	306,137	458,039	500,000
Common Teal	<i>Anas crecca</i>		II		306,455	333,498	330,971	1,000,000–1,400,000
Sunda Teal	<i>Anas gibberifrons</i>				71	9		10,000–100,000
Mallard	<i>Anas platyrhynchos</i>		II		713,192	731,459	697,337	1,575,000
Spot-billed Duck*	<i>Anas poecilorhyncha</i>		II		289,372	296,477	316,675	910,000–1,800,000
Pacific Black Duck	<i>Anas superciliosa</i>				4	4	2	(100,000–1,000,000)
Philippine Duck	<i>Anas luzonica</i>	VU			3,621	2,334	4,632	5,000–10,000
Northern Pintail	<i>Anas acuta</i>		II		710,681	780,709	702,277	>1,200,000
Garganey	<i>Anas querquedula</i>		II		59,356	111,635	79,701	450,000–550,000
Northern Shoveler*	<i>Anas clypeata</i>		II		293,635	211,606	180,582	1,000,000–1,500,000
Marbled Teal	<i>Marmaronetta angustirostris</i>	VU	I		42	132		5,000
Red-crested Pochard	<i>Netta rufina</i>		II		50,018	63,504	29,657	100,000
Canvasback	<i>Aythya valisineria</i>		II		10	16	2	Vagrant
Common Pochard	<i>Aythya ferina</i>		II		369,672	285,530	265,508	500,000–800,000



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Baer's Pochard	<i>Aythya baeri</i>	VU	II		191	201	681	10,000–20,000
Ferruginous Duck	<i>Aythya nyroca</i>	NT	I		97,201	14,263	30,570	100,000
Tufted Duck	<i>Aythya fuligula</i>		II		217,672	179,543	162,087	(300,000–500,000)+ 200,000–300,000
Greater Scaup*	<i>Aythya marila</i>		II		192,978	217,098	272,309	200,000–300,000
Harlequin Duck	<i>Histrionicus histrionicus</i>		II		2,425	2,340	1,698	25,000–100,000
Common Scoter	<i>Melanitta nigra</i>		II		16,058	8,902	8,828	300,000–500,000
Velvet Scoter	<i>Melanitta fusca</i>		II		1,785	444	332	600,000–1,000,000
Long-tailed Duck	<i>Clangula hyemalis</i>		II		4,602	927	406	500,000–1,000,000
Common Goldeneye	<i>Bucephala clangula</i>		II		10,429	15,443	18,591	100,000–1,000,000
Smew	<i>Mergellus albellus</i>		II		3,449	2,866	4,370	25,000
Red-breasted Merganser	<i>Mergus serrator</i>		II		6,115	5,219	3,669	25,000–100,000
Scaly-sided Merganser	<i>Mergus squamatus</i>	EN	II		2		34	1,000–2,500
Goosander	<i>Mergus merganser</i>		II		11,915	12,879	13,535	52,500–110,000
White-headed Duck	<i>Oxyura leucocephala</i>	EN	I	II	5	23	5	<50
unidentified ducks	Anatinae spp.				498,141	265,248	432,045	
<b>CRANES</b>	<b>Gruidae</b>							
Demoiselle Crane	<i>Anthropoides virgo</i>		II	II	9,385	121,772	61,528	170,000–200,000
Siberian Crane	<i>Grus leucogeranus</i>	CR	I	I	3,101	2,856	3,184	3,200
Sarus Crane	<i>Grus antigone</i>	VU	II	II	418	278	465	9,300–11,800
White-naped Crane*	<i>Grus vipio</i>	VU	I	I	4,450	3,687	6,486	6,500
Common Crane	<i>Grus grus</i>		II	II	6,877	55,256	16,500	(70,000)+15,000– 22,000
Hooded Crane*	<i>Grus monacha</i>	VU	I	I	9,302	9,892	10,592	10,160
Black-necked Crane	<i>Grus nigricollis</i>	VU	I	I	3,261	3,488	3,562	8,000
Red-crowned Crane	<i>Grus japonensis</i>	EN	I	I	1,724	1,296	2,018	2,650
Hybrid Crane	<i>Grus grus x Grus monacha</i>				1			
unidentified cranes	Gruidae spp.				1,000	32,121	2	
<b>RAILS, GALLINULES &amp; COOTS</b>	<b>Rallidae</b>							
Swinhoe's Rail	<i>Coturnicops exquisitus</i>	VU					1	<10,000
Red-legged Crake	<i>Rallina fasciata</i>				111	66		?
Slaty-legged Crake	<i>Rallina eurizinoides</i>				1,000			?
Barred Rail	<i>Gallirallus torquatus</i>				36	12	359	?
Buff-banded Rail	<i>Gallirallus philippensis</i>				52	15	98	?
Slaty-breasted Rail	<i>Gallirallus striatus</i>				1,030	38	60	?
Water Rail	<i>Rallus aquaticus</i>				133	544	34	?
Brown Crake	<i>Amauornis akool</i>				59	22	57	?
Black-tailed (Elwes's) Crake	<i>Amauornis bicolor</i>				4	2	2	?
White-breasted Waterhen	<i>Amauornis phoenicurus</i>				3,078	4,202	3,194	100,000–>1,000,000
Baillon's Crake	<i>Porzana pusilla</i>				257	41	5	?
Ruddy-breasted Crake	<i>Porzana fusca</i>				77	113	365	?
White-browed Crake	<i>Porzana cinereus</i>				136	44	49	?
Watercock	<i>Gallinula cinerea</i>				714	743	193	?
Purple Swamphen	<i>Porphyrio porphyrio</i>				48,484	23,709	17,830	100,000– >1,000,000+?
Common Moorhen	<i>Gallinula chloropus</i>				40,498	12,062	7,329	?
Dusky Moorhen	<i>Gallinula tenebrosa</i>					12	10	?
Common Coot*	<i>Fulica atra</i>				360,349	320,705	358,432	1,600,000– >2,500,000+?
unidentified rails	Rallidae spp.				122	99	14	
<b>FINFOOTS</b>	<b>Helionithidae</b>							
Masked Finfoot	<i>Helipopsis personata</i>	VU			4	1	4	2,500–10,000
<b>JACANAS</b>	<b>Jacaniidae</b>							
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>				32,678	6,652	6,137	100,000–150,000
Bronze-winged Jacana	<i>Metopidius indicus</i>				26,842	5,640	3,313	50,000–100,000
unidentified jacanas	Jacaniidae spp.					7		
<b>PAINTED-SNIPE</b>	<b>Rostratulidae</b>							
Greater Painted Snipe	<i>Rostratula benghalensis</i>				135	446	151	10,000–25,000
<b>CRAB PLOVER</b>	<b>Dromadidae</b>							
Crab Plover	<i>Dromas ardeola</i>		II		5	6,957	8	(60,000–80,000)
<b>OYSTERCATCHER</b>	<b>Haematopodidae</b>							
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>				4,064	6,015	2,431	(100,000– 200,000)+10,000
Australian Pied Oystercatcher	<i>Haematopus longirostris</i>				4,419	5,046	4,068	11,000
Sooty Oystercatcher	<i>Haematopus fuliginosus</i>				724	1,760	785	11,500
<b>IBISBILL</b>	<b>Ibidorhynchidae</b>							
Ibisbill	<i>Ibidorhyncha struthersii</i>				121		8	?
<b>STILTS &amp; AVOCETS</b>	<b>Recurvirostridae</b>							
Black-winged Stilt	<i>Himantopus himantopus</i>		II		40,112	56,444	42,443	485,000–625,000
Banded Stilt	<i>Cladorhynchus leucocephalus</i>				12,667	10,190	5,799	206,000
Pied Avocet	<i>Recurvirostra avosetta</i>		II		2,883	29,134	20,458	35,000–200,000

## Results

English Name <sup>1</sup>	Scientific Name	T <sup>2</sup>	CMS <sup>3</sup>	CITES <sup>4</sup>	2002	2003	2004	Estimated Asian Population <sup>5</sup>
Red-necked Avocet	<i>Recurvirostra novaehollandiae</i>				4,517	6,185	987	107,000
<b>THICK-KNEES</b>	<b>Burhinidae</b>							
Stone Curlew	<i>Burhinus oedicnemus</i>		II		12	2	39	?
Bush Thick-knee	<i>Burhinus grallarius</i>	NT			3	9		?
Great Thick-knee	<i>Burhinus (Esacus) recurvirostris</i>				561	279	266	<10,000–25,000
Beach Thick-knee	<i>Burhinus gigantea (E. magnirostris)</i>	NT			2	17	2	<10,000–25,000
<b>COURSERS &amp; PRATINCOLES</b>	<b>Glareolidae</b>							
Indian Courser	<i>Cursorius coromandelicus</i>					1		?
Australian Pratincole	<i>Stiltia Isabella</i>					12		25,000–1,000,000
Collared Pratincole	<i>Glareola pratincola</i>		II			354	9	Not in main distribution range
Oriental Pratincole	<i>Glareola maldivarum</i>				369	134	532	2,890,000–2,980,000
Small Pratincole	<i>Glareola lactea</i>				8,461	6,520	7,550	50,000–100,000
<b>PLOVERS</b>	<b>Charadriidae</b>							
Northern Lapwing	<i>Vanellus vanellus</i>		II		4,680	6,538	10,021	110,000–1,025,000
River Lapwing	<i>Vanellus duvaucelli</i>				1,067	734	317	<10,000–25,000
Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>				697	1,245	876	5,000–10,000
Grey-headed Lapwing	<i>Vanellus cinereus</i>		II		1,219	729	784	25,000–100,000
Red-wattled Lapwing	<i>Vanellus indicus</i>				8,742	7,755	8,157	<60,000+?
Banded Lapwing	<i>Vanellus tricolor</i>				66	184		25,000–1,000,000
Masked Lapwing	<i>Vanellus miles</i>				2,425	3,274	2,436	200,000–2,000,000
Sociable Lapwing	<i>Vanellus gregarius</i>	CR	I		8			200–600
White-tailed Lapwing	<i>Vanellus leucurus</i>		II		241	756	372	10,000–100,000
unidentified lapwings	<i>Vanellus spp.</i>				1	170	19	
Red-kneed Dotterel	<i>Erythrogonys cinctus</i>				99	99	10	25,000–1,000,000
Pacific Golden Plover	<i>Pluvialis fulva</i>		II		22,899	13,611	19,069	185,000–250,000
Grey Plover	<i>Pluvialis squatarola</i>		II		12,251	14,970	11,062	155,000
Great Ringed Plover	<i>Charadrius hiaticula</i>		II		19	42	20	Not in main distribution range
Long-billed Plover	<i>Charadrius placidus</i>		II		159	119	135	<10,000–25,000
Little Ringed Plover	<i>Charadrius dubius</i>		II		4,144	8,128	6,960	50,000–125,000
Kentish Plover	<i>Charadrius alexandrinus</i>		II		23,619	26,724	67,558	158,000–210,000
Javan Plover	<i>Charadrius javanicus</i>	NT			5	10		?
Red-capped Plover	<i>Charadrius ruficapillus</i>				3,019	10,367	4,174	95,000
Malaysian Plover	<i>Charadrius peronii</i>	NT			6	30	32	10,000–25,000
Double-banded Plover	<i>Charadrius bicinctus</i>				81	64	127	50,000
Lesser Sandplover	<i>Charadrius mongolus</i>		II		17,284	38,555	26,981	210,000–240,000
Greater Sandplover	<i>Charadrius leschenaultii</i>		II		40,698	14,182	16,830	125,000–200,000
Oriental Plover	<i>Charadrius veredus</i>		II		8,447	16,752	335	70,000
Hooded Plover	<i>Charadrius rubricollis</i>	NT			92	71	45	10,500
Black-fronted Dotterel	<i>Euseyonis melanops</i>				123	292	61	17,100
unidentified <i>Charadrius</i> plovers	<i>Charadrius spp.</i>				1,509	4,238	2,581	
<b>SNIFE, SANDPIPERS &amp; PHALAROPES</b>	<b>Scolopacidae</b>							
Eurasian Woodcock	<i>Scolopax rusticola</i>		II		7	9	4	25,000–1,000,000
Jack Snipe	<i>Lymnocyptes minimus</i>		II		10	175	110	<20,000–<35,000
Solitary Snipe	<i>Gallinago solitaria</i>		II		1	44	21	<20,000–110,000
Latham's Snipe	<i>Gallinago hardwickii</i>		II		199	159	87	25,000–100,000
Wood Snipe	<i>Gallinago nemoricola</i>	VU			1	1		2,500–10,000
Pintail Snipe	<i>Gallinago stenura</i>		II		328	392	485	25,000–1,000,000+ (25,000–1,000,000)
Swinhoe's Snipe	<i>Gallinago megala</i>		II		3	98	13	25,000–100,000
Common Snipe	<i>Gallinago gallinago</i>		II		3,257	2,698	1,868	200,000–2,000,000
unidentified snipe	<i>Gallinago spp.</i>				108	75	50	
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>		II		21	23	33	Vagrant
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT	II		536	24	53	23,000
Black-tailed Godwit	<i>Limosa limosa</i>	NT	II		112,624	131,430	47,425	310,000
Bar-tailed Godwit	<i>Limosa lapponica</i>		II		49,866	46,110	59,737	325,000+ (100,000–150,000)
unidentified godwits	<i>Limosa spp.</i>				1,855	57		
Little Curlew	<i>Numenius minutus</i>		II		469	694	1,794	180,000
Whimbrel	<i>Numenius phaeopus</i>		II		3,676	6,290	3,325	80,000–155,000
Eurasian Curlew	<i>Numenius arquata</i>		II		18,249	11,273	7,948	(10,000–100,000)+35,000
Far Eastern Curlew	<i>Numenius madagascariensis</i>		II		6,056	6,563	4,301	38,000
unidentified curlews	<i>Numenius spp.</i>				481	503	412	
Spotted Redshank	<i>Tringa erythropus</i>		II		3,498	13,040	16,651	35,000–125,000
Common Redshank	<i>Tringa totanus</i>		II		11,285	15,928	12,909	145,000–400,000
Marsh Sandpiper	<i>Tringa stagnatilis</i>		II		13,157	8,380	17,535	200,000–1,100,000
Common Greenshank	<i>Tringa nebularia</i>		II		9,044	9,408	8,657	150,000–200,000

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Nordmann's Greenshank	<i>Tringa guttifer</i>	EN	I	I	7	14	74	500–1000
Green Sandpiper	<i>Tringa ochropus</i>		II		2,408	1,099	983	50,000–200,000
Wood Sandpiper	<i>Tringa glareola</i>		II		4,481	7,960	6,767	200,000–300,000
Terek Sandpiper	<i>Xenus cinereus</i>		II		12,759	2,350	3,644	60,000–150,000
Common Sandpiper	<i>Actitis hypoleucos</i>		II		8,383	6,712	6,208	100,000–150,000
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		II		7,612	8,495	7,143	40,000
Wandering Tattler	<i>Heteroscelus incanus</i>		II		16,335	5,327	8,621	Vagrant
unidentified <i>Tringa</i> sandpipers	<i>Tringa</i> spp.				2			
Ruddy Turnstone	<i>Arenaria interpres</i>		II		4,495	5,585	2,971	10,000–100,000+ (25,000–100,000)
Great Knot	<i>Calidris tenuirostris</i>		II		11,459	5,305	4,716	(2000– 5000)+380,000
Red Knot	<i>Calidris canutus</i>		II		69,314	66,498	40,340	220,000
Sanderling	<i>Calidris alba</i>		II		3,104	3,682	3,919	47,000–122,000
Red-necked Stint	<i>Calidris ruficollis</i>		II		83,695	105,299	93,437	315,000
Little Stint	<i>Calidris minuta</i>		II		18,587	48,052	21,704	200,000–300,000
Temminck's Stint	<i>Calidris temminckii</i>		II		3,453	5,494	2,103	35,000–200,000
Long-toed Stint	<i>Calidris subminuta</i>		II		597	368	1,286	25,000
Pectoral Sandpiper	<i>Calidris melanotos</i>		II				2	Vagrant
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>		II		8,131	16,225	6,553	160,000
Curlew Sandpiper	<i>Calidris ferruginea</i>		II		21,789	20,915	40,395	380,000–480,000
Dunlin	<i>Calidris alpina</i>		II		72,468	121,175	91,625	850,900+(200,000– 2,000,000)
Spoon-billed Sandpiper	<i>Eurynorhynchus pygmaeus</i>	EN	I		3	9	4	<3,000
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		II		92	120	386	(61,000–64,000)+ 10,000–100,000
Ruff	<i>Philomachus pugnax</i>		II		13,425	31,533	14,514	25,000–100,000
unidentified <i>calidris</i> sandpipers	<i>Calidris</i> spp.				983	930	100	
Red-necked Phalarope	<i>Phalaropus lobatus</i>		II		8	4	1	100,000–1,000,000
Grey Phalarope	<i>Phalaropus fulicarius</i>		II			3		Vagrant
unidentified shorebirds	Charadrii spp.				269,546	76,804	132,361	
<b>GULLS</b>	<b>Laridae</b>							
Black-tailed Gull	<i>Larus crassirostris</i>				21,319	30,728	16,251	1,050,000
Sooty Gull	<i>Larus hemprichii</i>		II		94			Vagrant
Common (Mew) Gull	<i>Larus canus</i>				4,078	5,597	8,281	25,000–100,000
Glaucous-winged Gull	<i>Larus glaucescens</i>				16	35	24	(570,000)
Glaucous Gull	<i>Larus hyperboreus</i>				58	410	71	?
Iceland Gull	<i>Larus glaucooides</i>					1	2	Vagrant
Herring Gull	<i>Larus argentatus</i>				30,037	40,043	27,987	57,000–66,000+?
Heuglin's Gull	<i>Larus heuglini</i>				4,111	2,444	9,781	(25,000–1,000,000)
Slaty-backed Gull	<i>Larus schistisagus</i>				4,536	2,026	3,345	25,000–1,000,000
Yellow-legged Gull/Caspian Gull	<i>Larus cachinnans</i>				165	20	347	(100,000– >1,000,000)
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>				2,314	4,023	2,196	25,000–100,000
Brown-headed Gull	<i>Larus brunnecephalus</i>				10,736	30,059	10,058	(100,000–200,000)
Common Black-headed Gull	<i>Larus ridibundus</i>				48,169	82,212	81,007	125,000→2,000,000
Slender-billed Gull	<i>Larus genei</i>		II		744	1,052	1,032	(150,000)
Saunders's Gull	<i>Larus saundersi</i>	VU	I		1,317	1,568	2,511	7,100–9,600
Relict Gull	<i>Larus relictus</i>	VU	I	I		2	3,367	12,000
Little Gull	<i>Larus minutus</i>					1		Vagrant
Black-legged Kittiwake	<i>Larus tridactyla</i>				71	105	45	Vagrant
unidentified gulls	Laridae spp.				3,007	7,592	5,772	
<b>TERNES</b>	<b>Sternidae</b>							
Gull-billed Tern	<i>Gelochelidon nilotica</i>				3,435	2,602	1,574	70,000–200,000
Caspian Tern	<i>Sterna caspia</i>				897	1,820	2,428	60,000–125,000
Lesser Crested Tern	<i>Sterna bengalensis</i>				3,958	27,368	295	(150,000–180,000)
Sandwich Tern	<i>Sterna sandwicensis</i>		II		83	90		(110,000)
(Greater) Crested Tern	<i>Sterna bergii</i>				1,611	14,258	280	(100,000– 1,000,000)+?
River Tern	<i>Sterna aurantia</i>				6,142	7,660	6,663	50,000–100,000
Black-naped Tern	<i>Sterna sumatrana</i>				12	65	4,381	?
Common Tern	<i>Sterna hirundo</i>				12,563	6,929	10,644	35,000–1,100,000+?
Little Tern	<i>Sterna albifrons</i>		II		5,223	6,852	4,685	60,000–200,000
Black-bellied Tern	<i>Sterna melanogaster</i>	NT			376	641	75	10,000–25,000
Bridled Tern	<i>Sterna anaethetus</i>						20	?
Whiskered Tern	<i>Chlidonias hybridus</i>				30,595	19,230	42,463	50,000–200,000+?
White-winged Black Tern	<i>Chlidonias leucopterus</i>				1,740	722	1,303	25,000–1,000,000
unidentified <i>Sterna</i> Terns	<i>Sterna</i> spp.				1,700			
unidentified terns	Sterninae spp.				6,537	14,352	17,381	
Brown Noddy	<i>Anous stolidus</i>						1	(75,000)
Lesser Noddy	<i>Anous tenuirostris</i>						11	(>1,000,000)

## Results

English Name <sup>1</sup>	Scientific Name	T <sup>2</sup>	CMS <sup>3</sup>	CITES <sup>4</sup>	2002	2003	2004	Estimated Asian Population <sup>5</sup>
White Tern	<i>Gygis alba</i>					10		(100,000–1,000,000)
<b>SKIMMER</b>	<b>Rynchopidae</b>							
Indian Skimmer	<i>Rynchops albigollis</i>	VU			975	663	1,001	6,000–10,000
unidentified waterbirds					5,610			
<b>Total Waterbirds</b>					<b>7,964,568</b>	<b>7,763,834</b>	<b>7,934,809</b>	
<b>ALBATROSSES</b>	<b>Diomedidae</b>							
Laysan Albatross	<i>Phoebastria immutabilis</i>	VU					1	(874,000)
<b>FRIGATEBIRDS</b>	<b>Fregatidae</b>							
Christmas Island Frigatebird	<i>Fregata andrewsi</i>	CR		I		700		2,400–4,800
Lesser Frigatebird	<i>Fregata ariel</i>					2,000		(200,000)
unidentified frigatebirds	<i>Fregata</i> spp.				2		60	
<b>AUKS</b>	<b>Alcidae</b>							
Rhinoceros Auklet	<i>Cerorhinca monocerata</i>				26			(800,000)
Ancient Murrelet	<i>Synthliboramphus antiquus</i>				287	36	2	(1,000,000)
<b>OSPREY, KITES, HAWKS &amp; EAGLES</b>	<b>Accipitridae</b>							
Osprey	<i>Pandion haliaetus</i>		II	II	122	152	114	(460,000)
Black-winged (shouldered) Kite	<i>Elanus caeruleus</i>			II	26	20	25	(100,000–1,000,000)
Black Kite	<i>Milvus migrans</i>		II	II	638	1,102	234	?
Brahminy Kite	<i>Haliaeetus indus</i>			II	255	758	703	100,000–1,000,000
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>			II	42	60	76	?
Pallas's Fish-eagle	<i>Haliaeetus leucoryphus</i>	VU	I	II	11	27	15	(2,500–9,999)
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT	I	I	21	25	50	?
Steller's Sea-eagle	<i>Haliaeetus pelagicus</i>	VU	I	II	60	3		5,000
Lesser Fish-eagle	<i>Ichthyophaga humilis</i>	NT		II	6	8	22	?
Grey-headed Fish-eagle	<i>Ichthyophaga ichtyaetus</i>	NT		II	28	30	46	?
Cinereous Vulture	<i>Aegypius monachus</i>	NT	II	II	149	475	456	11,000–16,000
Crested Serpent-eagle	<i>Spilornis cheela</i>			II			2	?
Hen Harrier	<i>Circus cyaneus</i>		II	II	41	42	33	(1,300,000)
Pallid Harrier	<i>Circus macrourus</i>	NT	II	II	9	4		(18,000–30,000)
Pied Harrier	<i>Circus melanoleucos</i>		II	II	32	19	21	10,000–100,000
Montagu's Harrier	<i>Circus pygargus</i>		II	II	2		1	(100,000–1,000,000)
Western Marsh Harrier	<i>Circus aeruginosus</i>		II	II	108	580	461	(100,000–1,000,000)
Eastern Marsh Harrier	<i>Circus spiliotus</i>		II	II	58	57	45	?
unidentified Harriers	<i>Circus</i> spp.			II	17			
Japanese Sparrowhawk	<i>Accipiter gularis</i>		II	II	2	1	1	10,000–100,000
Eurasian Sparrowhawk	<i>Accipiter nisus</i>		II	II	2	9	8	(1,000,000–10,000,000)
Northern Goshawk	<i>Accipiter gentilis</i>		II	II	3	5	9	?
Common Buzzard	<i>Buteo buteo</i>		II	II	70	61	99	(4,000,000)
Upland Buzzard	<i>Buteo hemilasius</i>		II	II	2	4	1	10,000–100,000
Rough-legged Hawk	<i>Buteo lagopus</i>		II	II	2	5		(100,000–1,000,000)
Lesser Spotted Eagle	<i>Aquila pomarina</i>			II	7	3		(100,000–1,000,000)
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	I	II	40	67	35	(2,500–9,999)
Steppe Eagle	<i>Aquila nipalensis</i>			II		3	7	(100,000–1,000,000)
Imperial Eagle	<i>Aquila heliaca</i>	VU	I	I	10	8	9	(2,500–9,999)
Golden Eagle	<i>Aquila chrysaetos</i>		II	II	4	6	2	(250,000)
Changeable Hawk-eagle	<i>Spizaetus cirrhatous</i>			II			1	10,000–100,000
unidentified raptors					1	13	29	
<b>FALCONS</b>	<b>Falconidae</b>							
Common Kestrel	<i>Falco tinnunculus</i>		II	II	82	84	119	(5,000,000)
Merlin	<i>Falco columbarius</i>		II	II	2	3	4	(100,000–1,000,000)
Peregrine Falcon	<i>Falco peregrinus</i>		II	I	6	60	20	(10,000–100,000)
<b>KINGFISHERS</b>	<b>Alcedinidae</b>							
Ruddy Kingfisher	<i>Halcyon coromanda</i>					35		?
Stork-billed Kingfisher	<i>Halcyon capensis</i>				11	132	73	?
Brown-winged Kingfisher	<i>Halcyon amauroptera</i>					91	15	?
White-throated Kingfisher	<i>Halcyon smyrnensis</i>				218	2,108	924	?
Black-capped Kingfisher	<i>Halcyon pileata</i>				29	258	38	?
Collared Kingfisher	<i>Todiramphus chloris</i>				67	88	73	?
Oriental Dwarf (Black-backed) Kingfisher	<i>Ceyx erithacus</i>					1		?
Blue-eared Kingfisher	<i>Alcedo meninting</i>				14	24	3	?
Blyth's Kingfisher	<i>Alcedo hercules</i>	NT				1		?
Common Kingfisher	<i>Alcedo atthis</i>				169	1,393	774	?
Small Blue Kingfisher	<i>Alcedo coerulescens</i>						1	?
Pied Kingfisher	<i>Ceryle rudis</i>				169	1,046	630	?
unidentified Kingfishers	Alcedinidae spp.					23	3	
<b>WAGTAILS &amp; PIPITS</b>	<b>Motacillidae</b>							
White Wagtail	<i>Motacilla alba</i>				81	2,921	2,351	?
White-browed wagtail	<i>Motacilla maderaspatensis</i>					1,095	673	?

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Grey Wagtail	<i>Motacilla cinerea</i>				1	3,883	2,658	(1,500,000–3,200,000)
Citrine Wagtail	<i>Motacilla citreola</i>				22	307	210	?
Yellow Wagtail	<i>Motacilla flava</i>				5	2,749	3,843	(5,000,000–50,000,000)
Japanese Wagtail	<i>Motacilla grandis</i>					47	43	?
unidentified wagtails	<i>Motacilla</i> spp.					3,500	3,115	
Water Pipit	<i>Anthus spinoletta</i>					212	375	?
Red-throated Pipit	<i>Anthus cervinus</i>					1	1	(500,000–5,000,000)
Oliver-backed Pipit	<i>Anthus hodgsoni</i>					30	23	?
Paddyfield Pipit	<i>Anthus rufulus</i>						14	?
Buff-bellied (American) Pipit	<i>Anthus rubescens</i>					815	647	(22,000,000)
unidentified pipits	<i>Anthus</i> spp.				20			

**Notes:**

English Name<sup>1</sup>: English and scientific names of waterbirds used throughout the report follow *Waterbird Population Estimates* (Wetlands International 2006); other wetland-dependent species follow BirdLife International ([www.birdlife.org/datazone/species/index.html](http://www.birdlife.org/datazone/species/index.html)). The Western Reef Egret is listed a subspecies of Little Egret in *Waterbird Population Estimates*, but has been considered as a separate species, *Egretta gularis*, in view of its distinct plumage differences (see e.g. Grimmett *et al.* 1998) and is listed separately in the report. T<sup>2</sup> – Globally threatened and near-threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

CMS<sup>3</sup> – Appendix I and II species of the Convention on Migratory Species (list downloaded from CMS website as at 31 August 2006, effective from 23 February 2006; see Section 1.4.3 for more information).

CITES<sup>4</sup> – Appendix I and II species of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (list downloaded from CITES website as at 31 August 2006, valid from 14 June 2006).

Asian Population<sup>5</sup>:

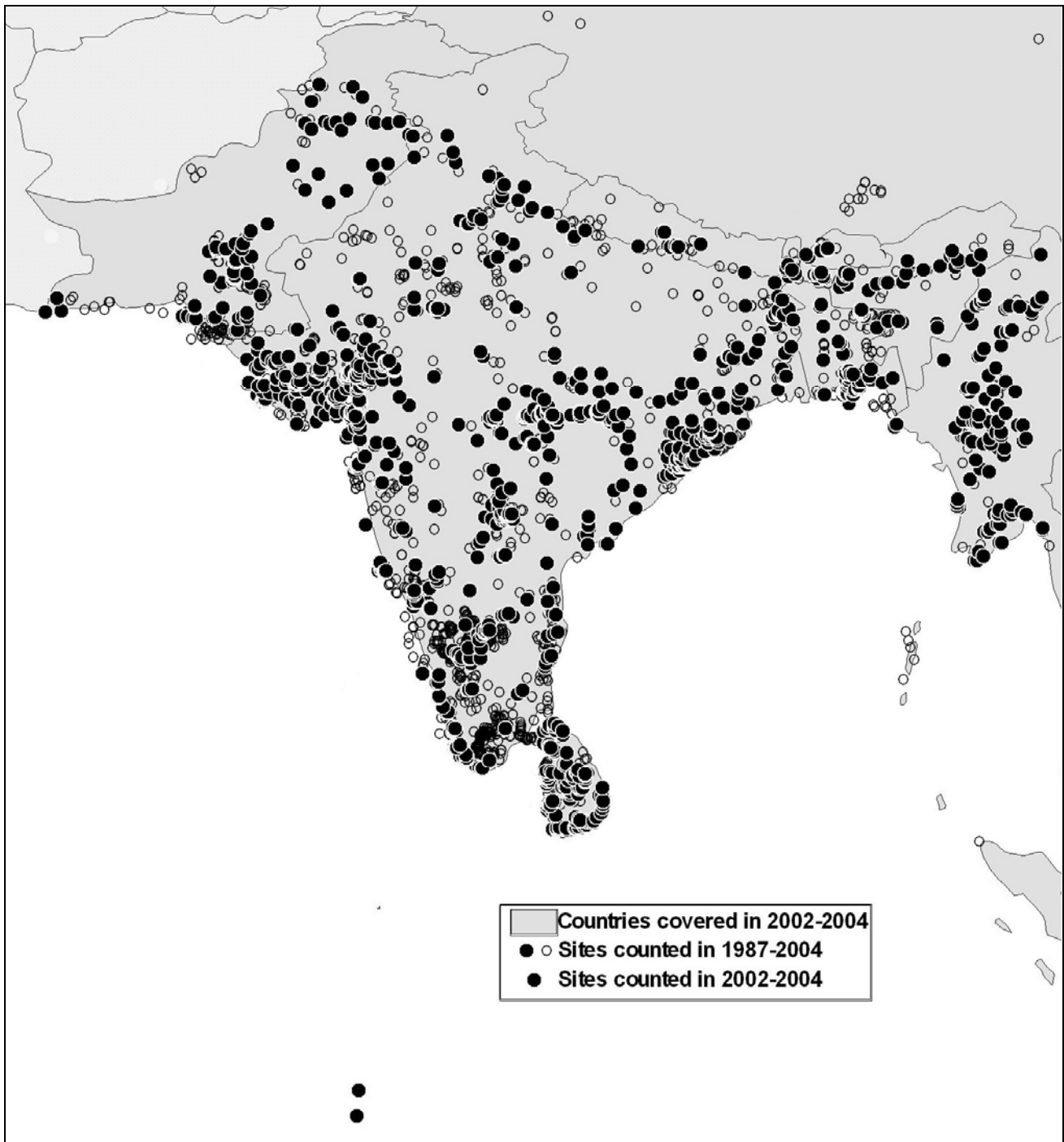
- Waterbird species – It is important to note that these estimates are provided only as an indicative guide for the population estimate of the species for the AWC region in Asia (and migratory shorebirds in Australasia). The estimate is generated by combining estimates of all biogeographic populations of the species occurring in the region during the non-breeding period (northern winter) as extracted from *Waterbird Population Estimates – Fourth Edition* (Wetlands International 2006). *Waterbird Population Estimates* remains the definitive guide to population estimates for all waterbird species worldwide.
- Wetland-dependent species – populations are extracted from BirdLife International ([www.birdlife.org/datazone/species/index.html](http://www.birdlife.org/datazone/species/index.html)); downloaded on 1 January 2007) and Ferguson-Lees *et al.* (2001).
- \* indicates that the estimate may be in need of revision in the light of data presented in this report.
- ? indicates that no estimate is available for one or more populations of the species.
- Estimates are placed in brackets when only a proportion of the population occurs in the AWC region.
- Vagrant – a species that is accidental (rare and irregular) in occurrence.

## 3.2 South Asia

### 3.2.1 Overview

A total of 1,205 sites were surveyed during 2002 to 2004. Total numbers of waterbirds recorded were 3,941,894 (518 sites), 3,544,755 (735 sites) and 3,014,246 (548 sites) respectively in 2002, 2003 and 2004 (Figure 7 and Table 6). Thirty-three Ramsar sites, three World Heritage Sites and 111 IBAs were surveyed at least once. More than 20,000 waterbirds were recorded at 59 different sites, and 239 sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

**Figure 7: Sites covered by the AWC in the South Asian Region, 1987–2004**



Totals of 170 waterbird and 39 wetland-dependent species (including 22 raptors, nine kingfishers, and eight wagtails and plovers) were recorded. The highest count totals of the most numerous species (more than 50,000 birds) were Northern Pintail (569,025 in 2003), Common Coot (337,154 in 2004), Northern Shoveler (269,045 in 2002), Gadwall (262,888 in 2004), Eurasian Wigeon (178,267 in 2004), Common Pochard (161,696 in 2002), Lesser Whistling Duck (150,873 in 2003), Black-tailed Godwit (NT, 126,898 in 2003), Garganey (109,408 in 2003), Demoiselle Crane (121,772 in 2003), Common Teal (106,365 in 2003), Tufted Duck (102,998 in 2002), Ferruginous Duck (NT, 93,988 in 2002), Cattle Egret (76,455 in 2002), Lesser Flamingo (NT, 71,690 in 2004), Asian Openbill (59,897 in 2002), Little Cormorant (59,719 in 2002), Cotton Pygmy Goose (55,634 in 2002), Common Crane (51,853 in 2003) and Red-crested Pochard (50,005 in 2003).

Highest count totals of 16 globally threatened species were as follows: Critically Endangered: Sociable Lapwing (8 in 2002); Endangered: Greater Adjutant (15 in 2003), White-winged Duck (2 in 2004), White-headed Duck (23 in 2003), Spoon-billed Sandpiper (6 in 2003); Vulnerable: Spot-billed Pelican (3,929 in 2003), Dalmatian Pelican (1,135 in 2002), Lesser Adjutant (214 in 2003), Marbled Teal (132 in 2004), Baer's Pochard (183 in 2003), Sarus Crane (275 in 2003), Masked Finfoot (2 in 2002), Indian Skimmer (1,000 in 2004), Pallas's Sea Eagle (27 in 2003), Greater Spotted Eagle (65 in 2003) and Imperial Eagle (6 in 2003).

Highest count totals of 14 Near Threatened species were as follows: Oriental Darter (1,226 in 2003), Painted Stork (8,408 in 2003), Black-necked Stork (88 in 2003), Black-headed Ibis (6,737 in 2002), Lesser Flamingo (71,690 in 2004), Falcated Duck (306 in 2003), Ferruginous Duck (93,988 in 2002), Asian Dowitcher (6 in 2004), Black-tailed Godwit (126,898 in 2003), Black-bellied Tern (641 in 2003), White-tailed Eagle (1 in 2004), Grey-headed Fish-eagle (24 in 2004), Lesser Fish-eagle (22 in 2004) and Pallid Harrier (9 in 2002).

**Table 6: Waterbird species totals reported during the AWC in South Asia, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		17,605	18,463	13,465
Red-necked Grebe	<i>Podiceps grisegena</i>		3	1	12
Great Crested Grebe	<i>Podiceps cristatus</i>		531	827	1,477
Black-necked Grebe	<i>Podiceps nigricollis</i>		476	85	5
unidentified grebes	Podicipedidae spp.		54	1,563	682
Great White Pelican	<i>Pelecanus onocrotalus</i>		4,446	7,435	8,461
Spot-billed Pelican	<i>Pelecanus philippensis</i>	VU	1,919	3,929	1,038
Dalmatian Pelican	<i>Pelecanus crispus</i>	VU	1,135	266	570
unidentified pelicans	Pelecanidae spp.		20	766	4
Great Cormorant	<i>Phalacrocorax carbo</i>		13,053	11,332	10,940
Indian Cormorant	<i>Phalacrocorax fuscicollis</i>		5,679	6,579	9,718
Little Cormorant	<i>Phalacrocorax niger</i>		59,719	47,077	32,118
unidentified cormorants	Phalacrocoracidae spp.		5,583	3,199	8,948
Oriental Darter	<i>Anhinga melanogaster</i>	NT	621	1,226	637
Grey Heron	<i>Ardea cinerea</i>		7,274	5,519	3,664
Eastern White Egret	<i>Ardea modesta</i>		3,906	11,429	5,967
Intermediate Egret	<i>Ardea intermedia</i>		10,572	22,737	7,703
Goliath Heron	<i>Ardea goliath</i>		1	3	4
Purple Heron	<i>Ardea purpurea</i>		3,480	1,838	1,540
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		76,455	46,667	49,179
Green-backed Heron	<i>Butorides striatus</i>		199	649	42
Indian Pond Heron	<i>Ardeola grayii</i>		35,413	22,072	15,877
Little Egret	<i>Egretta garzetta</i>		47,421	24,633	21,411
Western Reef Egret	<i>Egretta gularis</i>		646	637	254
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		623	3,275	542
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		4,996	4,517	1,864
Malayan Night-heron	<i>Gorsachius melanolophus</i>		27		
Eurasian Bittern	<i>Botaurus stellaris</i>			32	4
Little Bittern	<i>Ixobrychus minutus</i>			7	
Yellow Bittern	<i>Ixobrychus sinensis</i>		129	238	62
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		51	100	105
Black Bittern	<i>Ixobrychus flavicollis</i>		36	212	56
unidentified bitterns	<i>Ixobrychus</i> spp.			35	41
unidentified Ardeidae	Ardeidae spp.		3,177	6,063	13,441
Painted Stork	<i>Mycteria leucocephala</i>	NT	4,983	8,408	5,780
Asian Openbill	<i>Anastomus oscitans</i>		59,897	20,119	16,771
Black Stork	<i>Ciconia nigra</i>		127	110	168
Woolly-necked Stork	<i>Ciconia episcopus</i>		375	542	440
Eurasian White Stork	<i>Ciconia ciconia</i>		135	69	75
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT	25	88	17
Greater Adjutant	<i>Leptoptilos dubius</i>	EN		15	9

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	77	214	211
unidentified storks	Ciconiidae spp.		4		7
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	4,594	5,737	5,317
Indian Black Ibis	<i>Pseudibis papillosa</i>		3,230	2,413	2,928
Glossy Ibis	<i>Plegadis falcinellus</i>		4,760	4,817	7,265
unidentified ibises	<i>Threskiornithidae</i> spp.		9,800	5	
Eurasian Spoonbill	<i>Platalea leucorodia</i>		3,863	5,141	6,315
Greater Flamingo	<i>Phoenicopterus ruber roseus</i>		20,339	43,439	12,590
Lesser Flamingo	<i>Phoeniconaias minor</i>	NT	13,019	54,623	71,690
unidentified flamingos	Phoenicopteridae spp.		6,224	253	
Fulvous Whistling Duck	<i>Dendrocygna bicolor</i>		20,981	40,183	8,083
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		150,873	117,615	71,215
Greylag Goose	<i>Anser anser</i>		2,889	10,112	2,729
Bar-headed Goose	<i>Anser indicus</i>		14,342	20,587	19,775
unidentified grey geese	<i>Anser</i> spp.		979		
Ruddy Shelduck	<i>Tadorna ferruginea</i>		36,996	26,554	16,133
Common Shelduck	<i>Tadorna tadorna</i>		6,374	7,733	12,103
White-winged Duck	<i>Cairina scutulata</i>	EN			2
Comb Duck	<i>Sarkidiornis melanotos</i>		2,542	856	4,014
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		55,634	29,260	19,979
Eurasian Wigeon	<i>Anas penelope</i>		145,937	118,140	178,267
Falcated Duck	<i>Anas falcata</i>	NT	70	306	7
Gadwall	<i>Anas strepera</i>		228,999	194,814	262,888
Common Teal	<i>Anas crecca</i>		95,238	106,365	63,008
Mallard	<i>Anas platyrhynchos</i>		18,651	21,897	10,651
Spot-billed Duck	<i>Anas poecilorhyncha</i>		16,489	22,852	14,680
Northern Pintail	<i>Anas acuta</i>		495,096	569,025	488,688
Garganey	<i>Anas querquedula</i>		55,874	109,408	73,546
Northern Shoveler	<i>Anas clypeata</i>		269,045	187,184	150,750
Marbled Teal	<i>Marmaronetta angustirostris</i>	VU	42	132	
Red-crested Pochard	<i>Netta rufina</i>		50,005	63,474	28,873
Common Pochard	<i>Aythya ferina</i>		161,696	93,969	68,408
Baer's Pochard	<i>Aythya baeri</i>	VU	161	183	43
Ferruginous Duck	<i>Aythya nyroca</i>	NT	93,988	13,275	28,701
Tufted Duck	<i>Aythya fuligula</i>		102,998	88,125	20,773
Red-breasted Merganser	<i>Mergus serrator</i>		2		
Goosander	<i>Mergus merganser</i>		414	43	575
White-headed Duck	<i>Oxyura leucocephala</i>	EN	5	23	5
unidentified ducks	Anatinae spp.		363,494	176,726	342,188
Demoiselle Crane	<i>Anthropoides virgo</i>		9,385	121,772	61,528
Sarus Crane	<i>Grus antigone</i>	VU	194	275	217
Common Crane	<i>Grus grus</i>		4,362	51,853	9,984
unidentified cranes	Gruidae spp.		1,000	32,118	2
Slaty-legged Crake	<i>Rallina eurizinoides</i>		1,000		
Slaty-breasted Rail	<i>Gallirallus striatus</i>		1,011	11	35
Water Rail	<i>Rallus aquaticus</i>		83	506	22
Brown Crake	<i>Amauornis akool</i>		59	18	31
Black-tailed (Elwes's) Crake	<i>Amauornis bicolor</i>		4		
White-breasted Waterhen	<i>Amauornis phoenicurus</i>		1,788	3,650	2,629
Baillon's Crake	<i>Porzana pusilla</i>		247	24	5
Ruddy-breasted Crake	<i>Porzana fusca</i>		31	80	29
Watercock	<i>Gallicrex cinerea</i>		365	427	81
Purple Swamphen	<i>Porphyrio porphyrio</i>		44,116	18,251	12,799
Common Moorhen	<i>Gallinula chloropus</i>		38,932	9,724	3,990
Common Coot	<i>Fulica atra</i>		334,060	309,129	337,154
unidentified rails	Rallidae spp.		2	3	
Masked Finfoot	<i>Heliopais personata</i>	VU	2		1
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		31,611	5,919	5,061
Bronze-winged Jacana	<i>Metopidius indicus</i>		26,393	5,362	2,957
Greater Painted Snipe	<i>Rostratula benghalensis</i>		96	413	89
Crab Plover	<i>Dromas ardeola</i>		5	6,957	8
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>		352	344	26
Ibisbill	<i>Ibidorhyncha struthersii</i>		102		8
Black-winged Stilt	<i>Himantopus himantopus</i>		33,436	47,033	35,608
Pied Avocet	<i>Recurvirostra avosetta</i>		1,486	13,485	4,826
Stone Curlew	<i>Burhinus oedicephalus</i>		12	2	39
Great Thick-knee	<i>Burhinus (Esacus) recurvirostris</i>		558	279	252
Indian Courser	<i>Cursorius coromandelicus</i>			1	
Collared Pratincole	<i>Glareola pratincola</i>			354	9
Oriental Pratincole	<i>Glareola maldivarum</i>		352	89	88
Small Pratincole	<i>Glareola lactea</i>		7,301	3,600	3,583
Northern Lapwing	<i>Vanellus vanellus</i>		421	1,473	468



English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
River Lapwing	<i>Vanellus duvaucelli</i>		1,027	656	259
Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>		697	1,245	876
Grey-headed Lapwing	<i>Vanellus cinereus</i>		636	328	424
Red-wattled Lapwing	<i>Vanellus indicus</i>		8,554	7,451	7,811
Sociable Lapwing	<i>Vanellus gregarius</i>	CR	8		
White-tailed Lapwing	<i>Vanellus leucurus</i>		241	756	372
unidentified lapwings	<i>Vanellus</i> spp.		1	70	19
Pacific Golden Plover	<i>Pluvialis fulva</i>		15,550	3,038	6,972
Grey Plover	<i>Pluvialis squatarola</i>		3,797	380	682
Great Ringed Plover	<i>Charadrius hiaticula</i>		2	28	5
Long-billed Plover	<i>Charadrius placidus</i>		19		
Little Ringed Plover	<i>Charadrius dubius</i>		1,670	6,009	3,178
Kentish Plover	<i>Charadrius alexandrinus</i>		3,173	3,395	3,371
Lesser Sandplover	<i>Charadrius mongolus</i>		12,209	27,141	14,624
Greater Sandplover	<i>Charadrius leschenaultii</i>		1,591	502	186
unidentified <i>Charadrius</i> plovers	<i>Charadrius</i> spp.		546	95	5
Eurasian Woodcock	<i>Scolopax rusticola</i>		3	6	3
Jack Snipe	<i>Lymnocyptes minimus</i>		10	175	110
Solitary Snipe	<i>Gallinago solitaria</i>			44	21
Pintail Snipe	<i>Gallinago stenura</i>		294	330	342
Swinhoe's Snipe	<i>Gallinago megala</i>			97	1
Common Snipe	<i>Gallinago gallinago</i>		2,131	1,688	500
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT		5	6
Black-tailed Godwit	<i>Limosa limosa</i>	NT	110,338	126,898	41,655
Bar-tailed Godwit	<i>Limosa lapponica</i>		4,038	4,840	1,629
unidentified godwits	<i>Limosa</i> spp.		314		
Whimbrel	<i>Numenius phaeopus</i>		281	1,433	131
Eurasian Curlew	<i>Numenius arquata</i>		14,107	2,097	540
Spotted Redshank	<i>Tringa erythropus</i>		883	515	92
Common Redshank	<i>Tringa totanus</i>		8,424	10,991	6,019
Marsh Sandpiper	<i>Tringa stagnatilis</i>		10,818	2,844	13,066
Common Greenshank	<i>Tringa nebularia</i>		3,972	3,407	1,455
Green Sandpiper	<i>Tringa ochropus</i>		1,934	801	492
Wood Sandpiper	<i>Tringa glareola</i>		3,016	6,421	4,033
Terek Sandpiper	<i>Xenus cinereus</i>		328	412	171
Common Sandpiper	<i>Actitis hypoleucos</i>		6,340	6,172	5,275
Ruddy Turnstone	<i>Arenaria interpres</i>		208	190	126
Red Knot	<i>Calidris canutus</i>			25	
Great Knot	<i>Calidris tenuirostris</i>		10	40	37
Sanderling	<i>Calidris alba</i>		190	152	29
Little Stint	<i>Calidris minuta</i>		18,585	48,044	21,696
Temminck's Stint	<i>Calidris temminckii</i>		3,064	5,247	1,396
Long-toed Stint	<i>Calidris subminuta</i>		3	16	40
Curlew Sandpiper	<i>Calidris ferruginea</i>		4,364	4,577	25,559
Dunlin	<i>Calidris alpina</i>		20,926	830	1,575
Spoon-billed Sandpiper	<i>Eurynorhynchus pygmaeus</i>	EN	1	6	
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		80	3	74
Ruff	<i>Philomachus pugnax</i>		13,409	31,520	14,458
unidentified <i>Calidris</i> sandpipers	<i>Calidris</i> spp.		591	9	25
unidentified <i>Tringa</i> sandpipers	<i>Tringa</i> spp.		10,000		
Red-necked Phalarope	<i>Phalaropus lobatus</i>		4	2	1
unidentified shorebirds	<i>Charadrii</i> spp.		152,377	26,775	51,581
Sooty Gull	<i>Larus hemprichii</i>		94		
Heuglin's Gull	<i>Larus heuglini</i>		3,682	1,865	9,484
Yellow-legged Gull	<i>Larus cachinnans</i>			18	52
Great Black-headed (Pallas's) Gull	<i>Larus ichthyæetus</i>		1,607	3,859	1,964
Brown-headed Gull	<i>Larus brunnicephalus</i>		9,265	19,427	8,007
Common Black-headed Gull	<i>Larus ridibundus</i>		8,865	32,141	3,731
Slender-billed Gull	<i>Larus genei</i>		743	1,048	1,032
Little Gull	<i>Larus minutus</i>			1	
unidentified gulls	<i>Laridae</i> spp.		2,329	5,974	687
Gull-billed Tern	<i>Gelochelidon nilotica</i>		2,941	2,117	1,082
Caspian Tern	<i>Sterna caspia</i>		638	1,163	1,282
Lesser Crested Tern	<i>Sterna bengalensis</i>		3,487	27,183	275
Sandwich Tern	<i>Sterna sandvicensis</i>		83	90	
(Greater) Crested Tern	<i>Sterna bergii</i>		352	13,969	238
River Tern	<i>Sterna aurantia</i>		6,102	7,522	6,306
Black-naped Tern	<i>Sterna sumatrana</i>				12
Common Tern	<i>Sterna hirundo</i>		5,769	1,475	180
Little Tern	<i>Sterna albifrons</i>		4,618	4,678	1,422
Black-bellied Tern	<i>Sterna melanogaster</i>	NT	362	641	38
Bridled Tern	<i>Sterna anaethetus</i>				20

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Whiskered Tern	<i>Chlidonias hybridus</i>		22,755	18,054	25,842
White-winged Black Tern	<i>Chlidonias leucopterus</i>		828	19	30
unidentified terns	<i>Sternae spp.</i>		2,028	13,747	13,601
Brown Noddy	<i>Anous stolidus</i>				1
Lesser Noddy	<i>Anous tenuirostris</i>				11
Indian Skimmer	<i>Rynchops albicollis</i>	VU	975	661	1,000
<b>Total Waterbirds</b>			<b>3,941,894</b>	<b>3,544,755</b>	<b>3,014,246</b>
Osprey	<i>Pandion haliaetus</i>		84	109	53
Black-shouldered Kite	<i>Elanus caeruleus</i>		15	10	
Black Kite	<i>Milvus migrans</i>		426	888	55
Brahminy Kite	<i>Haliastur indus</i>		186	669	522
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>		29	45	46
Pallas's Sea Eagle	<i>Haliaeetus leucoryphus</i>	VU	11	27	15
White-tailed Sea Eagle	<i>Haliaeetus albicilla</i>	NT			1
Lesser Fish-eagle	<i>Ichthyophaga humilis</i>	NT		3	22
Grey-headed Fish-eagle	<i>Ichthyophaga ichtyaetus</i>	NT	9	15	24
Crested Serpent-eagle	<i>Spilornis cheela</i>				2
Hen Harrier	<i>Circus cyaneus</i>			1	
Pallid Harrier	<i>Circus macrourus</i>	NT	9	4	
Pied Harrier	<i>Circus melanoleucos</i>		4	3	2
Montagu's Harrier	<i>Circus pygargus</i>		2		1
Western Marsh Harrier	<i>Circus aeruginosus</i>		71	532	454
Eastern Marsh Harrier	<i>Circus spilinotus</i>			44	5
Lesser Spotted Eagle	<i>Aquila pomarina</i>		7	3	
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	26	65	26
Steppe Eagle	<i>Aquila nipalensis</i>			3	7
Imperial Eagle	<i>Aquila heliaca</i>	VU	4	6	5
Changeable Hawk-eagle	<i>Spizaetus cirrhatus</i>				1
Peregrine Falcon	<i>Falco peregrinus</i>			48	2
unidentified raptors				13	27
Ruddy Kingfisher	<i>Halcyon coromanda</i>			34	
Stork-billed Kingfisher	<i>Halcyon capensis</i>		3	122	65
Brown-winged Kingfisher	<i>Halcyon amauroptera</i>			91	15
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		36	1,693	827
Black-capped Kingfisher	<i>Halcyon pileata</i>		1	196	19
Collared Kingfisher	<i>Todiramphus chloris</i>			40	3
Oriental Dwarf Kingfisher	<i>Ceyx erithacus</i>			1	
Common Kingfisher	<i>Alcedo atthis</i>		15	1,192	645
Pied Kingfisher	<i>Ceryle rudis</i>		143	1,012	534
unidentified kingfishers	<i>Alcedinidae spp.</i>			23	3
White Wagtail	<i>Motacilla alba</i>		17	2,613	1,737
White-browed wagtail	<i>Motacilla maderaspatensis</i>			1,095	673
Grey Wagtail	<i>Motacilla cinerea</i>			3,878	2,636
Citrine Wagtail	<i>Motacilla citreola</i>		4	307	210
Yellow Wagtail	<i>Motacilla flava</i>			2,733	3,833
unidentified wagtails	<i>Motacilla spp.</i>				114
Water Pipit	<i>Anthus spinoletta</i>			211	375
Red-throated Pipit	<i>Anthus cervinus</i>			1	1
Paddyfield Pipit	<i>Anthus rufulus</i>				14

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

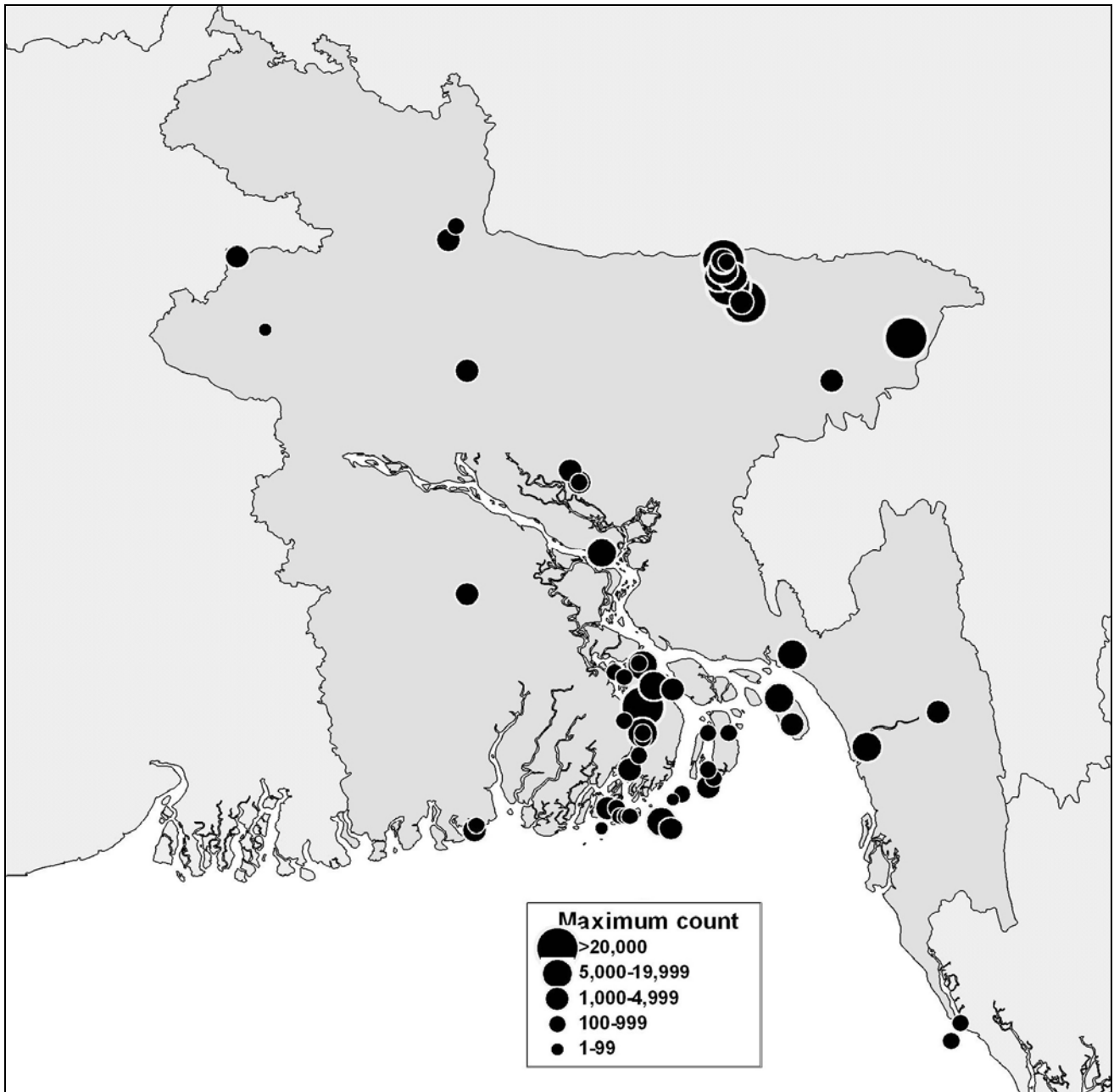
### 3.2.2 Bangladesh

Sixty-one sites were surveyed at least once during the three years 2002–2004 (Figure 8 and Table 7). Waterbird totals recorded were 294,808 (33 sites), 428,674 (30 sites) and 570,893 (42 sites) respectively in 2002, 2003 and 2004.

Tangua Haor and the Sundarbans, the only two Ramsar sites (both IBAs) in Bangladesh were surveyed; the Sundarbans is also a UNESCO World Heritage Site. In addition, six IBAs were surveyed.

Sites that recorded more than 20,000 waterbirds were Tangua Haor Complex (more than 200,000 waterbirds in all three years), Tagrar Char (151,110 in 2004), Aila Beel (131,783 in 2003), Chatidhara Beel (38,449 in 2004) and Hakaluki Haors (34,483 in 2004). A total of 22 sites recorded more than 1% of the biogeographic population of at least one waterbird species.

**Figure 8: AWC site coverage and numerical distribution of waterbirds in Bangladesh, 2002–2004**



Totals of 105 waterbird, 11 raptor and seven kingfisher species were recorded during the three years (Table 8). The most numerous species recorded were Northern Pintail (128,809 in 2003), Ferruginous Duck (92,680 in 2002), Gadwall (68,321 in 2003), Eurasian Wigeon (58,728 in 2004), Common Coot (41,000 in 2003), Fulvous Whistling Duck (31,783 in 2003), Red-crested Pochard (14,333) and Common Shelduck (11,676 in 2004).

The highest count totals of six Vulnerable species during this period (Table 8) were as follows: Lesser Adjutant (14 in 2002), Baer's Pochard (151 in 2002), Masked Finfoot (2 in 2002), Indian Skimmer (1,000 in 2004), Pallas's Fish-eagle (7 in 2002) and Greater Spotted Eagle (3 in 2004). Highest counts of the nine Near Threatened species were as follows: Oriental Darter (5 in 2004), Black-headed Ibis (149 in 2003), Lesser Flamingo (12 in 2002), Falcated Duck (10 in 2002), Ferruginous Duck (92,680 in 2002), Asian Dowitcher (2 in 2004), Black-tailed Godwit (5,923 in 2003), Black-bellied Tern (6 in 2002) and Grey-headed Fish-eagle (2 in 2004).

Major threats to the wetlands and waterbirds reported were agricultural development, wetland reclamation, clearance of vegetation and waterbird hunting and poaching. The counts were coordinated by the Bangladesh Bird Club.

Table 7: Wetland sites surveyed during the AWC in Bangladesh, 2002–2004

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Barisal	Banger Char					7,249
Barisal	Bheduria Char				103	
Barisal	Dholar Char				1,559	
Barisal	Dighai Char				772	406
Barisal	Doba Char			1,736	3,459	79
Barisal	Ganeshpur Char				280	
Barisal	Gazipur Char			9,816	8,088	4,798
Barisal	Islam Char					44
Barisal	Kalakacha Char			73		
Barisal	Kalkiny Char			4,802		
Barisal	Kashem Char			1,488		
Barisal	Kazir Char					836
Barisal	Kochuar Char				420	
Barisal	Kukri-Mukri Char			642	31	
Barisal	Laksmi Char			196		
Barisal	Montaj Char			383		
Barisal	Mudflat East of Moulovir Char			1,080	281	
Barisal	Nabir Char			279		163
Barisal	New Char, Opposite Dewla					1,500
Barisal	New Char, West of Najirpur					164
Barisal	Peal (Pial) Char			119	207	72
Barisal	Samiruddin Char			11,220		
Barisal	Shahjalal Char			1,562	2,306	10,368
Barisal	Sikder Char			601		
Barisal	Tagrar Char					151,110
Barisal	Taltalir Char					529
Barisal	Urir Char				8,061	2,392
Chittagong	Ganges Delta: Hatia North	pl				230
Chittagong	Ganges Delta: Hatia West	pl				175
Chittagong	Jahajmara			1,362	801	1,996
Chittagong	Kaptai Lake					1,875
Chittagong	Moulavir Char			966	425	640
Chittagong	Muhuri Dam	I	48DF	4,086	9,158	10,092
Chittagong	Ganges Delta: Nijum Dweep	pl		660	666	687
Chittagong	Patenga Beach	I	2AFH	825	2,367	6,301
Chittagong	St. Martins Island		L			102
Chittagong	Teknaf					461
Dhaka	Chapada Beel		6HI	3,096	1,714	
Dhaka	Dhaka Zoo		4	78	819	
Dhaka	Dighirpar		6F	5,164		234
Dhaka	Jahangirnagar University (JU) Campus		489D	1,394	1,912	1,401
Dhaka	Mirpur Ceramic Factory Premises		A			3,215
Khulna	Sundarbans: Kachikhali	pR, pl,	L	294		507
Khulna	Sundarbans: Katka	pW	L	1,333		202
Rajshahi	Gaibandha North			757		
Rajshahi	Jabai Beel		26			2,735
Rajshahi	Shariakandi		F		1,156	
Rajshahi	Siraganj (Jamuna River)		F	1,633	2,663	422
Rajshahi	Utrail Beel		26			95
Sylhet	Aila (Ailer) Beel	I	5H		131,783	104
Sylhet	Chatidhara Beel		I			38,449
Sylhet	Hail Haor	I	24678FGI	701	1,116	693
Sylhet	Hakaluki Haors	I	67FGI		26,380	34,483
Sylhet	Khajauory Beel		4H	247	486	
Sylhet	Khana Muia Beel		6I	3,436	14,190	
Sylhet	Pagna Beel		6I			4,561
Sylhet	Pana Beel		HI	544	2,087	406
Sylhet	Pashua Haor		46I	5,335	4,319	1,214
Sylhet	Rowa Beel		6I			1,973
Sylhet	Shonir Haor		6CDI			7,238
Sylhet	Tangua Haor Complex	R, I	46HI	228,992	201,106	270,761

**Notes:**

Status<sup>1</sup>: R – Ramsar site, pR – part of a Ramsar site, I – IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), pW – part of a UNESCO World Heritage Site.

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

**Table 8: Waterbird species counts reported during the AWC in Bangladesh, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		1,559	1,174	588
Great Crested Grebe	<i>Podiceps cristatus</i>		16	29	190
Great Cormorant	<i>Phalacrocorax carbo</i>		7	68	170
Little Cormorant	<i>Phalacrocorax niger</i>		532	1,320	802
Oriental Darter	<i>Anhinga melanogaster</i>	NT	4		5
Grey Heron	<i>Ardea cinerea</i>		171	209	260
Eastern White Egret	<i>Ardea modesta</i>		709	1,541	487
Intermediate Egret	<i>Ardea intermedia</i>		2,715	9,432	1,087
Purple Heron	<i>Ardea purpurea</i>		15	14	20
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		422	251	247
Green-backed Heron	<i>Butorides striatus</i>		2		
Indian Pond Heron	<i>Ardeola grayii</i>		594	251	368
Little Egret	<i>Egretta garzetta</i>		1,576	372	731
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		37	264	800
Malayan Night-heron	<i>Gorsachius melanolophus</i>		1		
Yellow Bittern	<i>Ixobrychus sinensis</i>		5		
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		4	1	1
Black Bittern	<i>Ixobrychus flavicollis</i>		1		
Unidentified Ardeidae	Ardeidae spp.		53		180
Asian Openbill	<i>Anastomus oscitans</i>				133
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	14	2	4
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	109	149	84
Glossy Ibis	<i>Plegadis falcinellus</i>				1
Eurasian Spoonbill	<i>Platalea leucorodia</i>		2	11	
Fulvous Whistling Duck	<i>Dendrocygna bicolor</i>		11,099	31,783	4,766
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		5,118	4,370	5,008
Greylag Goose	<i>Anser anser</i>			33	3
Bar-headed Goose	<i>Anser indicus</i>		356	14	151
Ruddy Shelduck	<i>Tadorna ferruginea</i>		7,424	9,631	3,438
Common Shelduck	<i>Tadorna tadorna</i>		5,640	7,046	11,676
Comb Duck	<i>Sarkidiornis melanotos</i>		2	4	
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		368	81	408
Eurasian Wigeon	<i>Anas penelope</i>		2,870	4,252	58,728
Falcated Duck	<i>Anas falcata</i>	NT	10	6	1
Gadwall	<i>Anas strepera</i>		9,945	68,321	81,517
Common Teal	<i>Anas crecca</i>		1,435	348	4,722
Mallard	<i>Anas platyrhynchos</i>		17	13	22
Spot-billed Duck	<i>Anas poecilorhyncha</i>		1,240	213	489
Northern Pintail	<i>Anas acuta</i>		52,233	128,809	85,109
Garganey	<i>Anas querquedula</i>		3,059	5,761	23
Northern Shoveler	<i>Anas clypeata</i>		8,520	6,157	4,727
Red-crested Pochard	<i>Netta rufina</i>		6,700	14,333	10,356
Common Pochard	<i>Aythya ferina</i>		5,072	3,362	6,977
Baer's Pochard	<i>Aythya baeri</i>	VU	151	30	25
Ferruginous Duck	<i>Aythya nyroca</i>	NT	92,680	11,277	25,411
Tufted Duck	<i>Aythya fuligula</i>		110	4,359	4,976
unidentified ducks	Anatinae spp.		25,480	56,500	210,011
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		16	12	5
Baillon's Crake	<i>Porzana pusilla</i>		6	6	1
Ruddy-breasted Crake	<i>Porzana fusca</i>		10	5	
Purple Swamphen	<i>Porphyrio porphyrio</i>		1,386	128	199
Common Moorhen	<i>Gallinula chloropus</i>		429	132	210
Common Coot	<i>Fulica atra</i>		19,975	41,000	31,685
Masked Finfoot	<i>Heliopais personata</i>	VU	2		1
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		855	253	322
Bronze-winged Jacana	<i>Metopidius indicus</i>		8	8	4
Greater Painted Snipe	<i>Rostratula benghalensis</i>			2	22
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>		2		
Black-winged Stilt	<i>Himantopus himantopus</i>		2,100	37	71
Pied Avocet	<i>Recurvirostra avosetta</i>		178	18	39
Great Thick-knee	<i>Burhinus (Esacus) recurvirostris</i>		7		11
Small Pratincole	<i>Glareola lactea</i>		4,472	259	74
Northern Lapwing	<i>Vanellus vanellus</i>		7	5	
River Lapwing	<i>Vanellus duvaucelli</i>		7		
Grey-headed Lapwing	<i>Vanellus cinereus</i>		397	69	33
Red-wattled Lapwing	<i>Vanellus indicus</i>		24	16	13
Pacific Golden Plover	<i>Pluvialis fulva</i>		2,099	470	1,635
Grey Plover	<i>Pluvialis squatarola</i>		82	2	
Little Ringed Plover	<i>Charadrius dubius</i>			15	62
Kentish Plover	<i>Charadrius alexandrinus</i>		716	47	30

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Lesser Sandplover	<i>Charadrius mongolus</i>		1,207	3,330	849
Greater Sandplover	<i>Charadrius leschenaultii</i>		145	22	20
Pintail Snipe	<i>Gallinago stenura</i>		4		
Common Snipe	<i>Gallinago gallinago</i>		28	39	6
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT			2
Black-tailed Godwit	<i>Limosa limosa</i>	NT	1,542	5,923	1,671
Bar-tailed Godwit	<i>Limosa lapponica</i>		3,413		68
Whimbrel	<i>Numenius phaeopus</i>		101	93	42
Eurasian Curlew	<i>Numenius arquata</i>		1,430	314	224
Spotted Redshank	<i>Tringa erythropus</i>		7	25	2
Common Redshank	<i>Tringa totanus</i>		688	465	239
Marsh Sandpiper	<i>Tringa stagnatilis</i>		26	62	9
Common Greenshank	<i>Tringa nebularia</i>		416	194	333
Green Sandpiper	<i>Tringa ochropus</i>		32	6	6
Wood Sandpiper	<i>Tringa glareola</i>		44	34	51
Terek Sandpiper	<i>Xenus cinereus</i>		62	18	18
Common Sandpiper	<i>Actitis hypoleucos</i>		38	34	9
Ruddy Turnstone	<i>Arenaria interpres</i>		14	7	7
Great Knot	<i>Calidris tenuirostris</i>		2		
Sanderling	<i>Calidris alba</i>		12	11	
Little Stint	<i>Calidris minuta</i>		131	86	523
Temminck's Stint	<i>Calidris temminckii</i>		1	35	9
Curlew Sandpiper	<i>Calidris ferruginea</i>		2		3
Ruff	<i>Philomachus pugnax</i>		42	141	46
unidentified shorebirds	Charadrii spp.		229	2,137	4,142
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>		240	217	64
Brown-headed Gull	<i>Larus brunnicephalus</i>		982	106	587
Common Black-headed Gull	<i>Larus ridibundus</i>		59	106	163
unidentified gulls	Laridae spp.			30	409
Gull-billed Tern	<i>Gelochelidon nilotica</i>		4	2	8
Caspian Tern	<i>Sterna caspia</i>		2	3	13
Lesser Crested Tern	<i>Sterna bengalensis</i>		12		
River Tern	<i>Sterna aurantia</i>		36	2	1
Common Tern	<i>Sterna hirundo</i>		57	7	
Little Tern	<i>Sterna albifrons</i>		4	46	3
Black-bellied Tern	<i>Sterna melanogaster</i>	NT	6	1	
Whiskered Tern	<i>Chlidonias hybridus</i>		1,112	372	781
White-winged Black Tern	<i>Chlidonias leucopterus</i>		5		
unidentified terns	Sterninae spp.		1,315	31	466
Indian Skimmer	<i>Rynchops albicollis</i>	VU	503	500	1,000
<b>Total Waterbirds</b>			<b>294,808</b>	<b>428,674</b>	<b>570,893</b>
Osprey	<i>Pandion haliaetus</i>		3	2	1
Black-shouldered Kite	<i>Elanus caeruleus</i>		4		
Black Kite	<i>Milvus migrans</i>		22	8	22
Brahminy Kite	<i>Haliastur indus</i>		2	4	
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>		5		9
Pallas's Fish-eagle	<i>Haliaeetus leucoryphus</i>	VU	7	3	4
Grey-headed Fish-eagle	<i>Ichthyophaga ichthyaetus</i>	NT	1	1	2
Pied Harrier	<i>Circus melanoleucos</i>		4	3	2
Western Marsh Harrier	<i>Circus aeruginosus</i>		13	13	8
Lesser Spotted Eagle	<i>Aquila pomarina</i>		7	3	
Greater Spotted Eagle	<i>Aquila clanga</i>	VU			3
Stork-billed Kingfisher	<i>Halcyon capensis</i>		3	4	4
Brown-winged Kingfisher	<i>Halcyon amauroptera</i>				7
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		2		
Black-capped Kingfisher	<i>Halcyon pileata</i>		1		4
Collared Kingfisher	<i>Todiramphus chloris</i>				3
Common Kingfisher	<i>Alcedo atthis</i>		2		
Pied Kingfisher	<i>Ceryle rudis</i>		4		

**Note:**

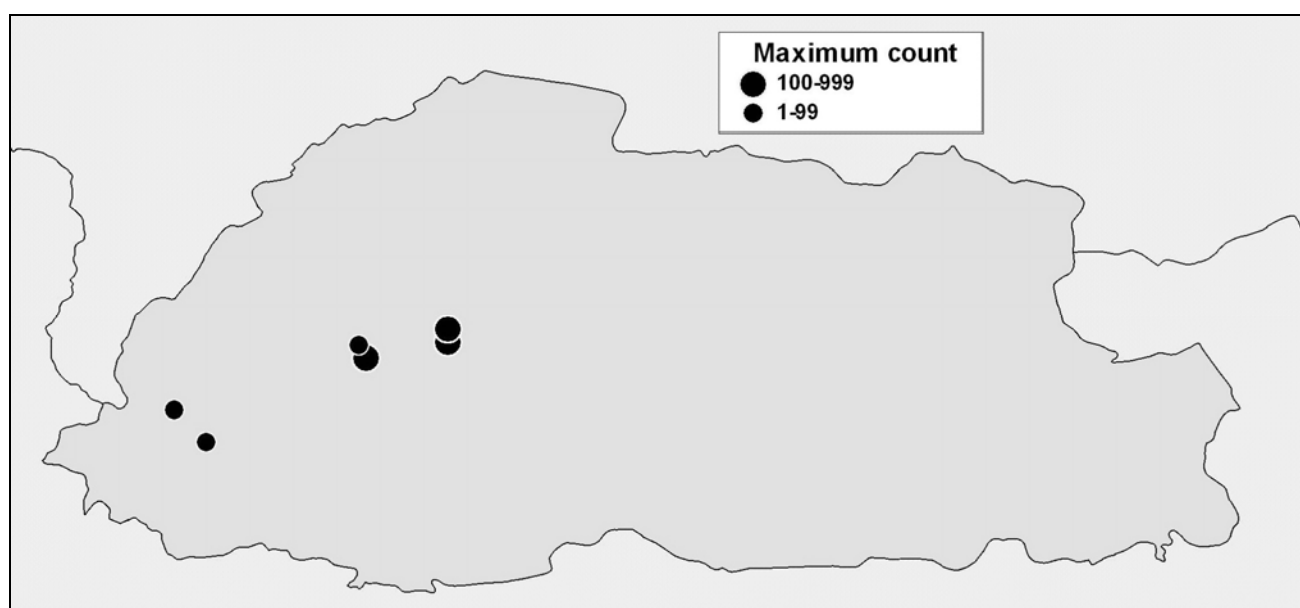
GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): VU – Vulnerable; NT – Near Threatened.

### 3.2.3 Bhutan

A census was conducted in 2002 only and covered six sites (Figure 9 and Table 9): 1,160 individuals of 18 waterbird species were recorded. In addition, two raptor and two kingfisher species were recorded (Table 10). One site, namely Babesa Sewerage Station, recorded more than 1% of the Goosander population (89 individuals in 2002), which makes it a site of international importance. One wetland IBA, Paro wetlands, was also surveyed. The observation of a total of 102 Ibisbills at five sites is the largest number of this species ever reported to the AWC.

Information on threats to the wetlands was not available for most of the sites, but at one site reclamation was reported. The data were contributed by individual counters.

**Figure 9: AWC site coverage and numerical distribution of waterbirds in Bhutan in 2002**



**Table 9: Wetland sites surveyed during the AWC in Bhutan in 2002**

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002
Paro	Paro Chhu River Isuna – Bondey Bridge	pl		29
Paro	Paro Chhu River Paro Town – Kichu Resort	pl		51
Punakha	Puna Sang Chhu River Chime Chorsten – Punakha			271
Thimphu	Babesa Sewerage Station			191
Thimphu	Marsh behind Swing Pool Sports Complex		I	6
Wangdue Phodrang	Puna Sang Chhu River Wangdue Phodrang Bridge – Chime Chorste			621

**Notes:**

Status<sup>1</sup>: pl – part of an IBA identified by BirdLife International (2005). Threats<sup>2</sup>: I – Partial reclamation.

**Table 10: Waterbird species counts reported during the AWC in Bhutan in 2002**

English Name	Scientific Name	2002
Great Cormorant	<i>Phalacrocorax carbo</i>	57
Ruddy Shelduck	<i>Tadorna ferruginea</i>	595
Gadwall	<i>Anas strepera</i>	5
Common Teal	<i>Anas crecca</i>	1
Mallard	<i>Anas platyrhynchos</i>	119
Spot-billed Duck	<i>Anas poecilorhyncha</i>	6
Goosander	<i>Mergus merganser</i>	126
Black-tailed (Elwes's) Crake	<i>Amauornis bicolor</i>	4
Common Coot	<i>Fulica atra</i>	3
Ibisbill	<i>Ibidorhyncha struthersii</i>	102
River Lapwing	<i>Vanellus duvaucelli</i>	42
Long-billed Plover	<i>Charadrius placidus</i>	19
Eurasian Woodcock	<i>Scolopax rusticola</i>	1

English Name	Scientific Name	2002
Pintail Snipe	<i>Gallinago stenura</i>	20
Common Snipe	<i>Gallinago gallinago</i>	12
Common Greenshank	<i>Tringa nebularia</i>	2
Green Sandpiper	<i>Tringa ochropus</i>	21
Common Sandpiper	<i>Actitis hypoleucos</i>	25
<b>Total Waterbirds</b>		<b>1,160</b>
Osprey	<i>Pandion haliaetus</i>	1
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>	2
White-throated Kingfisher	<i>Halcyon smyrnensis</i>	3
Common Kingfisher	<i>Alcedo atthis</i>	3

### 3.2.4 India

A total of 904 sites were surveyed at least once in all three years (Figure 10 and Table 11). Total numbers of waterbirds recorded were 2,923,382 (341 sites), 2,501,605 (549 sites) and 2,037,691 (407 sites) respectively in 2002, 2003 and 2004. Eleven Ramsar sites, one UNESCO World Heritage Site and 63 IBAs were also covered. The 2002 data were published by the Bombay Nature History Society (Rahmani *et al.* 2002), and a report of the 2003–2005 data was made available at the BNHS website ([www.bnhs.org](http://www.bnhs.org)).

Forty-three sites recorded more than 20,000 waterbirds; they were Chilika Lake (1,349,587 in 2002), Bhitarkanika Mangrove (280,463 in 2003), Hirakud Reservoir (160,449 in 2002), Mandovi Estuary (120,485 in 2002), Kole Wetlands (101,359 in 2004), Pipalava Bandharo (76,427 in 2003), Pong Dam Bird Sanctuary (73,892 in 2003), Sangameshwara (71,563 in 2002), Harabhangi (67,274 in 2002), Farakka Barrage (64,656 in 2003), Manjira Wildlife Sanctuary (61,185 in 2002), Nizamsagar Dam (60,704 in 2002), National Chambal Wildlife Sanctuary (53,115 in 2002), Amipur Tank (53,828 in 2004), Jamnagar Taluka wetlands (52,695 in 2003), Dwaraka Taluka wetlands (48,749 in 2003), Great Rann of Kachchh (45,738 in 2004), Victor Salt Pans and Coastal area (43,320 in 2003), Kanewal (41,127 in 2004), Pariej (36,623 in 2003), Pulicat Lake Bird Sanctuary (34,536 in 2002), Laknapur Project (33,446 in 2002), Dev Dam (32,157 in 2004), Sewree Jetty (28,623 in 2003), Rengali (28,501 in 2002), Morva Hadaf Dam (Patangdi) (28,102 in 2004), Khambhalia Taluka wetlands (28,082 in 2003), Mathankodu Tank (27,498 in 2002), Hipparga Tank (27,403 in 2003), Haripura Reservoir (26,844 in 2002), Wadwana (25,868 in 2003), Karavetty Tank (25,778 in 2003), Jafarabad Coast (23,933 in 2003), Nani Kakrad (23,271 in 2004), Lambhvel Sewage Pond (22,851 in 2003), Godavari River (22,318 in 2002), Roka Lake (22,300 in 2003), Pampalo (22,035 in 2003), Misamari Beel (21,876 in 2003), Chapora Estuary: Marjim – 'Tembwado' Coastline (21,693 in 2003), Krishnaraja Sagar Reservoir (21,225 in 2004), Ibrahimpatan Lake (21,191 in 2002) and Mahi River Estuary: Sarod J Point (20,280 in 2004). A total of 172 sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

Totals of 154 waterbird, 16 raptor and nine kingfisher species were recorded (Table 12). The most numerous species (with a count of more than 50,000 individuals) recorded were Northern Pintail (396,748 in 2002), Common Coot (245,307 in 2004), Northern Shoveler (223,213 in 2002), Gadwall (195,592 in 2002), Lesser Whistling Duck (142,628 in 2002), Demoiselle Crane (121,772 in 2003), Eurasian Wigeon (116,302 in 2002), Common Pochard (114,108 in 2002), Black-tailed Godwit (NT, 113,044 in 2003), Garganey (92,417 in 2003), Tufted Duck (90,459 in 2002), Lesser Flamingo (NT, 71,690 in 2004), Cattle Egret (66,562 in 2002), Asian Openbill (58,509 in 2002), Cotton Pygmy Goose (55,026 in 2002), Common Teal (54,55 in 2003), Little Cormorant (52,555 in 2002) and Common Crane (51,811 in 2003).

The highest count totals of 13 globally threatened species recorded during this period (Table 12) were as follows: the Critically Endangered: Sociable Lapwing (2 in 2002); Endangered: Greater Adjutant (15 in 2003), White-winged Duck (2 in 2004), Spoon-billed Sandpiper (6 in 2003); Vulnerable: Spot-billed Pelican (3,381 in 2003), Dalmatian Pelican (570 in 2004), Lesser Adjutant (205 in 2003), Baer's Pochard (153 in 2003), Sarus Crane (275 in 2003), Indian Skimmer (472 in 2002), Pallas's Fish-eagle (22 in 2003), Greater Spotted Eagle (49 in 2003) and Imperial Eagle (5 in 2004).

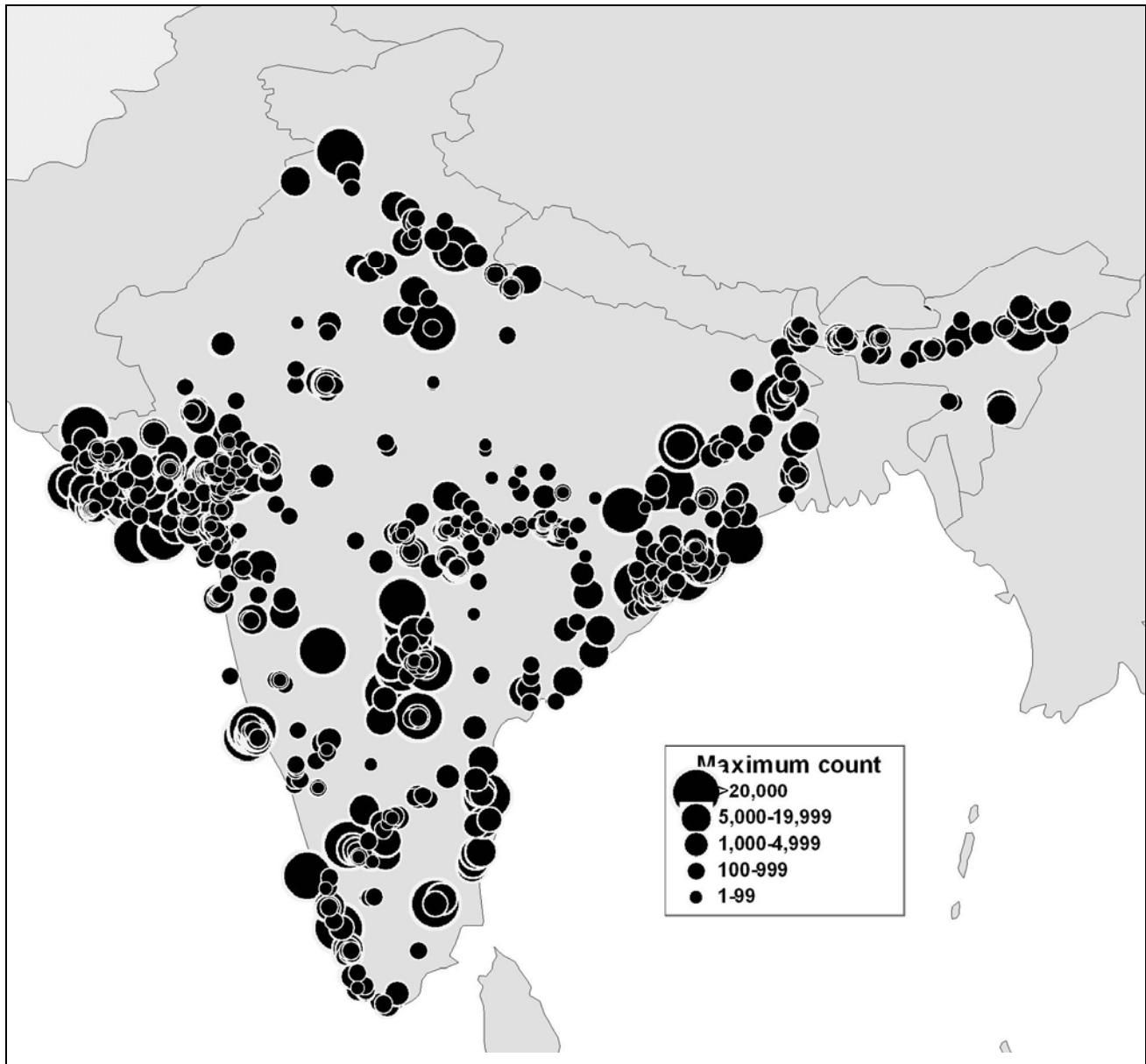
Highest count totals of 14 Near Threatened species were as follows: Oriental Darter (1,015 in 2003), Painted Stork (7,933 in 2003), Black-necked Stork (49 in 2003), Black-headed Ibis (4,734 in 2003), Lesser Flamingo (71,690 in 2004), Falcated Duck (300 in 2003), Ferruginous Duck (3,270 in 2004), Asian Dowitcher (5 in 2003), Black-tailed Godwit (113,044 in 2003), Black-bellied Tern (562 in 2003), White-tailed Eagle (1 in 2004), Grey-headed Fish-eagle (12 in 2003), Lesser Fish-eagle (22 in 2004) and Pallid Harrier (1 in 2003).



The population of Goliath Herons (4 in 2004) is also very threatened. The major threats to wetlands reported were agricultural development, excessive cattle grazing and fishing besides illegal hunting of waterbirds.

The counts were coordinated by the Bombay Natural History Society.

**Figure 10: AWC site coverage and numerical distribution of waterbirds in India, 2002–2004**



**Table 11: Wetland sites surveyed during the AWC in India, 2002–2004**

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Andhra Pradesh	Akiveedu Fishery Pond					343
Andhra Pradesh	Alisagar			267		
Andhra Pradesh	Ameenapur Tank		7EH	786	1,651	321
Andhra Pradesh	Anantaram Tank			4,480		
Andhra Pradesh	Bachpalli			4	3	
Andhra Pradesh	Bellal Cheruvu			2,677		
Andhra Pradesh	Bhimavaram – Undi Paddy Fields		CD			230
Andhra Pradesh	Bon Cheruvu				828	
Andhra Pradesh	Buttaiguddem Pond		236	271		
Andhra Pradesh	Chigurpally Tank			79		
Andhra Pradesh	Chikkadapally			10,535		

## Results: South Asia

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Andhra Pradesh	Chinatumbulum Tank			17,133		
Andhra Pradesh	Coringa Wildlife Sanctuary	pl			16,707	
Andhra Pradesh	Dalicheruvu Tank			5,514		
Andhra Pradesh	Damercharla			554		
Andhra Pradesh	Daulatabad Cheruvu			5,723		
Andhra Pradesh	DMRL Tank			131		
Andhra Pradesh	Durgah of Hussain Shahwali		4789AGI		172	
Andhra Pradesh	Durgama Tank, Madapur Village		8IL	56	95	10
Andhra Pradesh	Duvva Paddy Fields		CD			881
Andhra Pradesh	Eerlakunta Madinaguda		3		133	55
Andhra Pradesh	Fox Sagar Lake				539	
Andhra Pradesh	Gangaiya Puram Tank			1,829		
Andhra Pradesh	Gangavaram Tank		8EH	978	2,107	884
Andhra Pradesh	Gargeyapuram				895	
Andhra Pradesh	Ghattu Tank				109	
Andhra Pradesh	Himayat Sagar				1,287	
Andhra Pradesh	Hussain Sagar			3,522	3,421	
Andhra Pradesh	I. D. L. Tank – Kukatpally		8		79	86
Andhra Pradesh	Ibrahimpatan Lake			21,191		
Andhra Pradesh	Icrisat Campus (Patancheru)			3,085	7,544	
Andhra Pradesh	Inkriyal				909	
Andhra Pradesh	Jamukula – Dinni			759		
Andhra Pradesh	Jankampet Cheruvu			1,499		
Andhra Pradesh	Jatrole Tank			632		
Andhra Pradesh	Jogipet Tank		236		840	
Andhra Pradesh	Kadirabad		67CD		18,154	
Andhra Pradesh	Kalagiri Reservoir			154		
Andhra Pradesh	Kandukuru			406	894	
Andhra Pradesh	Khachabal Village			11,001		
Andhra Pradesh	Khaja Kunta		258A	89	207	126
Andhra Pradesh	Kodad Tank			367		
Andhra Pradesh	Kolleru Wetland: Godavari River	R, I		22,318		
Andhra Pradesh	Kolleru Wetland: Gudivaka Lanka		58ACD	678	921	592
Andhra Pradesh	Kolleru Wetland: Kolleru Lake		ACDFI			1,846
Andhra Pradesh	Kolleru Wetland: Penumaka Lanka		58ACDI	983	9,067	
Andhra Pradesh	Kondakarla Lake			17,310		
Andhra Pradesh	Kotapally			13,640		
Andhra Pradesh	Kotta Tank and Timmaraju Cheruvu			4,844		
Andhra Pradesh	Laknapur Project			33,446		
Andhra Pradesh	Mahaboob Sagar		78		2,883	
Andhra Pradesh	Malkiahpet Tank			101		
Andhra Pradesh	Manjira Wildlife Sanctuary	I		61,185		
Andhra Pradesh	Mantur Tank			494		
Andhra Pradesh	Mittakodur Tank			27,498		
Andhra Pradesh	Miyapur Lakes			54	84	
Andhra Pradesh	Mupparthipadu					396
Andhra Pradesh	Nalla Cheruvu		38	23	2,044	65
Andhra Pradesh	Nandalur Tank			2,455		
Andhra Pradesh	Nandyal Tank			1,786		
Andhra Pradesh	Naupada Swamps			7,147		
Andhra Pradesh	Neerukulla Tank		78		73	
Andhra Pradesh	Nellapattu Pelican Sanctuary	I	4IL	6,700	1,957	
Andhra Pradesh	Nizamsagar Dam			60,704		
Andhra Pradesh	Palem Tank			2,521		
Andhra Pradesh	Palmakole Lake				905	
Andhra Pradesh	Pattenna Palem – Village Pond		3ACDG	62		119
Andhra Pradesh	Pavumanchala				816	
Andhra Pradesh	Pawnarchala Tank			2,039		
Andhra Pradesh	Pedda Tippa				769	
Andhra Pradesh	Pocharam			12,642		
Andhra Pradesh	Pulicat Lake Bird Sanctuary	I			34,536	2,451
Andhra Pradesh	Ranga Samudram				2,460	
Andhra Pradesh	Ravirala Tank			2,196		
Andhra Pradesh	Reddiganapavaram		67D	210		43
Andhra Pradesh	Rudur Tank			6,870		
Andhra Pradesh	Sangameshwara			71,563	366	
Andhra Pradesh	Sasanam Irri. Tank			172		
Andhra Pradesh	Somasila Tank			3,008		
Andhra Pradesh	Tamadapalli Tank			822		
Andhra Pradesh	Tammadi Tank, Khanamet Village			18		
Andhra Pradesh	Telineela Puram	I		454		
Andhra Pradesh	Thalamudupi				4,683	

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Andhra Pradesh	Thathipudi Tank			13,519	584	
Andhra Pradesh	Tummadi Tank			18	56	
Andhra Pradesh	Tummala Gudem Tank			1,439		
Andhra Pradesh	Uppalapadu Water Tank	I		1,514	1,251	3,884
Andhra Pradesh	Velamavari Palwem			350		
Andhra Pradesh	Yerrakalva Reservoir		6GH	377	217	231
Assam	Aie River		27H			83
Assam	Assam Engineering College – Ulubari Colony Fish Pond					450
Assam	Bauwwa Beel	I	267FHI			171
Assam	Bhosmari Lake		56			136
Assam	Bordoibam Bilmukh Bird Sanctuary	I	2467FH		2,581	1,065
Assam	Bordoloni	pl	2467FH		2,760	2,259
Assam	Chandubi Beel	I	26H			619
Assam	Chenamari Beel		GH		8,297	
Assam	Deepor Beel	R, I	235789ABCD			2,776
Assam	Dhamar					538
Assam	Dhir Beel		267FH		1,612	3,464
Assam	Doloni		267H			3,896
Assam	Japisojia – Jugibaria Beel		CDH		1,449	900
Assam	Jengdia Beel	pl	267FH		253	714
Assam	Kamranga Beel		46FG	275		
Assam	Kani Beel		246FH		2,002	1,654
Assam	Kaziranga National Park: Combined	I, W	27CL		449	1,283
Assam	Khamranga Beel		346		279	251
Assam	Kuarbari – Dalani	I	2467H		4,888	1,848
Assam	Kokilamukh		FHL			8,680
Assam	Matar Gadda		78H		39	16
Assam	Misamari Beel		GH		21,876	
Assam	Na Beel		67FH			700
Assam	Nameri Wildlife Sanctuary					758
Assam	Nayasara Lake		356H			157
Assam	Panidihing and Fokolai	pl	2367FH		1,683	
Assam	Sipi Beel		267HI			1,522
Assam	Sivasagar Tank		1		628	1,791
Assam	Son Beel	I	2567FHI			253
Assam	Tinikunia Pukhuri		48GL			3,384
Assam	Urpod Beel	I	2356H			3,583
Bihar	Vikramshila Ganga Dolphin Sanctuary (Kahalgaoon–Sultanganj)	I	24678BCDFH		4,002	2,102
Chandigarh U.T.	Sukhna Lake		2DFL		2,277	
Chhattishgarh	Abhanpur Tank, Dhantan Road				35	
Chhattishgarh	Anjora Village Tank		G			21
Chhattishgarh	Badhaitola Bandh		367CDFG		70	142
Chhattishgarh	Bandhawa Talab		3			535
Chhattishgarh	Bar Waterbody				23	
Chhattishgarh	Bharda Village		46			63
Chhattishgarh	Budatalab				176	336
Chhattishgarh	Chherikhedi		67CDH			61
Chhattishgarh	Chichola Tank		367G			95
Chhattishgarh	Chola Kodar Dam			91		703
Chhattishgarh	Darbha Pond				20	
Chhattishgarh	Deogaon Tank (Bar Nawa Para Sanctuary)		67CDG		225	
Chhattishgarh	Deotola Crossroad Tank		3467CDFG			166
Chhattishgarh	Gadhya Dabri–Umaria				34	24
Chhattishgarh	Gajgidhni Tank		2467CDFG		420	
Chhattishgarh	Gangrel Dam				32	
Chhattishgarh	Gayatri Nagar Marsh		48HI	31	43	177
Chhattishgarh	Gidhori Tank – I					403
Chhattishgarh	Gidhori Tank – II					24
Chhattishgarh	Kharoon River		89ABCD	33		
Chhattishgarh	Khartora		3	12		
Chhattishgarh	Kori Dam		HL	447		
Chhattishgarh	Kosamsara		3	36		
Chhattishgarh	Kosranji Reservoir				4,139	
Chhattishgarh	Kurud – Mandir Hasand		H			7,688
Chhattishgarh	Kurud Tank		67FH	1,258	347	966
Chhattishgarh	Lakholi Tank				30	7
Chhattishgarh	Lendwa Tank – Mandher					77
Chhattishgarh	Limtara		3	15		
Chhattishgarh	Mahanadi – Dhamni		HL	94		
Chhattishgarh	Mahanadi River		6	82		
Chhattishgarh	Mandher Tank		3G			1,149
Chhattishgarh	Maniyari		H	30		

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State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Chhattishgarh	Manohar Sagar Bandh		6GL	55		
Chhattishgarh	Murethi Res			350		
Chhattishgarh	Naiya (Budera) Tank		8FG	37	153	
Chhattishgarh	Nayak Tand Tank		8	18		
Chhattishgarh	Odiya					40
Chhattishgarh	Orarbandh		347FG		178	
Chhattishgarh	Patewa Tank					65
Chhattishgarh	Pendrawan Tank – Bangoli		67EFGH	1,811	968	1,125
Chhattishgarh	Pikridih Reservoir		67FG	779	155	
Chhattishgarh	Rani Laxmidevi Jalashaya		6FH		78	
Chhattishgarh	Ranisagar Talao		468G		104	
Chhattishgarh	Rasmara Tanks		467FG		130	
Chhattishgarh	Rasni Pond		3	75		
Chhattishgarh	Sendh Tank/Reservoir		FGL	1,717	107	1,123
Chhattishgarh	Seonath River		6H	96	89	
Chhattishgarh	Shivnath River		2E			113
Chhattishgarh	Singhanpur					79
Chhattishgarh	Tappa Tank		3467CDFGHL	460		100
Chhattishgarh	Telibandha Tank		38H	76	275	
Delhi/U.P	Yamuna River: Okhla Barrage Bird Sanctuary	I	46789ACDFH	4,569	19,152	3,918
Goa	Agarwaddo Marshes		1		1,436	
Goa	Agassaim Mudflats		1	1,330	4,154	
Goa	Batim Tank		1		7,646	6,010
Goa	Carambolim Tank	I	3FG	7,429	4,658	1,384
Goa	Chapora Estuary: Marjim – ‘Tembwado’ Coastline		G	1,662	21,693	2,448
Goa	Ciba–Geigy–Corlim		1	112	125	53
Goa	Cumbarjua Canal		1		630	
Goa	Curtorim Lake		35689AF		4,645	
Goa	Curtorim Mangroves		67EFG		746	
Goa	Macasana Tanks		F	6,818	13,019	6,911
Goa	Maina Lake		56F		4,424	
Goa	Mandovi Estuary		1	120,485	45,844	13,857
Goa	Neura Wetlands		67	729	232	
Goa	Raitollem Lake		367BFI		664	
Goa	Raiturem Mangroves		678EFGI		2,428	
Goa	Santa Cruz Pond		1	710	343	
Goa	Seraulim Lake		3578FI		3,915	
Goa	Shiroda		368E	278	3,437	
Gujarat	Adadra		7G			750
Gujarat	Aghlod Talav		G			335
Gujarat	Aji – I		6	2,050		1,231
Gujarat	Aji – II		2678CDG		248	1,463
Gujarat	Ajwa		7FG	2,667		
Gujarat	Alansagar Lake		26CD			15,946
Gujarat	Amali Dam		8FHL	1,473	813	172
Gujarat	Ambla Talav		CD			125
Gujarat	Amipur Tank					53,828
Gujarat	Avaniya Pond			396	738	188
Gujarat	Bajana Creek – Tandi		1		625	
Gujarat	Bamanwad				570	1,734
Gujarat	Bandiabeli Talav					1,654
Gujarat	Barbodan Lake		37	504	754	644
Gujarat	Barka Talav		7G			1,179
Gujarat	Bhadar Dam		G	927		
Gujarat	Bhadkha				190	
Gujarat	Bhadreshwar Creek		8H	555	253	355
Gujarat	Bhimasar Tank		238	197	98	847
Gujarat	Boriyala Tank		67GH			2,503
Gujarat	Boriyavi Village Pond		G		987	
Gujarat	Borsi Dam				48	
Gujarat	Bortalav				296	
Gujarat	Causeway Lake		K			354
Gujarat	Charakla Saltworks	I		10,220		
Gujarat	Chhab Talav		8L	317		
Gujarat	Chhari Dhandh	pl	246GFHL	6,640	0	2,426
Gujarat	Chhatardi Tank		38L		0	291
Gujarat	Chhaya Creek					5,273
Gujarat	Chhotaudepur Pond				553	
Gujarat	Curly Tidal Area					209
Gujarat	Dahisara Village Tank		3	122	73	38
Gujarat	Daloli		6G		6,324	607
Gujarat	Dantiwada Dam					14,609

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Gujarat	Dedadra Talav					3,981
Gujarat	Demli Tank			1,854	463	124
Gujarat	Dev Dam		G		2,825	32,157
Gujarat	Devisar Tank		368	380	86	1,866
Gujarat	Devsar		2369G		2,555	
Gujarat	Dhakwada		38G		2,984	
Gujarat	Dholi Dhaja Dam		236789ABCD	16,328	988	9,582
Gujarat	Dhonsaa Jheel		6L	798		
Gujarat	Dhrokadia Dam (Advana)					142
Gujarat	Dodhasan Mandir					1,502
Gujarat	Don Reservoir		68GL	143	562	181
Gujarat	Dongaria Talav					231
Gujarat	Dori Kalwada		36FGI			213
Gujarat	Doswada		6		873	630
Gujarat	Dudhrej Talav					1,913
Gujarat	Eshar Dam				27	
Gujarat	Fad Dang – Beti		467G	1,299	358	611
Gujarat	Fansa Tank		1		579	
Gujarat	Gangasar Tank		78HG	544	311	
Gujarat	Garibpura Pond		K	245	309	954
Gujarat	Gatehara Pond – Saij		AFGI			518
Gujarat	Gaurishanker Lake		9KGL	2,747		2,883
Gujarat	Gaulameshwar Lake		78		1,479	
Gujarat	Gavier Lake			142	273	
Gujarat	Gengadia		7GH			284
Gujarat	Ghodadhroi Reservoir					84
Gujarat	Ghogha Coast and Salt Pans				172	16
Gujarat	Gobarapura		H		1,252	3,743
Gujarat	Golabresda					222
Gujarat	Gorad Smashan		89A		211	
Gujarat	Gosabara - 1					407
Gujarat	Great Rann of Kachchh					45,738
Gujarat	Guneli		6GH		1,739	4,046
Gujarat	Gutal				506	
Gujarat	Hadmatiya Dam or Dairy Dam					683
Gujarat	Hamirsar Tank		8L	1,205	198	15
Gujarat	Harni Pond		8	12		59
Gujarat	Hathab (Via Koliyak) – Sea Shore					7,933
Gujarat	Hathmati Reservoir					10,186
Gujarat	Heranj					569
Gujarat	Ishwaria Lake		26			1,532
Gujarat	Jafarabad Coast (Salt Works)		AF		23,933	
Gujarat	Jakhwada		G		102	
Gujarat	Jamli				83	
Gujarat	Jamnagar District: Bhanvad Taluka (4 Inland Wetlands)				1,564	
Gujarat	Jamnagar District: Dhrol Taluka (3 Inland Wetlands)				5,052	
Gujarat	Jamnagar District: Dwaraka Taluka (6 Inland and 5 Coastal Wetlands)				48,749	
Gujarat	Jamnagar District: Jamjodhpur Taluka (9 Inland Wetlands)				12,008	
Gujarat	Jamnagar District: Jamnagar Taluka (8 Inland and 6 Coastal Wetlands)				52,695	
Gujarat	Jamnagar District: Jodiya Taluka (1 Inland and 21 Coastal Wetlands)				14,295	
Gujarat	Jamnagar District: Kalavad Taluka (5 Inland Wetlands)				1,445	
Gujarat	Jamnagar District: Kalyanpur Taluka (8 Inland and 5 Coastal Wetlands)				9,139	
Gujarat	Jamnagar District: Khambhalia Taluka (3 Inland and 6 Coastal Wetlands)				28,082	
Gujarat	Jamnagar District: Lalpur Taluka (2 Inland Wetlands)				335	
Gujarat	Janjaria Hanuman		8L		218	
Gujarat	Jaspur		47	73		
Gujarat	Javala Irrigation Tank		37	129	889	833
Gujarat	Javar					59
Gujarat	Jesola				198	2,996
Gujarat	Jetalpur Village Tank		38		242	
Gujarat	Kabutari Dam		67GH	1,929		3,265
Gujarat	Kada Dam		1	496		
Gujarat	Kadana Dam, Andhari Village				305	
Gujarat	Kali Dam			1,206		4,527
Gujarat	Kaliyakuva		7GH			3,177
Gujarat	Kalubhar Dam		CDG			1,712
Gujarat	Kanajari Village Pond				217	
Gujarat	Kandav Talav		36GH			461

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State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Gujarat	Kanela Talav		67G	363		
Gujarat	Kanewal					41,127
Gujarat	Kanka Talav			474	109	
Gujarat	Kankanpur Talav		67H			515
Gujarat	Karachiya Irrigation Tank		67	11	26	
Gujarat	Karad				1,467	
Gujarat	Kareda Dam		78F	3,356	11,578	800
Gujarat	Karkoliya Lake (Near Mota Surka Village – Valavad)				730	
Gujarat	Karli Dam					6,691
Gujarat	Kathivadar Lake and Salt Pans		G			1,169
Gujarat	Kevadi Dam		F	183	670	2,463
Gujarat	Khageshri – Ishwaria Dam					82
Gujarat	Khambala Dam					291
Gujarat	Kharva Talav					484
Gujarat	Khatri Pond		L	165	132	17
Gujarat	Khirjog		1			8,386
Gujarat	Khodiyar Lake		78		576	
Gujarat	Khodiyar Dam					898
Gujarat	Killa- Pardi		7FG		84	
Gujarat	Koliak (Bhavnagar Dist) - Seashore					15
Gujarat	Konka Talav					714
Gujarat	Korda Sandher					4,062
Gujarat	Kothamba				168	
Gujarat	Kribhco Lake		A	1,200	803	3,069
Gujarat	Krushnakunj Lake					2,128
Gujarat	Kuchadi Reservoir					7,015
Gujarat	Kukma Village Tank		38	93	105	89
Gujarat	Kumbharwada Sewage Pond		8A	3,208	11,056	7,160
Gujarat	Kuvadwa		26			1,207
Gujarat	Kuvazar Talav			178		
Gujarat	Lair Reservoir		3	29	65	42
Gujarat	Lakhi Dam		F	2,600	788	401
Gujarat	Lakhnka Irrigation Dam		K		241	73
Gujarat	Lakhota Lake		789AGL	6,246	3,443	
Gujarat	Lalbaug Lake		789AGL	199	140	
Gujarat	Lalpari Reservoir		23589I			3,127
Gujarat	Lambhvel Sewage Pond			10,449	22,851	15,471
Gujarat	Limbhoi		8IL		334	
Gujarat	Lunivav Dam					3,683
Gujarat	Machhan Nala Dam		2	15,427		
Gujarat	Madhavpura Marsh		26CDFGH		5,550	3,412
Gujarat	Magadalla Bridge		267CDFG			1,245
Gujarat	Mahi River Estuary: Dabka		2	71	22	192
Gujarat	Mahi River Estuary: Mohammedpura		7AG	28	121	138
Gujarat	Mahi River Estuary: Sarod J point		A	12,660	5,020	20,280
Gujarat	Mahi River: Singhroy – Jasspur		2A		240	
Gujarat	Mahisagar River		A	933		
Gujarat	Malan Dam					764
Gujarat	Malav		6FH			1,002
Gujarat	Masar Village Pond		67G		82	551
Gujarat	Mazum Reservoir		HG		309	2,671
Gujarat	Medha Creek		6			11,938
Gujarat	Meshwo Reservoir				805	428
Gujarat	Mithi Virdi Coast					46
Gujarat	Mokar Rann					5,779
Gujarat	Morva Hadaf Dam (Patangdi)		6GH	17,556		28,102
Gujarat	Muvalia Tank		6H			2,207
Gujarat	Muval Reservoir		67G	15	973	2,676
Gujarat	Nagarala Pond		67	344		1,038
Gujarat	Nagarama Village Pond		67GH		4,501	10,935
Gujarat	Naika Dam			11,190	2,393	9,219
Gujarat	Nakti Creek (New Kandla)		23678BCDFH		5,469	708
Gujarat	Nani Kakrad		28BDH		11,919	23,271
Gujarat	Narda Tank		7FGH		4,584	1,831
Gujarat	Narmada Main Canal			1,266		
Gujarat	Narsanda Village Pond				1,150	
Gujarat	Nava Talao				19,746	6,022
Gujarat	New Port Freshwater Pond, Bhavnagar		6CDH		661	
Gujarat	New Port Salt pans, Bhavnagar			4,281	15,729	5,175
Gujarat	Nikol Bandhara		6CD		11,126	1,465
Gujarat	Ningal Tank		38L	79	3	4,027
Gujarat	Nirma Salt Pan			2,785		2,881

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Gujarat	Nyari – I		26G	700	3,553	3,830
Gujarat	Odarka Pond				8,383	655
Gujarat	Onchal Lake		H		10,516	18,992
Gujarat	Orwada Irri. Tank		67GH	1,741		917
Gujarat	Padhiyar		7			205
Gujarat	Padra Pond					82
Gujarat	Palan Lake		3678FG	766	163	
Gujarat	Panam Palla				426	817
Gujarat	Panoli Lake			4,329	2,256	3,471
Gujarat	Pansora Village Pond					85
Gujarat	Par					5,060
Gujarat	Pariej				36,623	29,390
Gujarat	Patadungri Tank					3,000
Gujarat	Phodaranes Dam					8
Gujarat	Phophal – I			6,052		
Gujarat	Pipalava Bandhara (Kaj)	I	67CDF		76,427	
Gujarat	Porbandar Bird Sanctuary					46
Gujarat	Rahkui				39	
Gujarat	Randharda		268			1,215
Gujarat	Ratania Lake		A	582	1,260	365
Gujarat	Ratanpaa Dam		67	457		603
Gujarat	Ratnal Check Dam			92	112	
Gujarat	Ratnal Tank		238	166	0	306
Gujarat	Ratneshvar Tank		6GH			4,767
Gujarat	Rudarmata Dam		36GHL	4	822	16
Gujarat	Rukmavati Creek		8HL	426	407	212
Gujarat	Saiyant Tank					4,417
Gujarat	Sakariya and Bherai Pond		G			4,014
Gujarat	Saktimata Tank					120
Gujarat	Samadhiyala Bandhara		8CD			1,299
Gujarat	Sankli Forest Tank		7			710
Gujarat	Sara Reservoir					1,044
Gujarat	Sardhar Lake					145
Gujarat	Sat Hanuman Reservoir		27A			2,528
Gujarat	Sattapar Dam		2	418	0	
Gujarat	Saul Talav				96	
Gujarat	Savli Tanks		35789G	59	118	89
Gujarat	Shamna Talav		67			2,220
Gujarat	Shervo Dhandh		7			3,603
Gujarat	Shinay Reservoir		L			262
Gujarat	Shitala Tank		378		1,463	
Gujarat	Shivpuri Talav		67			658
Gujarat	Sidhada Dam					5,552
Gujarat	Sinaj Reservoir				0	
Gujarat	Sipu Dam					578
Gujarat	Sokhda Talav		36CDF	3,733		1,930
Gujarat	Sorathi Dam					1,825
Gujarat	Sri Tinbi				519	
Gujarat	Sudamda Ponds		368CD	10,941		
Gujarat	Sukhbhadar		6CDH			159
Gujarat	Sukhi Dam				3,399	
Gujarat	Tapar Reservoir		6GL	781	0	1,005
Gujarat	Tapi River at Surat Causeway		GKL	2,886	8,738	
Gujarat	Tapi River at Mandvi		F	567	1,584	
Gujarat	Thol Lake Bird Sanctuary	I	ACHL		1,390	
Gujarat	Tikar Village Pond					886
Gujarat	Timbi Tank		6FGH	2,878	2,878	6,378
Gujarat	Topansar Tank		8L	246	523	108
Gujarat	Traj Village Pond				24	110
Gujarat	Traj Village–Sala Pond		3FG			847
Gujarat	Tranja				843	3,036
Gujarat	Tundel		G			891
Gujarat	Tuva		67GH			1,317
Gujarat	Vada Tank		67GH		543	1,745
Gujarat	Vadadala		67	202	662	
Gujarat	Vadadhra					517
Gujarat	Vadala					55
Gujarat	Vadtal				565	
Gujarat	Vaidi Dam				201	
Gujarat	Vala Khavaj Jheel		L	242	84	107
Gujarat	Vanaj Dam, Vijaynagar		26CDHK		1,438	
Gujarat	Varadhari		67			673

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State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Gujarat	Vastuna Village Pond					335
Gujarat	Valtrak Reservoir		6CDFG	599	2,060	
Gujarat	Vav				677	
Gujarat	Veri Dam		26		316	7,308
Gujarat	Victor (Bherai) Salt Pans and Coastal Area		FG		43,320	5,851
Gujarat	Victor Pond and Sakriya Hanuman Pond – Bherai		8F		8,847	
Gujarat	Vijaysagar		6GL	295	294	
Gujarat	Vinjole		7			4,340
Gujarat	Virania				184	
Gujarat	Visavada Reservoir					34
Gujarat	Wadwana Reservoir		3567FH	9,671	25,868	
Gujarat	Zanzaria – Fulsaria Stream		9			89
Gujarat	Zazam Dam					4,484
Haryana	Basai Wetlands	I			4,488	
Haryana	Bhindawas Lake Bird Sanctuary	I			2,195	
Haryana	Sheikhapura		36CDFH		181	208
Haryana	Sultanpur Bird Sanctuary	I			1,035	
Himachal Pradesh	Pong Dam Bird Sanctuary	R, I	6789CDFHKL	51,720	73,892	71,705
Jharkhand	Kanke Reservoir		L		19,991	
Jharkhand	Roka Lake		68CDFH		22,300	
Karnataka	Abbalagere Tank		68		6	
Karnataka	Anandapuram Pond		235678		212	
Karnataka	Aragoppa Pond		68		88	
Karnataka	Bannur Heggere					5,085
Karnataka	Byramangala Reservoir					15,664
Karnataka	Cauvery River: Muthathi – Bheemeshwari Fishing Camp		7L			140
Karnataka	Chatradahally Pond					125
Karnataka	Cheelur Pond					966
Karnataka	Chennamumbapura/Abbalagere			138		
Karnataka	Dadada Halli Tank					3,022
Karnataka	Dasarahalli Tank					2
Karnataka	Dodda Tumkur Tank					3
Karnataka	Donikere					269
Karnataka	Gejjagalri Kere				7,309	
Karnataka	Gudavi Bird Sanctuary	I			849	884
Karnataka	Hadinarli				2,709	
Karnataka	Hebbal Tank					583
Karnataka	Hesergatta Tank					18
Karnataka	Hirekere				20	
Karnataka	Hosabale Pond					182
Karnataka	Jakkur Tank					190
Karnataka	Janqina Koppa Pond				124	
Karnataka	Kagodu Pond					34
Karnataka	Kallambi Tank				143	51
Karnataka	Kallur Tank		236G			11,048
Karnataka	Karigala Tank					17,089
Karnataka	Keladi Pond					268
Karnataka	Kelgeri Tank				1,016	
Karnataka	Kolagunasi Pond				121	
Karnataka	Krishna River – Karnataka		467FG		3,028	2,196
Karnataka	Krishnaraja Sagar Reservoir	I				21,225
Karnataka	Kunthur Tank					11,475
Karnataka	Lingambudhi Tank	I				3,225
Karnataka	Mandakalli Tank				876	
Karnataka	Manslapur Tank				1,721	
Karnataka	Mavina Kere		56		1,332	
Karnataka	Murugamatta Pond				159	216
Karnataka	Nagavara Tank		38			1,072
Karnataka	Nantangud Kere		78CDFG		64	
Karnataka	Narasambudhi Tank	I	36			809
Karnataka	Navale		36		36	
Karnataka	Nelligudda Tank		67			166
Karnataka	Nuggikeri Tank		4G		207	
Karnataka	Purale		236785		214	
Karnataka	Puttenahalli Tank					153
Karnataka	Rani Kere, Anandapuram		235678		368	
Karnataka	Soraba Pond		235678		204	307
Karnataka	Tippagondana Halli		G			3,350
Karnataka	Ullurukere					294
Karnataka	Yedehalli Pond					143
Karnataka	Yelehanka Lake		I			28
Kerala	Akkulam Lake		258CDIL	607	725	1,164



State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Kerala	Ambalamedu Lake		247CHG	11	17	11
Kerala	Aruvikkara		GK	232		
Kerala	Ashtamudi Lake: Chittumala Marsh and Paddy Fields		57HIK		681	1,186
Kerala	Ashtamudi Lake: East Kallada Paddy Field and Chittu Marsh			606		
Kerala	Ashtamudi Lake: Kandachira Marsh	pR	FGI	1,864		
Kerala	Ashtamudi Lake: Karali Marsh	pR	248EFG	2,686		1,853
Kerala	Ashtamudi Lake: Kaudachira		247ACDG		1,481	
Kerala	Ashtamudi Lake: Kodimatha Marshes		28CDFI	160	182	246
Kerala	Azhinhilum		4679FI		510	680
Kerala	Charanathukavu – Aazhankal Marsh		4FI	147		
Kerala	Kadalundy Estuary		23IL		959	928
Kerala	Kalpalli		678G		239	
Kerala	Kattampally	I	EGI		20,087	
Kerala	Kayal Varampinakom		8F	1,500		
Kerala	Kole Combined Wetlands	I	4789CDEFHI	10,299	77,439	101,359
Kerala	Kottappuzha Estuary			2,513		
Kerala	Pallippuram Paddyfields		6CDI	396		
Kerala	Perunna Paddy Fields		67I	978	144	97
Kerala	Poothapandy		FI	376		
Kerala	Punchakari			2,746		
Kerala	Purathur (Bharatapuza) Estuary		46789EFHIL			11,272
Kerala	Trikkur – Kaloor Flooded Area				165	
Kerala	Vadakke Chira (Tank)				2,436	
Kerala	Velayani Lake		26CDIL		478	
Kerala	Veli Lake		IL	91		
Kerala	Vembanad: Aakkanady Back Waters			842	281	
Kerala	Vembanad: Arayiram Kayal			255	389	
Kerala	Vembanad: Arayiram Lake Paddy Field		CF			260
Kerala	Vembanad: Erupathynalayiram Kayal		CH	897	228	
Kerala	Vembanad: Kaippuzha Muttu		6CF	2,984	4,463	1,981
Kerala	Vembanad: Kumarakom Paddyfields		6FI		1,023	614
Kerala	Vembanad: Kumarakom Tourist Complex		49FIL	353	97	139
Kerala	Vembanad: Narakathara		CDFGI	1,111	816	1,131
Kerala	Vembanad: Nedumudi		26CDFGI		768	624
Kerala	Vembanad: Pallathuruthy		267CDHI	116	425	603
Kerala	Vembanad: Pathiramanal		9FL	2,074	304	219
Kerala	Vembanad: Thannermukkam Bundh		ACDEFHK	428	848	7,054
Kerala	Vembanad: Thollairam Kayal		67CDFGI		10,922	7,638
Kerala	Vembanad: Vembanad Lake	R, I	2BCDEFHIKL	4,307	1,705	4,486
Madhya Pradesh	Bargi Reservoir				78	
Madhya Pradesh	Bhundakona Tank		6	350		
Madhya Pradesh	Chambal River: (National Chambal Sanctuary)				836	
Madhya Pradesh	Halali Dam	I	467FH		350	
Madhya Pradesh	Kanha National Park: Kisli					34
Madhya Pradesh	Kanha National Park: Kopadabri Naktighati					16
Madhya Pradesh	Kolar Dam		67HK		241	
Madhya Pradesh	Kotawal Dam					76
Madhya Pradesh	Kumadih					71
Madhya Pradesh	Kwari River					51
Madhya Pradesh	Mirghan Pond					82
Madhya Pradesh	Narna					78
Madhya Pradesh	Pench National Park					299
Madhya Pradesh	Pindrai Tank				67	
Madhya Pradesh	Pipalwala Talab – Bithli					40
Madhya Pradesh	Sarekha – Bada Talab					99
Madhya Pradesh	Sarekha Pond		1	49		
Madhya Pradesh	Sarekha – Chhota Talab					48
Madhya Pradesh	Supatal – Garha				58	
Madhya Pradesh	Upper Lake, Bhopal City		4678FHK		708	
Maharashtra	Adegaon Lake		67F		276	
Maharashtra	Aitwade Duban		I		180	
Maharashtra	Amanala Tank		7CDG		303	
Maharashtra	Ambazari Reservoir		7F	1,671	4,951	
Maharashtra	Anjur – Alimgadh		6G		559	
Maharashtra	Ankhoda Reservoir				263	
Maharashtra	Ashband		ACDFH		3,258	15,230
Maharashtra	Asolamendha Tank		7DFHL		3,170	
Maharashtra	Basalapur Tank		3		205	
Maharashtra	Bhatala Tank		7CDG		180	
Maharashtra	Bims Paradise, Thane Creek		2489GI		495	
Maharashtra	Bodalkasa Lake		H		152	
Maharashtra	Bodare Talav				103	

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State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Maharashtra	Bopobodi Talav		2FI		65	96
Maharashtra	Borgaon Manjin Tank		78FHL	2,545	5,621	
Maharashtra	Bpcl Road, Wadala		489BJ		231	
Maharashtra	Ceirola (Heti) Lake		26FG		366	420
Maharashtra	Chandai Lake		CDFH	480		
Maharashtra	Chargaon Lake		7CDFH	418	4,164	1,548
Maharashtra	Chhatri Lake		37F		2,276	
Maharashtra	Chichtola Reservoir		47CG		526	1,000
Maharashtra	Dahegaon Reservoir		3CG	1,246	878	
Maharashtra	Dapoli Sea Shore		1		1,230	
Maharashtra	Dastapur		37		244	
Maharashtra	Dhangaon					27
Maharashtra	Dodmazari Talav		27G		30	125
Maharashtra	Gangapur Dam	I	7CG		8,162	
Maharashtra	Ghalana Lake		7GF		581	
Maharashtra	Ghodpeth Tank		7CDG		142	
Maharashtra	Godara Talav		2FG			148
Maharashtra	Gorewada Reservoir				1,495	
Maharashtra	Gudhari Lake		G		77	244
Maharashtra	Harney Bunder		H		153	
Maharashtra	Hipparga Tank		267FH		27,403	
Maharashtra	Indala Reservoir		37H		145	
Maharashtra	Irai Dam			3,664		
Maharashtra	Itiadoh			133		
Maharashtra	Januna Tank		7BCDFHL	641		
Maharashtra	Jawahar Nagar Ordnance Factory Tank				166	
Maharashtra	Junona Lake		467CDFHL		901	1,001
Maharashtra	Kangaon – Nangaon		6I			11,327
Maharashtra	Kathalabodi Lake		67F		44	
Maharashtra	Kavadi		78AI		443	649
Maharashtra	Kekatpur Tank		367H		206	
Maharashtra	Khambala		G		133	
Maharashtra	Koknagadh and Chandori Tanks		347FG		318	287
Maharashtra	Koradi Lake				731	
Maharashtra	Krishna Bridge to Goware		246789BCDF			842
Maharashtra	Krishna River Maharashtra		28CDG		833	955
Maharashtra	Labhansarad Tank		7CDHF		876	
Maharashtra	Lagam Tank		7		744	
Maharashtra	Lawari/Umari Lake		27FG		41	90
Maharashtra	Magali Tank		7FG		175	
Maharashtra	Mahuli Lake		27FG		56	150
Maharashtra	Malijunga Talav		7DEFG			252
Maharashtra	Mana-Erai River		89ACDEH		120	
Maharashtra	Mangli Reservoir		7G	207		
Maharashtra	Manora Tank		67D		265	
Maharashtra	Mansar Tank					52
Maharashtra	Maregaon Reservoir		47CDFH		1,454	
Maharashtra	Morgaon Talav		7G		267	216
Maharashtra	Mukutban		237	1,092		
Maharashtra	Nahvi Talav		246789CDFG			149
Maharashtra	Nandur Madhameshwar Wildlife Sanctuary	I	2367ACDEH	8,211	15,378	9,403
Maharashtra	Navegaon Lake		HL	3,777		2,034
Maharashtra	Nerli Talav		246789CDFG			290
Maharashtra	Nilona Dam		4FG	1,187	2,246	
Maharashtra	Pakdiguddam Tank		7FH		1,027	
Maharashtra	Panchala Lake		7HI		49	
Maharashtra	Parsodi Talav		2FG		96	319
Maharashtra	Pashan Lake				207	
Maharashtra	Pawanpar Reservoir		47FH		5,977	
Maharashtra	Pedgaon (Bhima River)		GI			4,827
Maharashtra	Pimpalgaon				197	
Maharashtra	Pipriya Lake, Pench Tiger Project		7L		393	
Maharashtra	Pohara		37HF		94	
Maharashtra	Powai Lake		23AG		306	379
Maharashtra	Pritisangam Ghat To Krishna Bridge		246789BCDF			516
Maharashtra	Rajura Reservoir		37FGH		1,031	
Maharashtra	Rantalai Tamk		3		307	
Maharashtra	Rawanwadi		2FG		339	131
Maharashtra	Renuka – Khodshi Dam from Canal Bridge		246789BCDF			431
Maharashtra	Risala Tank		H		295	
Maharashtra	Rishi Sarovar		37H		2,327	
Maharashtra	Sakoli Lake		478H		119	

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Maharashtra	Saraswati Reservoir				145	
Maharashtra	Satnur Lake			1,092		
Maharashtra	Sawardi		8G		10	
Maharashtra	Sayaki Lake		7L		606	
Maharashtra	Sewree Jetty		489ABG		28,623	
Maharashtra	Shewati Reservoir		7G		161	
Maharashtra	Shimpore – Khed		G			9,345
Maharashtra	Shingaldoah Lake (Uttarwadhona)		7FG		6,946	
Maharashtra	Shiregaon – Bandh		67FG		2,281	1,999
Maharashtra	Silli-Ambadi Tank				155	
Maharashtra	Sitepar Talav Lake		2FI			166
Maharashtra	Siwani Bandh Lake		7CDG		1,454	
Maharashtra	Sondad Talav		39GF		566	597
Maharashtra	Sonegaon Reservoir		7FG		118	
Maharashtra	Sunderwata		3			50
Maharashtra	Surlighat Talav		467CDFG			5
Maharashtra	Suryaganga Lake		7FH		296	
Maharashtra	Talegaon Lake		48AHL			99
Maharashtra	Tansa (Belnala) Wildlife Sanctuary		7GK		494	
Maharashtra	Telangkhedi		237GL		1,081	
Maharashtra	Thane-Ulhas Estuary	I	29A		5,192	
Maharashtra	Thane East Salt Pan				520	
Maharashtra	Toranmal Reserve Forest		8CDG			129
Maharashtra	Upper Wardha Project		H		603	
Maharashtra	Vadgaon – Haveli		467BCDFG			42
Maharashtra	Vena		7F		5,965	
Maharashtra	Visapur Tank		26			5,002
Maharashtra	Wadali (Main) Lake		378H		430	
Maharashtra	Wadgaon		7HL		4,138	
Maharashtra	Wakeshwar		7GL		650	
Maharashtra	Zarpada Lake		7G		1,096	500
Manipur	Ithai Wapokpi – Nongma Ikhong		2346HK			5,861
Manipur	Logtak Lake	R, I				16,443
Orissa	Ambagada Pond		246H	179	291	
Orissa	Ansupa Lake		46F	23	219	
Orissa	Bada (Bandha) Tank Girisola		5C	274	249	
Orissa	Badabandha S. Tikara Pada		267		226	
Orissa	Badjoda Dam		KL		670	
Orissa	Baghlati Reservoir				75	
Orissa	Baghua Reservoir			578		
Orissa	Balakati Jora (Marh)		FG		1,067	
Orissa	Balimela Reservoir		FG		1,098	
Orissa	Bankbal Dam		H		1,937	
Orissa	Belama Tank		25		109	
Orissa	Belana Gadia		23467		289	
Orissa	Belapathra Ghai				281	
Orissa	Bengei Bandha		267DG	59	34	
Orissa	Bhetanai Haja			461	217	
Orissa	Bhismagir – Bada Tank		237		229	
Orissa	Bhitarkanika Mangrove	R, I			280,463	
Orissa	Biswa Ghai Kharinipada		2357		256	
Orissa	Chadakmaraa – Parsurampur		235G		44	
Orissa	Chhamundia Reservoir		25FG		190	
Orissa	Chilika Lake: Combined	R, I	235FH	1,349,587	482,366	773,649
Orissa	Daha Dam			4,034	199	
Orissa	Denua				6,978	
Orissa	Derasa Reservoir		47HL	450	240	
Orissa	Derjang		5FH		2,315	
Orissa	Dhulia Nali Dam – Manpur		25FH		1,086	
Orissa	Ekamrakanan Tank			3,894		
Orissa	Erra Tank		25	157	224	
Orissa	Gayala Banka on Mahanadi		24679CD	2,661	1,021	
Orissa	Ghodahaddam				2,021	
Orissa	Gopala Sagar (Patrapur)		579		177	
Orissa	Hadgadh				523	
Orissa	Haldia Dam		FHL	500	1,420	
Orissa	Hansapada Bada Pokhari		1		894	
Orissa	Hansua Irrigation Tank			75		
Orissa	Harabhangi			67,274		
Orissa	Hetta Tank – Sauntipalli		579		517	
Orissa	Hirakud Reservoir		25F	160,449	24,188	
Orissa	Hirapur Bada Pokhari		G		149	

## Results: South Asia

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Orissa	Huma Salt Fields			381		
Orissa	Interim Test Range – Chandipur				3,315	
Orissa	Jalamara Tank			81	74	
Orissa	Jambhina Irrigation Tank		6G	22		
Orissa	Jharia Nala Reservoir		247FH	480		
Orissa	Jhumuka Reservoir		47FGL		240	
Orissa	Kalingodola (on Bahuda River)		CDL		547	
Orissa	Kalinji Tank			157	155	
Orissa	Kalo Reservoir		467FGH	1,520	1,805	
Orissa	Kamarkhunti Dam		47G	4,415	880	
Orissa	Kanjari Reservoir		G	89	212	
Orissa	Kelakata Reservoir		25FH		856	
Orissa	Khajuritanak – S. Rautapur		2		113	
Orissa	Khoiro Tank		27F		54	
Orissa	Krishna Sagara Donuru			451		
Orissa	Krusnasagar Phasi Guda		236		217	
Orissa	Kuanria Dam		6CFHL		716	
Orissa	Kumuti Tank			398	111	
Orissa	Kuspangji Pato				1,092	
Orissa	Machhakund Reservoir		6		391	
Orissa	Mahadei Pokhari				173	
Orissa	Mahadei Sagar			411	160	
Orissa	Mandira Reservoir					1,442
Orissa	Meghājholi Sagara		27		157	
Orissa	Mahanadi River: Trisulia to Baidyeswar			1,146		
Orissa	Molia Ghai Dam			555		
Orissa	Mukundadev Sagar		5		223	
Orissa	Mukutmonipur			23,522		
Orissa	Nagapur Tank		G		1,131	
Orissa	Naraj–Mundali		2	1,393	2,678	
Orissa	Narayan Sagar		5		109	
Orissa	Nedam Dam		1		17	
Orissa	Ongaito Tank			6,749	872	
Orissa	Padma Pato Iswarapur				191	
Orissa	Palaba Bandha		378F		260	
Orissa	Pangidi Haja			628	238	
Orissa	Parabadi Dhauli		4H	14		
Orissa	Pathuri Reservoir			24	230	
Orissa	Pampalo		G		22,035	
Orissa	Raga Tank			146	384	
Orissa	Raghunath Sagar			494	932	
Orissa	Rakhyasa Tank		27		241	
Orissa	Ralaba Tank		378f	412	260	
Orissa	Ramasagar and Seethasagar Complex			807		
Orissa	Remala		2		61	
Orissa	Rengali			28,501	2,814	
Orissa	Rissia Reservoir		47H	323	841	
Orissa	Rusikulya Dam			266	458	
Orissa	Saipal		25	786	1,279	
Orissa	Salia Reservoir			244		
Orissa	Sana Patta		23FH		474	
Orissa	Sapua Irri			61		
Orissa	Sisilo		1	1,443	362	
Orissa	Suleipat Dam		G		1,572	
Orissa	Sundar Dam		25	5,095	2,330	
Orissa	Suvarnapur–Ansupa				503	
Orissa	Tampara Backwaters			721		
Orissa	Thumka Reservoir		47FGL		240	
Puducherry	Bahour Tank	I	7FH	6,678	2,806	2,678
Puducherry	Ousteri Tank	I	3679AFL	7,220	4,817	2,407
Punjab	Harike Wetland	R, I	3	5,391		
Punjab	Nangal Head Works				3,388	
Punjab	Ropar Wetland	R, I		185		
Rajasthan	Abhedra		37F	1,653		
Rajasthan	Alniya Dam	I	679CDFH	2,227		714
Rajasthan	Amanishah Nullah Ambabari		234789FG		1,618	1,096
Rajasthan	Bardha Dam	I	26DF	6,221		
Rajasthan	Chandalai		6H		566	189
Rajasthan	Golyahedi Village Pond		26CD	577	230	499
Rajasthan	Guda–Bish (Vishnion) Dam		7	1,243		
Rajasthan	Jalmahal Lake		4689HIL		2,410	1,420
Rajasthan	Kayalana and Barli Pond		8	1,469	1,149	

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Rajasthan	Kishore Sagar		3589CG		3,122	294
Rajasthan	KTPS Ash Pond		239	683		
Rajasthan	Pathik Sagar		67CG		399	
Rajasthan	Rajpura Village Pond		236CD	635	327	577
Rajasthan	Ram Sagar Lake (Hindoli)	I	267		76	488
Rajasthan	Right Main Canal		2589CDFG			5,129
Rajasthan	Sambhar Lake	R, I		0		
Rajasthan	Sardarsamand		CDH	2,337	1,011	
Rajasthan	Ummedganj		346789F	2,481	435	
Rajasthan	Vardha Dam		6CDFH			13,697
Tamil Nadu	Andi Odai Tank		7FG		5,760	5,680
Tamil Nadu	Chembarambakkam Tank		29FJ	5,244		
Tamil Nadu	Cheyyur Lagoon		FH		1,268	8,296
Tamil Nadu	Kaliveli Tank	pl	367FG	15,205	3,476	237
Tamil Nadu	Karavetty Tank	I	7FG		25,778	1,622
Tamil Nadu	Koonthakulam Bird Sanctuary	I	L		1,333	
Tamil Nadu	Kottaikulam (Periyakulam)		67		129	
Tamil Nadu	Man Odai Tank		7FG		1,677	2,033
Tamil Nadu	Singenallum		28HL			402
Tamil Nadu	Suchindram Tank	I	236789		946	1,442
Tamil Nadu	Sulur Tank		478GHIL			131
Tamil Nadu	Tenneri Tanks		69A	3,220		
Tamil Nadu	Theroor Wetland Complex					3,003
Tamil Nadu	Ukkadam Tank				673	217
Tamil Nadu	Uppalam		4789FGIK			296
Tamil Nadu	Vembanoor Wetland Complex					604
Uttar Pradesh	Amakhera Tank		69H		293	
Uttar Pradesh	Ashpan			14,766		
Uttar Pradesh	Baadi Taal					4,159
Uttar Pradesh	Chaltuwa Wetland		3CDG		633	
Uttar Pradesh	Ghaziabad		24678AFGI		1,030	
Uttar Pradesh	Katernia Ghat Sanctuary	I	47CD			7,160
Uttar Pradesh	Kishanpur Wildlife Sanctuary		37G		1,544	
Uttar Pradesh	Nachan Tal		37CDG		471	
Uttar Pradesh	National Chambal Wildlife Sanctuary	I		53,115	2,835	4
Uttar Pradesh	Nawabganj Bird Sanctuary	I	7L		128	
Uttar Pradesh	Pili Dam			18,325		
Uttar Pradesh	Sur Sarovar Bird Sanctuary	I			15,581	
Uttar Pradesh	Tiger Haven		G		200	
Uttar Pradesh	Yamuna R.: Agra		7AH		154	
Uttar Pradesh/ Uttarakhand	Nanakmata Reservoir			3,603		
Uttarakhand	Asan Barrage	I	2378	2,815	5,756	7,027
Uttarakhand	Baur Reservoir		6F	4,368	4,410	1,805
Uttarakhand	Bheemgoda Barrage				798	
Uttarakhand	Dehra Dun		23		3,995	
Uttarakhand	Gang Lehari				148	
Uttarakhand	Ganges between Rishikesh and Haridwar		479GK			1,024
Uttarakhand	Gangetic Plains between Nildhara and Shyampur Village				698	
Uttarakhand	Gol Tapper				197	
Uttarakhand	Haripura Reservoir		27FG	26,844	763	1,559
Uttarakhand	Lal Tappar				21	
Uttarakhand	Ramganga River			823		
Uttarakhand	Tumeria Dam		6F	3,787	1,495	3,137
West Bengal	Adina Deer Park		36CDHL	816	587	
West Bengal	Ahiron, Murshidabad			2,298	5,961	
West Bengal	Alipore Zoological Gardens			630		
West Bengal	Ash Dykes of Farakka Thermal Power Project		23569ACDFI	2,150	1,893	
West Bengal	Baghar Beel		67CDFHI	1,617	4,174	
West Bengal	Bahara Muri		G	588		
West Bengal	Ballavpur Wildlife Sanctuary		3	5,081	7,558	
West Bengal	Bara Beel		36CDFH	374	307	
West Bengal	Bara Sagar Dighi		HIL	4,134	3,803	
West Bengal	Baratali Beel		6CDFHI	700	485	
West Bengal	Bharamori			466		
West Bengal	Chander More		367CDFGI	2,790	3,550	
West Bengal	Chittaranjan Bara Dam		27FHKL		2,094	
West Bengal	Dabur Char		FHL	624	286	
West Bengal	Domohani		3467CDFH	2,601	3,725	
West Bengal	Durgapur Barrage		58AFH	690		
West Bengal	Farakka Barrage (Ganges River)	I	268CDFHK	44,041	64,656	
West Bengal	Fulbari (Mahananda, Siliguri) Barrage		245678ACDFHL	1,080	1,439	1,182

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
West Bengal	Gajaldoba Teesta Barrage		267CDGL	2,517	7,356	
West Bengal	Gopal Pukar		46CHI	492	8	
West Bengal	Gosadanga Beel		278CD		176	
West Bengal	It Bhata Ihil		7CH		190	
West Bengal	Janata Eet Bhata		G			339
West Bengal	Jore Dighi				1,790	
West Bengal	Kaljani Bill		2CDG	138	309	
West Bengal	Karnail Singh Park		H		3,841	
West Bengal	Kumari Dam		6G	248	425	
West Bengal	Mahan Beel		3567CDF	210	469	
West Bengal	Mara Toresha River		2CD	364		
West Bengal	Mechi River		47CDFGI	1,042	933	
West Bengal	Nalban Fishery		H	656		
West Bengal	Nandikhola R.: Sevoke		7GKL	736	185	
West Bengal	Narar Thali Bil		2	574		
West Bengal	Naya Bandh Bill	I	356CDFH	1,675	9,386	
West Bengal	Naya Chara (Kharubhaj) Beel		6CDG	1,453	1,838	1,644
West Bengal	Panchet Dam		89AHL	2,497	4,297	
West Bengal	Purbasthali		26G			5,494
West Bengal	Rabindra Sarobar			114		
West Bengal	Raiganj (Kulik) Bird Sanctuary	I	267CDGL	1,087	2,194	
West Bengal	Rasar Char (Purbasthali)		7FG	6,931	5,456	
West Bengal	Rasik Bill		37CHL	5,439	4,202	1,492
West Bengal	Rydak River		29CDGK	185	527	462
West Bengal	Saat Beki Beel		6CDFG			603
West Bengal	Sagar Dighi				2,000	
West Bengal	Saheb Bandh		38ABG	6,989	7,208	
West Bengal	Sankosh Bill		2CDG	463		
West Bengal	Sankosh River		9CDFG	180		
West Bengal	Santragachi Jheel		389AGL	7,969		6,353
West Bengal	Satbeki Bill		23678CDHFGL	779	1,893	
West Bengal	Tara Dam, Purulia			296	428	
West Bengal	Tilpara Barrage		G	1,964	3,584	
West Bengal	Vikon Beel		467CDFHI	419	542	

**Notes:**

Status<sup>1</sup>: R – Ramsar site, pR – part of a Ramsar site, I – Wetland IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), W – UNESCO World Heritage Site.

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

**Table 12: Waterbird species counts reported during the AWC in India, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		14,878	12,655	11,006
Red-necked Grebe	<i>Podiceps grisegena</i>		3	1	12
Great Crested Grebe	<i>Podiceps cristatus</i>		445	675	1,253
Black-necked Grebe	<i>Podiceps nigricollis</i>		45	11	3
unidentified grebes	Podicipedidae spp.		54	1,563	682
Great White Pelican	<i>Pelecanus onocrotalus</i>		2,200	5,042	8,461
Spot-billed Pelican	<i>Pelecanus philippensis</i>	VU	1,071	3,381	480
Dalmatian Pelican	<i>Pelecanus crispus</i>	VU	141	125	570
unidentified pelicans	Pelecanidae spp.		20	766	4
Great Cormorant	<i>Phalacrocorax carbo</i>		9,469	8,351	9,546
Indian Cormorant	<i>Phalacrocorax fuscicollis</i>		3,381	2,792	6,667
Little Cormorant	<i>Phalacrocorax niger</i>		52,555	36,839	26,891
unidentified cormorants	Phalacrocoracidae spp.		1,909	1,816	676
Oriental Darter	<i>Anhinga melanogaster</i>	NT	463	1,015	538
Grey Heron	<i>Ardea cinerea</i>		5,663	4,155	2,858
Eastern White Egret	<i>Ardea modesta</i>		1,599	7,931	4,404
Intermediate Egret	<i>Ardea intermedia</i>		7,088	11,240	5,965
Goliath Heron	<i>Ardea goliath</i>		1	3	4
Purple Heron	<i>Ardea purpurea</i>		3,279	1,204	1,340
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		66,562	28,278	27,525
Green-backed Heron	<i>Butorides striatus</i>		156	634	15
Indian Pond Heron	<i>Ardeola grayii</i>		31,988	18,179	12,242
Little Egret	<i>Egretta garzetta</i>		41,715	18,942	17,336
Western Reef Egret	<i>Egretta gularis</i>		288	549	254

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		573	2,551	
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		4,129	4,121	731
Malayan Night-heron	<i>Gorsachius melanolophus</i>		26		
Eurasian Bittern	<i>Botaurus stellaris</i>			20	4
Yellow Bittern	<i>Ixobrychus sinensis</i>		63	164	26
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		46	94	100
Black Bittern	<i>Ixobrychus flavicollis</i>		13	134	32
unidentified bitterns	<i>Ixobrychus</i> spp.			35	41
unidentified Ardeidae	Ardeidae spp.		3,101	6,027	13,261
Painted Stork	<i>Mycteria leucocephala</i>	NT	4,513	7,933	5,253
Asian Openbill	<i>Anastomus oscitans</i>		58,509	18,619	11,503
Black Stork	<i>Ciconia nigra</i>		109	92	54
Woolly-necked Stork	<i>Ciconia episcopus</i>		332	513	407
Eurasian White Stork	<i>Ciconia ciconia</i>		133	69	75
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT	18	49	17
Greater Adjutant	<i>Leptoptilos dubius</i>	EN		15	9
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	56	205	149
unidentified storks	Ciconiidae spp.		4		7
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	2,714	4,734	3,695
Indian Black Ibis	<i>Pseudibis papillosa</i>		3,146	2,409	2,757
Glossy Ibis	<i>Plegadis falcinellus</i>		4,723	4,448	7,218
unidentified ibises	Threskiornithidae spp.		9,800	5	
Eurasian Spoonbill	<i>Platalea leucorodia</i>		2,799	4,063	6,059
Greater Flamingo	<i>Phoenicopterus ruber roseus</i>		8,979	34,244	12,556
Lesser Flamingo	<i>Phoeniconaias minor</i>	NT	13,019	54,333	71,690
unidentified flamingos	Phoenicopteridae spp.		6,224	253	
Fulvous Whistling Duck	<i>Dendrocygna bicolor</i>		9,882	8,400	3,317
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		142,628	110,229	64,195
Greylag Goose	<i>Anser anser</i>		2,889	7,919	2,710
Bar-headed Goose	<i>Anser indicus</i>		10,918	19,406	19,273
unidentified grey geese	<i>Anser</i> spp.		979		
Ruddy Shelduck	<i>Tadorna ferruginea</i>		27,676	16,188	10,383
Common Shelduck	<i>Tadorna tadorna</i>		204	303	406
White-winged Duck	<i>Cairina scutulata</i>	EN			2
Comb Duck	<i>Sarkidiornis melanotos</i>		2,540	851	4,014
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		55,026	28,942	19,554
Eurasian Wigeon	<i>Anas penelope</i>		116,302	92,960	98,156
Falcated Duck	<i>Anas falcata</i>	NT	60	300	
Gadwall	<i>Anas strepera</i>		195,592	111,496	174,618
Common Teal	<i>Anas crecca</i>		46,988	54,556	46,999
Mallard	<i>Anas platyrhynchos</i>		2,211	3,854	1,602
Spot-billed Duck	<i>Anas poecilorhyncha</i>		15,239	22,569	14,160
Northern Pintail	<i>Anas acuta</i>		396,748	320,591	359,560
Garganey	<i>Anas querquedula</i>		45,911	92,417	57,649
Northern Shoveler	<i>Anas clypeata</i>		223,213	139,555	119,831
Red-crested Pochard	<i>Netta rufina</i>		43,280	49,126	18,478
Common Pochard	<i>Aythya ferina</i>		114,108	59,229	47,226
Baer's Pochard	<i>Aythya baeri</i>	VU	10	153	18
Ferruginous Duck	<i>Aythya nyroca</i>	NT	964	1,641	3,270
Tufted Duck	<i>Aythya fuligula</i>		90,459	70,000	13,245
Goosander	<i>Mergus merganser</i>		85	40	56
unidentified ducks	Anatinae spp.		220,531	99,216	126,011
Demoiselle Crane	<i>Anthropoides virgo</i>		9,385	121,772	61,528
Sarus Crane	<i>Grus antigone</i>	VU	194	275	217
Common Crane	<i>Grus grus</i>		4,350	51,811	9,984
unidentified cranes	Gruidae spp.		1,000	32,118	2
Slaty-legged Crake	<i>Rallina eurizinoides</i>		1,000		
Slaty-breasted Rail	<i>Gallirallus striatus</i>		1,011	11	35
Water Rail	<i>Rallus aquaticus</i>		83	484	22
Brown Crake	<i>Amauromis akool</i>		59	18	19
White-breasted Waterhen	<i>Amauromis phoenicurus</i>		1,530	2,797	2,280
Baillon's Crake	<i>Porzana pusilla</i>		241	16	4
Ruddy-breasted Crake	<i>Porzana fusca</i>		21	73	29
Watercock	<i>Gallixrex cinerea</i>		353	397	73
Purple Swampphen	<i>Porphyrio porphyrio</i>		41,850	15,500	11,355
Common Moorhen	<i>Gallinula chloropus</i>		37,459	7,496	2,651
Common Coot	<i>Fulica atra</i>		216,428	192,193	245,307
unidentified rails	Rallidae spp.		2	3	
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		29,950	4,293	4,205
Bronze-winged Jacana	<i>Metopidius indicus</i>		26,351	5,332	2,829
Greater Painted Snipe	<i>Rostratula benghalensis</i>		96	388	64
Crab Plover	<i>Dromas ardeola</i>		2	6,923	

## Results: South Asia

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>		12	336	26
Ibisbill	<i>Ibidorhyncha struthersii</i>				8
Black-winged Stilt	<i>Himantopus himantopus</i>		23,238	39,517	30,675
Pied Avocet	<i>Recurvirostra avosetta</i>		667	12,903	4,695
Great Thick-knee	<i>Burhinus (Esacus) recurvirostris</i>		460	236	173
Collared Pratincole	<i>Glareola pratincola</i>			354	
Oriental Pratincole	<i>Glareola maldivarum</i>		352	89	71
Small Pratincole	<i>Glareola lactea</i>		2,757	3,113	2,482
Northern Lapwing	<i>Vanellus vanellus</i>		249	1,345	428
River Lapwing	<i>Vanellus duvaucelli</i>		963	656	93
Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>		596	1,190	819
Grey-headed Lapwing	<i>Vanellus cinereus</i>		239	218	388
Red-wattled Lapwing	<i>Vanellus indicus</i>		7,058	4,973	6,862
Sociable Lapwing	<i>Vanellus gregarius</i>	CR	2		
White-tailed Lapwing	<i>Vanellus leucurus</i>		64	427	232
unidentified lapwings	<b>Vanellus spp.</b>		1	70	19
Pacific Golden Plover	<i>Pluvialis fulva</i>		12,495	2,217	4,458
Grey Plover	<i>Pluvialis squatarola</i>		3,643	350	618
Great Ringed Plover	<i>Charadrius hiaticula</i>			28	4
Little Ringed Plover	<i>Charadrius dubius</i>		1,024	3,704	2,039
Kentish Plover	<i>Charadrius alexandrinus</i>		1,842	2,968	2,719
Lesser Sandplover	<i>Charadrius mongolus</i>		6,340	21,468	7,656
Greater Sandplover	<i>Charadrius leschenaultii</i>		1,393	411	150
unidentified <i>Charadrius</i> plovers	<i>Charadrius spp.</i>		546	95	5
Eurasian Woodcock	<i>Scolopax rusticola</i>		2	6	3
Jack Snipe	<i>Lymnocyrtus minimus</i>		10	175	110
Solitary Snipe	<i>Gallinago solitaria</i>			44	21
Pintail Snipe	<i>Gallinago stenura</i>		186	302	276
Swinhoe's Snipe	<i>Gallinago megala</i>			97	1
Common Snipe	<i>Gallinago gallinago</i>		1,468	1,538	463
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT		5	4
Black-tailed Godwit	<i>Limosa limosa</i>	NT	104,239	113,044	32,271
Bar-tailed Godwit	<i>Limosa lapponica</i>		466	4,663	1,560
unidentified godwits	<i>Limosa spp.</i>		314		
Whimbrel	<i>Numenius phaeopus</i>		115	1,283	59
Eurasian Curlew	<i>Numenius arquata</i>		12,356	1,615	207
Spotted Redshank	<i>Tringa erythropus</i>		860	489	90
Common Redshank	<i>Tringa totanus</i>		6,268	9,548	4,071
Marsh Sandpiper	<i>Tringa stagnatilis</i>		9,350	2,155	3,714
Common Greenshank	<i>Tringa nebularia</i>		3,028	2,878	639
Green Sandpiper	<i>Tringa ochropus</i>		1,449	508	398
Wood Sandpiper	<i>Tringa glareola</i>		2,624	6,169	3,811
unidentified <i>Tringa</i> Sandpipers	<i>Tringa spp.</i>		10,000		
Terek Sandpiper	<i>Xenus cinereus</i>		217	353	131
Common Sandpiper	<i>Actitis hypoleucos</i>		4,944	5,449	4,764
Ruddy Turnstone	<i>Arenaria interpres</i>		11	65	8
Great Knot	<i>Calidris tenuirostris</i>		4	8	5
Sanderling	<i>Calidris alba</i>		47	84	7
Little Stint	<i>Calidris minuta</i>		9,355	42,520	7,526
Temminck's Stint	<i>Calidris temminckii</i>		2,925	5,185	1,289
Long-toed Stint	<i>Calidris subminuta</i>		3	16	40
Curlew Sandpiper	<i>Calidris ferruginea</i>		991	3,550	2,772
Dunlin	<i>Calidris alpina</i>		20,341	822	1,575
Spoon-billed Sandpiper	<i>Euryornhynchus pygmaeus</i>	EN	1	6	
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		5	3	3
Ruff	<i>Philomachus pugnax</i>		12,785	29,168	14,134
unidentified <i>Calidris</i> sandpipers	<i>Calidris spp.</i>		591	9	25
unidentified shorebirds	<b>Charadrii spp.</b>		104,929	13,541	18,575
Heuglin's Gull	<i>Larus heuglini</i>		1,790	505	8,333
Yellow-legged Gull	<i>Larus cachinnans</i>			18	52
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>		856	1,317	226
Brown-headed Gull	<i>Larus brunnicephalus</i>		6,674	18,790	7,048
Common Black-headed Gull	<i>Larus ridibundus</i>		4,273	28,440	3,451
Slender-billed Gull	<i>Larus genei</i>		104	973	1,020
Little Gull	<i>Larus minutus</i>			1	
unidentified gulls	<i>Laridae spp.</i>		2,318	5,683	290
Gull-billed Tern	<i>Gelochelidon nilotica</i>		1,613	992	513
Caspian Tern	<i>Sterna caspia</i>		256	635	608
Lesser Crested Tern	<i>Sterna bengalensis</i>		85	895	68
Sandwich Tern	<i>Sterna sandvicensis</i>		71	50	
(Greater) Crested Tern	<i>Sterna bergii</i>		99	23	
River Tern	<i>Sterna aurantia</i>		5,735	6,820	6,227



English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Common Tern	<i>Sterna hirundo</i>		1,967	1,075	171
Little Tern	<i>Sterna albifrons</i>		2,283	4,023	808
Black-bellied Tern	<i>Sterna melanogaster</i>	NT	339	562	38
Whiskered Tern	<i>Chlidonias hybridus</i>		16,221	12,483	19,005
White-winged Black Tern	<i>Chlidonias leucopterus</i>		311	4	4
unidentified terns	Sterninae spp.		280	13,071	6,944
Indian Skimmer	<i>Rynchops albicollis</i>	VU	472	161	
<b>Total Waterbirds</b>			<b>2,923,382</b>	<b>2,501,605</b>	<b>2,037,691</b>
Osprey	<i>Pandion haliaetus</i>		15	84	50
Black Kite	<i>Milvus migrans</i>				33
Brahminy Kite	<i>Haliaeetus indus</i>			630	386
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>			42	7
Pallas's Sea Eagle	<i>Haliaeetus leucorhynchus</i>	VU	1	22	11
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT			1
Lesser Fish-eagle	<i>Ichthyophaga humilis</i>	NT		3	22
Grey-headed Fish-eagle	<i>Ichthyophaga ichthyaetus</i>	NT		12	12
Hen Harrier	<i>Circus cyaneus</i>			1	
Pallid Harrier	<i>Circus macrourus</i>	NT		1	
Western Marsh Harrier	<i>Circus aeruginosus</i>		1	370	442
Eastern Marsh Harrier	<i>Circus spiliotus</i>			44	5
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	1	49	23
Steppe Eagle	<i>Aquila nipalensis</i>			3	7
Imperial Eagle	<i>Aquila heliaca</i>	VU		4	5
Peregrine Falcon	<i>Falco peregrinus</i>			48	2
unidentified raptors				13	27
Ruddy Kingfisher	<i>Halcyon coromanda</i>			34	
Stork-billed Kingfisher	<i>Halcyon capensis</i>			118	61
Brown-winged Kingfisher	<i>Halcyon amauroptera</i>			91	8
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		2	1,613	827
Black-capped Kingfisher	<i>Halcyon pileata</i>			196	15
Collared Kingfisher	<i>Todiramphus chloris</i>			40	
Oriental Dwarf Kingfisher	<i>Ceyx erithacus</i>			1	
Common Kingfisher	<i>Alcedo atthis</i>		1	1,168	645
Pied Kingfisher	<i>Ceryle rudis</i>		101	893	534
unidentified Kingfishers	Alcedinidae spp.			23	3
White Wagtail	<i>Motacilla alba</i>			2,532	1,737
White-browed Wagtail	<i>Motacilla maderaspatensis</i>			1,087	673
Grey Wagtail	<i>Motacilla cinerea</i>			3,800	2,636
Citrine Wagtail	<i>Motacilla citreola</i>			289	210
Yellow Wagtail	<i>Motacilla flava</i>			2,705	3,833
unidentified wagtails	<i>Motacilla</i> spp.				114
Water Pipit	<i>Anthus spinoletta</i>			211	375
Red-throated Pipit	<i>Anthus cervinus</i>			1	1
Paddyfield Pipit	<i>Anthus rufulus</i>				14

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.2.5 Maldives

The count received from Maldives in 2004 represented the first time the country had taken part in the AWC. Two sites, Filitheyo Island and Etheremadivatu Island, were surveyed, and 22 and 34 individuals were recorded respectively (Figure 7). Neither site meets the criteria of international importance, and no globally threatened species were recorded.

**Table 13: Waterbird species counts reported during the AWC in Maldives in 2004**

English Name	Scientific Name	2004
Grey Heron	<i>Ardea cinerea</i>	5
Green-backed Heron	<i>Butorides striatus</i>	3
White-breasted Waterhen	<i>Amauromis phoenicurus</i>	1
Common Sandpiper	<i>Actitis hypoleucos</i>	2
(Greater) Crested Tern	<i>Sterna bergii</i>	1
Black-naped Tern	<i>Sterna sumatrana</i>	12
unidentified terns	Sterninae spp.	20
Brown Noddy	<i>Anous stolidus</i>	1
Lesser Noddy	<i>Anous tenuirostris</i>	11

A total of 56 individuals of eight waterbird species were recorded (Table 13). The most abundant groups were the terns and noddies. Tourism development was reported as a threat at both sites. The counts were contributed by individual counters.

### 3.2.6 Nepal

Eleven sites were surveyed for the AWC during 2002–2004 (Figure 11 and Table 14). Total numbers of waterbirds recorded were 5,259 (3 sites), 1,468 (3 sites) and 10,192 (9 sites) in 2002, 2003 and 2004, respectively.

Two Ramsar sites (also IBAs), namely, Beeshazar and associated lakes and Koshi Tappu Wildlife Reserve, and one UNESCO World Heritage Site (also an IBA), the Chitwan National Park, were surveyed. Three sites recorded more than 1% of the biogeographic population of at least one waterbird species.

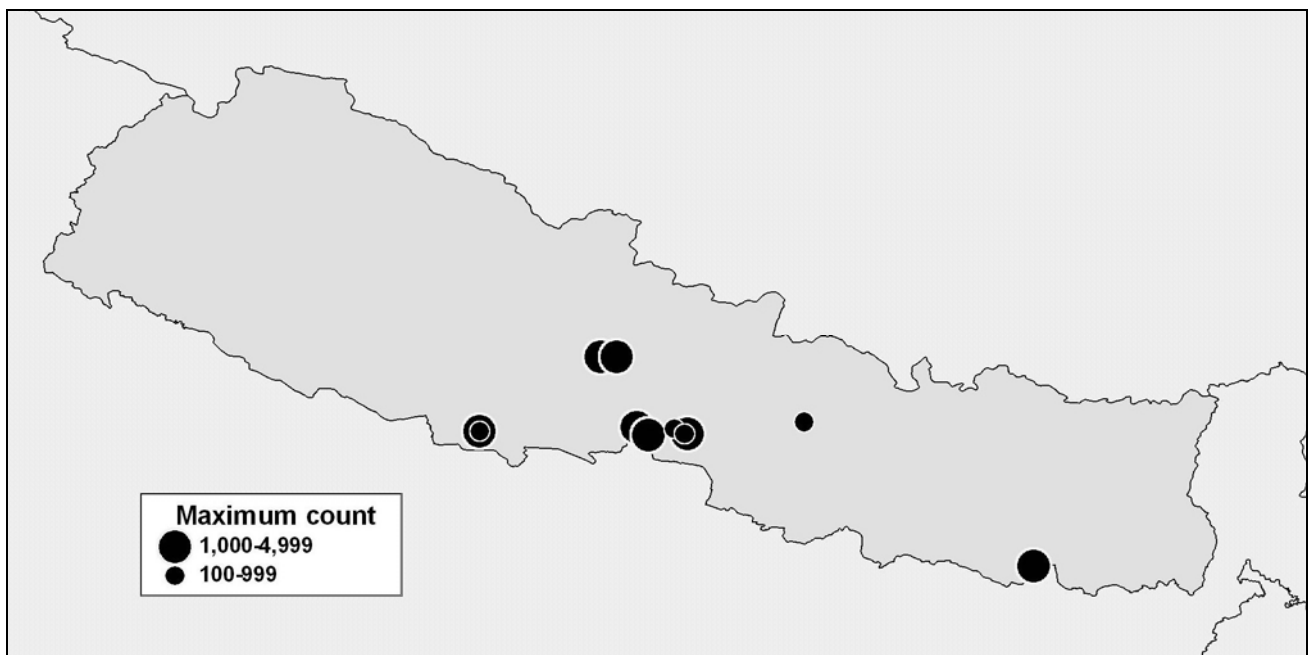
Totals of 75 waterbird and three kingfisher species were recorded (Table 15). The most numerous species recorded were Ruddy Shelduck (2,280 in 2004), Common Coot (1,012 in 2004), Small Pratincole (926 in 2004), Great Cormorant (698 in 2004), Gadwall (548 in 2004), Common Teal (519 in 2002) and Goosander (519 in 2004).

The highest count of the Vulnerable Lesser Adjutant was 52 individuals in 2004. Highest counts of the six Near Threatened species were as follows: Oriental Darter (18 in 2002), Black-necked Stork (6 in 2002), Black-headed Ibis (96 in 2002), Falcated Duck (6 in 2004), Ferruginous Duck (20 in 2004) and Black-bellied Tern (8 in 2002).

Habitat loss and degradation were the major threats to wetlands reported, combined with the possibility of reduced food availability due to over-fishing for many wetland-dependent birds. Water pollution, river poisoning and dynamite blasting to obtain fish, increased use of pesticides – particularly on the paddy crop, hunting and associated human disturbance and the spread of invasive alien plant species in wetland areas were some of the specific problems that Nepal's waterbirds were reported to have been facing in recent years.

The census was coordinated by Bird Conservation Nepal.

**Figure 11: AWC site coverage and numerical distribution of waterbirds in Nepal, 2002–2004**



**Table 14: Wetland sites surveyed during the AWC in Nepal, 2002–2004**

Province <sup>1</sup>	Site Name <sup>2</sup>	Status <sup>3</sup>	Threats <sup>4</sup>	2002	2003	2004
CR: Bagmati	Bagmati River near Kathmandu		5689FG		100	
CR: Bagmati	Taudaha		23568DFG		311	174
CR: Narayani	Beeshazar and associated lakes	R, I	3CH			155
CR: Narayani	Rapti River: at Sauraha					695
CR: Narayani	Chitwan National Park (CNP): Narayani River: Amaltari Ghat – Tribeni Ghat	I, W	6789AFG			1,112
CR: Narayani	CNP: Narayani River: Sigraulti to Amaltari Ghat		489ACDFGL	1,447		3,122
CR: Narayani	CNP: Rapti River and Dungre River					1,222
CR: Narayani	CNP: Rapti River: Kasara to Narayani Confl (Ghatgain to Bahmara)		6789AFG	1,139		1,344
CR: Narayani	Reu River: Baluwai Khola to Hathisaar		6789HGK			205
ER: Koshi	Koshi River Barrage (Koshi Tappu Wildlife Reserve)	R, I	28DFG	2,686		
WR: Gandaki	Pokhara Valley Lakes*		25678GHL		1,066	2,163

**Notes:**Province<sup>1</sup>: CR – Central Region, ER – Eastern Region, WR – Western Region.Site name<sup>2</sup>: Pokhara Valley Lakes\* – 2003 count covers only Khaste Lake. 2004 count is a total count of Fewa, Khaste, Madi and Rupa Lakes.Status<sup>3</sup>: R – Ramsar site, I – Wetland IBA identified by BirdLife International (2005), W – UNESCO World Heritage Site.Threats<sup>4</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.**Table 15: Waterbird species counts reported during the AWC in Nepal, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		48	74	176
Great Crested Grebe	<i>Podiceps cristatus</i>				6
Black-necked Grebe	<i>Podiceps nigricollis</i>		1		
Great Cormorant	<i>Phalacrocorax carbo</i>		209	1	698
Little Cormorant	<i>Phalacrocorax niger</i>		96		
Oriental Darter	<i>Anhinga melanogaster</i>	NT	18		17
Grey Heron	<i>Ardea cinerea</i>		14		9
Eastern White Egret	<i>Ardea modesta</i>		58		62
Intermediate Egret	<i>Ardea intermedia</i>		40	10	81
Purple Heron	<i>Ardea purpurea</i>		4		2
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		158	28	54
Green-backed Heron	<i>Butorides striatus</i>		10		10
Indian Pond Heron	<i>Ardeola grayii</i>		92	9	230
Little Egret	<i>Egretta garzetta</i>		89		219
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		442		263
Yellow Bittern	<i>Ixobrychus sinensis</i>				1
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>				3
Black Bittern	<i>Ixobrychus flavicollis</i>		2		
Asian Openbill	<i>Anastomus oscitans</i>		54		57
Black Stork	<i>Ciconia nigra</i>		18		114
Woolly-necked Stork	<i>Ciconia episcopus</i>		10		6
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT	6		
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	4		52
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	96		
Indian Black Ibis	<i>Pseudibis papillosa</i>		84		169
Eurasian Spoonbill	<i>Platalea leucorodia</i>		14		
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		186	192	351
Bar-headed Goose	<i>Anser indicus</i>		175		138
Ruddy Shelduck	<i>Tadorna ferruginea</i>		869		2,280
Common Shelduck	<i>Tadorna tadorna</i>		1		1
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>				2
Eurasian Wigeon	<i>Anas penelope</i>		55	17	83
Falcated Duck	<i>Anas falcata</i>	NT			6
Gadwall	<i>Anas strepera</i>		250	49	548
Common Teal	<i>Anas crecca</i>		519	426	445
Mallard	<i>Anas platyrhynchos</i>		404	32	189
Spot-billed Duck	<i>Anas poecilorhyncha</i>		4	3	18
Northern Pintail	<i>Anas acuta</i>		24		28
Garganey	<i>Anas querquedula</i>		31		36
Northern Shoveler	<i>Anas clypeata</i>		5	4	4
Red-crested Pochard	<i>Netta rufina</i>			2	39
Common Pochard	<i>Aythya ferina</i>		7	2	87

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Ferruginous Duck	<i>Aythya nyroca</i>	NT	7	16	20
Tufted Duck	<i>Aythya fuligula</i>				5
Goosander	<i>Mergus merganser</i>		196		519
Brown Crake	<i>Amaurornis akool</i>				12
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		11	1	10
Purple Swampphen	<i>Porphyrio porphyrio</i>		70	2	
Common Moorhen	<i>Gallinula chloropus</i>		291	20	67
Common Coot	<i>Fulica atra</i>		5	432	1,012
Bronze-winged Jacana	<i>Metopidius indicus</i>		34	22	124
Greater Painted Snipe	<i>Rostratula benghalensis</i>				1
Black-winged Stilt	<i>Himantopus himantopus</i>			4	4
Stone Curlew	<i>Burhinus oedicephalus</i>				20
Small Pratincole	<i>Glareola lactea</i>		62		926
Northern Lapwing	<i>Vanellus vanellus</i>				5
River Lapwing	<i>Vanellus duvaucelli</i>		15		166
Grey-headed Lapwing	<i>Vanellus cinereus</i>			40	3
Red-wattled Lapwing	<i>Vanellus indicus</i>		18		55
Little Ringed Plover	<i>Charadrius dubius</i>		14	2	112
Kentish Plover	<i>Charadrius alexandrinus</i>		62		61
Pintail Snipe	<i>Gallinago stenura</i>		5		3
Common Snipe	<i>Gallinago gallinago</i>			2	22
Eurasian Curlew	<i>Numenius arquata</i>		65		
Common Redshank	<i>Tringa totanus</i>		12	11	12
Common Greenshank	<i>Tringa nebularia</i>		148	33	250
Green Sandpiper	<i>Tringa ochropus</i>		44	12	85
Common Sandpiper	<i>Actitis hypoleucos</i>		51	10	98
Little Stint	<i>Calidris minuta</i>		7		15
Temminck's Stint	<i>Calidris temminckii</i>		23	12	97
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>		7		
Brown-headed Gull	<i>Larus brunnicephalus</i>				2
Common Black-headed Gull	<i>Larus ridibundus</i>				2
River Tern	<i>Sterna aurantia</i>		7		
Black-bellied Tern	<i>Sterna melanogaster</i>	NT	8		
<b>Total Waterbirds</b>			<b>5,259</b>	<b>1,468</b>	<b>10,192</b>
White-throated Kingfisher	<i>Halcyon smyrnensis</i>			1	
Common Kingfisher	<i>Alcedo atthis</i>		3		
Pied Kingfisher	<i>Ceryle rudis</i>		10		
White-browed Wagtail	<i>Motacilla maderaspatensis</i>			6	
Grey Wagtail	<i>Motacilla cinerea</i>			2	

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.2.7 Pakistan

A total of 109 sites were surveyed at least once in all three years (Figure 12 and Table 16). Waterbird totals were 496,943 (68 sites), 348,142 (87 sites) and 158,683 (23 sites) respectively in 2002, 2003 and 2004. Sixteen Ramsar sites and 23 IBAs were surveyed at least once.

Sites that recorded more than 20,000 waterbirds were: Chashma Barrage Reservoir (157,925 in 2002), Nur-Ri Lake (50,997 in 2002), Haleji Lake (39,248 in 2002), Keenjhar Lake (30,610 in 2002) and Lugh Lake (24,829 in 2002). A total of 18 sites recorded more than 1% of the biogeographic population of at least one waterbird species.

A total of 115 waterbird species were recorded in all three years, together with nine raptor and three kingfisher species (Table 17). The most numerous species recorded were: Common Coot (97,649 in 2002), Common Teal (50,977 in 2003), Common Pochard (42,509 in 2002), Northern Shoveler (40,676 in 2003), Northern Pintail (39,188 in 2002), Eurasian Wigeon (24,773 in 2002), Gadwall (23,207 in 2002), Mallard (17,998 in 2003), Tufted Duck (13,766 in 2003) and Greater Flamingo (6,966 in 2002).

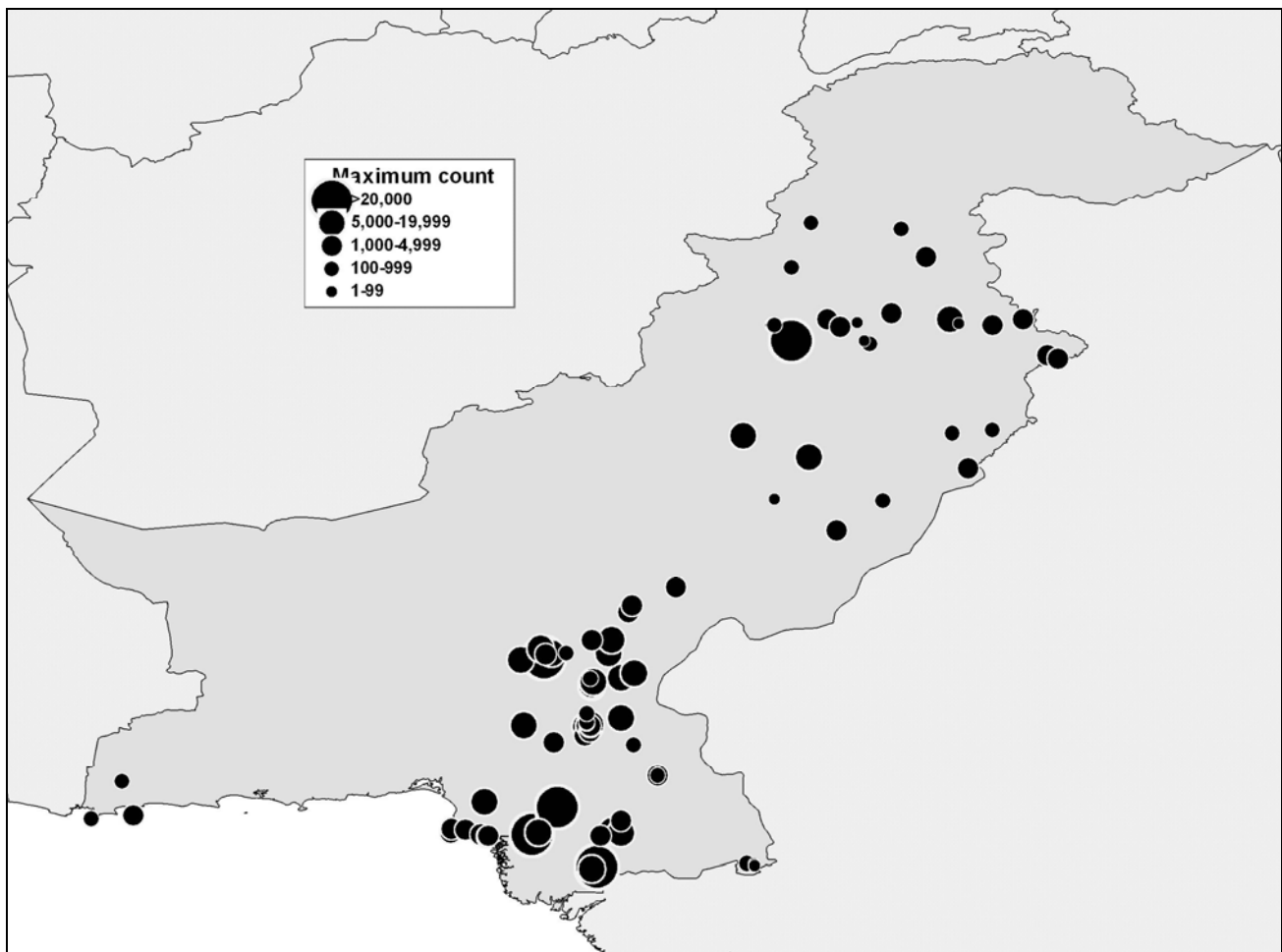
The highest count totals of seven globally threatened species during this period were as follows (Table 17): Critically Endangered: Sociable Lapwing (6 in 2002); Endangered: White-headed Duck (23 in 2003); Vulnerable: Dalmatian Pelican (994 in 2002), Marbled Teal (132 in 2003), Pallas's Sea Eagle (3 in 2002), Greater Spotted Eagle (25 in 2002) and Imperial Eagle (4 in 2002). Highest count totals of eight Near

Threatened species were: Oriental Darter (44 in 2003), Black-necked Stork (39 in 2003), Lesser Flamingo (290 in 2003), Ferruginous Duck (341 in 2003), Black-tailed Godwit (2,156 in 2003), Black-bellied Tern (78 in 2003) and Pallid Harrier (3 in 2002).

Major threats to the wetlands were climate-related (failure of rainfall), drainage, reclamation, water diversion for irrigation and other uses, pollution, hunting, trapping, poaching, overgrowth of vegetation, eutrophication, over-fishing and tourism /recreation. Additionally, the condition of the wetlands has changed considerably due to climatic conditions over the last decade (Jabeen Rahat 2004). In the southern province of Sindh, drought conditions had prevailed in the previous 5–6 years, leading to a loss and/or salination of many wetlands. However, during the 2002–2004 period, there was rainfall and some wetlands revived. More recently, leading up to the 2006 AWC, there has been widespread and heavy rain and this may enable the recovery of some of these wetlands and changes in the abundance and diversity of waterbird species (Munir Awan, pers. comm., Sept. 2006).

The counts were coordinated by the Punjab Wildlife and Parks Department and Sindh Wildlife Department.

**Figure 12: AWC site coverage and numerical distribution of waterbirds in Pakistan, 2002–2004**



**Table 16: Wetland sites surveyed during the AWC in Pakistan, 2002–2004**

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Balochistan	Aakra River Estuary		BFH	1,942		
Balochistan	Akara (Kaur) Dam		2FL	212		
Balochistan	Dasht Hor		47BFH	1,169		
Balochistan	Dasht River (Middle Part)		7F	72		
Balochistan	Gwadar Beach		478BFH	1,705		
Balochistan	Jiwani Mangroves	R, I	48BFH	964		
Balochistan	Saiji Dam		247F	1,531		

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Islamabad	Rawal Lake		289CDL		2,221	
NWFP	Kabul River		8CDF	341		
NWFP	Tanda Reservoir	R	236KL	414		
NWFP	Tarbela Reservoir		2CDK	798		
NWFP	Thanedar Wala	R, I	2367CDF	451		
Punjab	Bajwat area		367CDFG	10,882	817	
Punjab	Bathanwala		367CDFG		1,018	
Punjab	Chailianwala Marsh area		36CDF		35	
Punjab	Chandian Wali		36CDF	259		
Punjab	Ghamaghar Lake		J	70	160	656
Punjab	Head Islam		67CDK	121	150	139
Punjab	Head Marala Barrage		67ACD	4,390	2,691	567
Punjab	Head Qadirabad	I	367ACD	2,532	2,526	2,537
Punjab	Head Sulemanki		367CDFK		4,169	82
Punjab	Jehlum Bridge		89F		438	
Punjab	Kakos Kay			237	743	
Punjab	Kallar Kahar Lake		389L	1,433	1,302	4,855
Punjab	Khangarh Lake/Marsh Area		37FI		78	
Punjab	Kharal Lake		J	88	177	
Punjab	Lal Sohanara (Patisar) Lake	I	5J	1,297	182	149
Punjab	Nammal Lake		7CDK	992	1,419	961
Punjab	Rang Pur (Khushab)		37FI		5,265	1,093
Punjab	Rasool Barrage	I	37GK	7,399	2,332	
Punjab	River Ravi		67L		3,016	
Punjab	Taunsa Barrage	R, I	3567IK	6,518	9,559	
Punjab	Ucchali Wetland Complex: Jahlar Lake	R, I	28	50	91	43
Punjab	Ucchali Wetland Complex: Khabbaki Lake		6CDJ	84	42	0
Punjab	Ucchali Wetland Complex: Ucchali Lake		26CD	500	2,006	1,316
Punjab/NWFP	Chashma Barrage Reservoir	R, I	347KL	157,925	92,794	64,512
Sindh	Akhero Dhand		3		373	
Sindh	Akro Dhand		3F		274	
Sindh	Baboo Dhand		1			10,405
Sindh	Badam		35FG	1,203		
Sindh	Bakaar Lake		3FGK	920	702	
Sindh	Barr Talao		47	8		
Sindh	Berwari Dhand		1		7,530	7,270
Sindh	Bhan Sar Talao		2347F	6	76	
Sindh	Bhode Sar I Talao		237F	4	60	
Sindh	Bhode Sar II Talao		247F	57	91	
Sindh	Charvo Lake		3BFH	319	5,694	
Sindh	Chotiari Dam		3FH		2,258	
Sindh	Chungro Lake		BCDFG		841	
Sindh	Clifton Beach		8BGL	1,834	186	
Sindh	Dahee Lake		F		3,203	
Sindh	Dangree Dhand		1		2,109	
Sindh	Deh Akro-II: Chach Dhand	R, I	3F	1,535	485	
Sindh	Deh Akro-II: Pani Waro Dubho		3F		879	
Sindh	Deh Akro-II: Wassu Wari		3F		1,412	
Sindh	Dholaho Dhand		1		2,057	
Sindh	Dinn-E-Wari		3F	2,038		
Sindh	Drigh Lake	R, I	356BCDFGL	10,755	9,329	
Sindh	Ganjo Dhand		1			1,187
Sindh	Guddu Barrage		28ADFHL	3,549	2,597	
Sindh	Haleji Lake	R, I	345GL	39,248	15,380	
Sindh	Hamal (Katchri) Lake	I	35FHI	6,619	12,943	
Sindh	Hathungo Lakes: Gujri Lake		35F	4,608	419	
Sindh	Hathungo Lakes: Kinri Lake		35F	2,238	151	
Sindh	Hathungo Lakes: Mathoon Lake		3FG		698	
Sindh	Hawkes Bay/Sandspit		48BHL	2,492	2,030	
Sindh	Hub Dam	R, I	267BCHL	8,368	6,482	
Sindh	Hub River Mouth		378ABG	1,052	1,504	
Sindh	Hudero Lake		347H	13,643	1,154	
Sindh	Ibrahim's Haidri Coast		8ABH	3,297	1,766	
Sindh	Indus River Mouth	R, I	4FH	1,308	1,313	
Sindh	Jabho Lake	R, I	BFH	13,712	4,805	
Sindh	Jagheer		1			13,750
Sindh	Jarhi Dhand		1		5,572	5,486
Sindh	Junathi Dhand		CDFG		592	
Sindh	Kakre Ji Dhand		CDFG		820	
Sindh	Kala Kot Lake		3F	15,984		
Sindh	Kamal Sohoo Dhand		3BFH		1,052	
Sindh	Kathor Dhand		1		980	

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Sindh	Keenjhar (Kinjhar/Kalri) Lake	R, I	347FHL	30,610	15,952	
Sindh	Khakhro Dhand		1		2,174	
Sindh	Kirchan Dhand		1		6,179	3,848
Sindh	Korangi Creek		49ABH	3,125	582	
Sindh	Kotri Barrage		28FHL		646	
Sindh	Loonghno Dhand		3F		3,502	
Sindh	Lungh Lake		36BCDL	24,829	20,028	
Sindh	Manchar Lake	I	578BFHL	8,560	6,287	
Sindh	Mehrano Lake	pl	3		9,236	
Sindh	Nagiopeer Dhand		1		5,060	5,433
Sindh	Nur-Ri Lake	R, I	BFH	50,997	11,613	
Sindh	Phariaro Lake		1		165	
Sindh	Phoosna	I	3BFH	9,746	9,635	
Sindh	Pugri Dhand	I	35CDF	7,363	2,448	
Sindh	Putkan Dhand		1		8,027	11,940
Sindh	(Mountain Stream of) Rann of Kachchh: Jijoon Nadi	R, I	3478	57	73	
Sindh	Rann of Kachchh: Lakharr Khadio Talao		2347	76	72	
Sindh	Rann of Kachchh: Narya Sar Talao		237F	166	122	
Sindh	Rann of Kachchh: Rann Pure Dam		2F		49	
Sindh	Rup (Ghauspur) Lake		26CDFGH	624	2,727	
Sindh	Sadoro Faqir Ki Miani		1			17,896
Sindh	Samabi Dhand		3		295	
Sindh	Samand		3F		4,825	
Sindh	Nara canal wetlands: Sangrario Dhand	pR, pl	3F	1,187	1,943	
Sindh	Simni Dhand		1		2,109	
Sindh	Sindh Dhoru (Chimney Lake)		8FG	3,134	1,246	
Sindh	Sodar Peer Dhand		1			4,600
Sindh	Soomarkhi Lake		3F	6,429		
Sindh	Sukkur Barrage		268BCHL	5,010	1,816	
Sindh	Tharri Lake		3BFG	6,520	1,802	

**Notes:**

Status<sup>1</sup>: R – Ramsar site, pR – part of a Ramsar site, I – Wetland IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005).

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

**Table 17: Waterbird species counts reported during the AWC in Pakistan, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		890	3,859	1,362
Great Crested Grebe	<i>Podiceps cristatus</i>		70	123	28
Black-necked Grebe	<i>Podiceps nigricollis</i>		430	74	2
Great White Pelican	<i>Pelecanus onocrotalus</i>		2,246	2,393	
Dalmatian Pelican	<i>Pelecanus crispus</i>	VU	994	141	
Great Cormorant	<i>Phalacrocorax carbo</i>		3,148	2,900	433
Indian Cormorant	<i>Phalacrocorax fuscicollis</i>		35	256	
Little Cormorant	<i>Phalacrocorax niger</i>		2,733	4,566	899
Oriental Darter	<i>Anhinga melanogaster</i>	NT		44	6
Grey Heron	<i>Ardea cinerea</i>		889	876	87
Eastern White Egret	<i>Ardea modesta</i>		926	1,082	219
Intermediate Egret	<i>Ardea intermedia</i>		421	1,442	220
Purple Heron	<i>Ardea purpurea</i>		49	420	26
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		1,180	3,270	495
Green-backed Heron	<i>Butorides striatus</i>		10	4	
Indian Pond Heron	<i>Ardeola grayii</i>		1,078	1,127	295
Little Egret	<i>Egretta garzetta</i>		2,348	3,357	1,332
Western Reef Egret	<i>Egretta gularis</i>		357	84	
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		195	14	
Eurasian Bittern	<i>Botaurus stellaris</i>			12	
Little Bittern	<i>Ixobrychus minutus</i>			7	
Yellow Bittern	<i>Ixobrychus sinensis</i>		20	5	
Black Stork	<i>Ciconia nigra</i>			18	
Eurasian White Stork	<i>Ciconia ciconia</i>		2		
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT		39	
Indian Black Ibis	<i>Pseudibis papillosa</i>			4	2
Glossy Ibis	<i>Plegadis falcinellus</i>		23	369	32
Eurasian Spoonbill	<i>Platalea leucorodia</i>		975	752	16
Greater Flamingo	<i>Phoenicopterus ruber</i>		6,966	2,785	34

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Lesser Flamingo	<i>Phoeniconaias minor</i>	NT		290	
Greylag Goose	<i>Anser anser</i>			2,160	16
Bar-headed Goose	<i>Anser indicus</i>		2,893	1,167	213
Ruddy Shelduck	<i>Tadorna ferruginea</i>		432	735	32
Common Shelduck	<i>Tadorna tadorna</i>		529	384	20
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		215	180	
Eurasian Wigeon	<i>Anas penelope</i>		24,773	14,565	6,719
Gadwall	<i>Anas strepera</i>		23,207	14,948	6,205
Common Teal	<i>Anas crecca</i>		46,293	50,977	10,584
Mallard	<i>Anas platyrhynchos</i>		15,900	17,998	8,838
Spot-billed Duck	<i>Anas poecilorhyncha</i>			20	
Northern Pintail	<i>Anas acuta</i>		39,188	12,367	9,503
Garganey	<i>Anas querquedula</i>		82	107	
Northern Shoveler	<i>Anas clypeata</i>		36,561	40,676	24,166
Marbled Teal	<i>Marmaronetta angustirostris</i>	VU	42	132	
Red-crested Pochard	<i>Netta rufina</i>		25	13	
Common Pochard	<i>Aythya ferina</i>		42,509	31,376	14,118
Ferruginous Duck	<i>Aythya nyroca</i>	NT	337	341	
Tufted Duck	<i>Aythya fuligula</i>		12,429	13,766	2,547
Red-breasted Merganser	<i>Mergus serrator</i>		2		
Goosander	<i>Mergus merganser</i>		7	3	
White-headed Duck	<i>Oxyura leucocephala</i>	EN	5	23	5
unidentified ducks	Anatinae spp.		101,000	9,000	5,000
Common Crane	<i>Grus grus</i>		12	42	
Water Rail	<i>Rallus aquaticus</i>			22	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		117	604	115
Baillon's Crake	<i>Porzana pusilla</i>			2	
Purple Swamphen	<i>Porphyrio porphyrio</i>		209	568	357
Common Moorhen	<i>Gallinula chloropus</i>		720	1,947	1,030
Common Coot	<i>Fulica atra</i>		97,649	75,344	59,055
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		334	76	4
Greater Painted Snipe	<i>Rostratula benghalensis</i>			21	
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>		338	4	
Black-winged Stilt	<i>Himantopus himantopus</i>		2,632	5,434	1,133
Pied Avocet	<i>Recurvirostra avosetta</i>		641	414	90
Great Thick-knee	<i>Burhinus (Esacus) recurvirostris</i>		32	6	
Small Pratincole	<i>Glareola lactea</i>			186	
Northern Lapwing	<i>Vanellus vanellus</i>		165	123	35
Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>		9		
Red-wattled Lapwing	<i>Vanellus indicus</i>		1,035	2,009	282
Sociable Lapwing	<i>Vanellus gregarius</i>	CR	6		
White-tailed Lapwing	<i>Vanellus leucurus</i>		177	329	140
Pacific Golden Plover	<i>Pluvialis fulva</i>		2		
Grey Plover	<i>Pluvialis squatarola</i>		9	9	
Little Ringed Plover	<i>Charadrius dubius</i>		529	2,275	747
Kentish Plover	<i>Charadrius alexandrinus</i>		166	101	
Lesser Sandpiper	<i>Charadrius mongolus</i>		141	12	
Greater Sandpiper	<i>Charadrius leschenaultii</i>		40		
Common Snipe	<i>Gallinago gallinago</i>		623	108	9
Black-tailed Godwit	<i>Limosa limosa</i>	NT	1,475	2,156	25
Bar-tailed Godwit	<i>Limosa lapponica</i>		154	160	
Whimbrel	<i>Numenius phaeopus</i>		9		
Eurasian Curlew	<i>Numenius arquata</i>		122	77	
Spotted Redshank	<i>Tringa erythropus</i>		16		
Common Redshank	<i>Tringa totanus</i>		905	688	230
Marsh Sandpiper	<i>Tringa stagnatilis</i>		48	4	
Common Greenshank	<i>Tringa nebularia</i>		293	277	111
Green Sandpiper	<i>Tringa ochropus</i>		380	267	
Wood Sandpiper	<i>Tringa glareola</i>		123	3	
Terek Sandpiper	<i>Xenus cinereus</i>		33		
Common Sandpiper	<i>Actitis hypoleucos</i>		1,187	550	266
Ruddy Turnstone	<i>Arenaria interpres</i>		10		
Sanderling	<i>Calidris alba</i>		46		
Little Stint	<i>Calidris minuta</i>		3,120	4,427	534
Temminck's Stint	<i>Calidris temminckii</i>		108	15	
Curlew Sandpiper	<i>Calidris ferruginea</i>		48	12	
Dunlin	<i>Calidris alpina</i>		585	8	
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		6		
Ruff	<i>Philomachus pugnax</i>		574	2,207	270
Red-necked Phalarope	<i>Phalaropus lobatus</i>		2		
Sooty Gull	<i>Larus hemprichii</i>		94		
Heuglin's Gull	<i>Larus heuglini</i>		1,892	490	50



English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>		411	176	4
Brown-headed Gull	<i>Larus brunnicephalus</i>		84	88	
Common Black-headed Gull	<i>Larus ridibundus</i>		4,533	3,593	115
Slender-billed Gull	<i>Larus genei</i>		639	75	
Gull-billed Tern	<i>Gelochelidon nilotica</i>		499	112	
Caspian Tern	<i>Sterna caspia</i>		121	70	
Lesser Crested Tern	<i>Sterna bengalensis</i>				170
Sandwich Tern	<i>Sterna sandvicensis</i>		11		
(Greater) Crested Tern	<i>Sterna bergii</i>		6		
River Tern	<i>Sterna aurantia</i>		324	700	50
Common Tern	<i>Sterna hirundo</i>		34	38	
Little Tern	<i>Sterna albifrons</i>		267	490	407
Black-bellied Tern	<i>Sterna melanogaster</i>	NT	9	78	
Whiskered Tern	<i>Chlidonias hybridus</i>		775	486	
White-winged Black Tern	<i>Chlidonias leucopterus</i>			8	
<b>Total Waterbirds</b>			<b>496,943</b>	<b>348,142</b>	<b>158,683</b>
Osprey	<i>Pandion haliaetus</i>		65	23	
Black-shouldered Kite	<i>Elanus caeruleus</i>		11	10	
Black Kite	<i>Milvus migrans</i>		398	880	
Brahminy Kite	<i>Haliaeetus indus</i>		17	9	
Pallas's Fish-eagle	<i>Haliaeetus leucoryphus</i>	VU	3	2	
Pallid Harrier	<i>Circus macrourus</i>	NT	3	2	
Western Marsh Harrier	<i>Circus aeruginosus</i>		56	148	
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	25	16	
Imperial Eagle	<i>Aquila heliaca</i>	VU	4	2	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		29	79	
Common Kingfisher	<i>Alcedo atthis</i>		5	24	
Pied Kingfisher	<i>Ceryle rudis</i>		26	119	
White Wagtail	<i>Motacilla alba</i>		17	81	
White-browed Wagtail	<i>Motacilla maderaspatensis</i>			2	
Grey Wagtail	<i>Motacilla cinerea</i>			76	
Citrine Wagtail	<i>Motacilla citreola</i>		4	18	
Yellow Wagtail	<i>Motacilla flava</i>			28	

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.2.8 Sri Lanka

A total of 112 sites were surveyed at least once in all three years (Figure 13 and Table 18). Waterbird totals recorded were 220,342 (67 sites), 264,862 (66 sites) and 236,689 (65 sites) respectively in 2002, 2003 and 2004. The results of the census are summarised in Sirivardana (2003, 2004 and 2005).

Two Ramsar sites (both IBAs), namely Anaiwilundawa Tanks and Bundala National Park, were surveyed. Eleven other wetland IBAs were also surveyed.

Sites that recorded more than 20,000 waterbirds were Bundala National Park (118,705 in 2002), Vankalai Triangle (107,525 in 2003), Hambantota Wetlands (57,934 in 2004), Adam's Bridge Islands (40,375 in 2003), Vadamaradchi Lagoon (29,632 in 2004) and Uppu Aru Lagoon (25,368 in 2004). A total of 23 sites recorded more than 1% of the biogeographic population of at least one waterbird species.

A total of 103 waterbird species were recorded in all three years, together with 10 raptor and two kingfisher species (Table 19). The most numerous species recorded were Northern Pintail (107,258 in 2003), Lesser Crested Tern (26,288 in 2003), Curlew Sandpiper (22,784 in 2004), Cattle Egret (20,858 in 2004), Garganey (15,838 in 2004), Eurasian Wigeon (14,581 in 2004), Greater Crested Tern (13,946 in 2003), Little Stint (13,098 in 2004) and Marsh Sandpiper (9,343 in 2004).

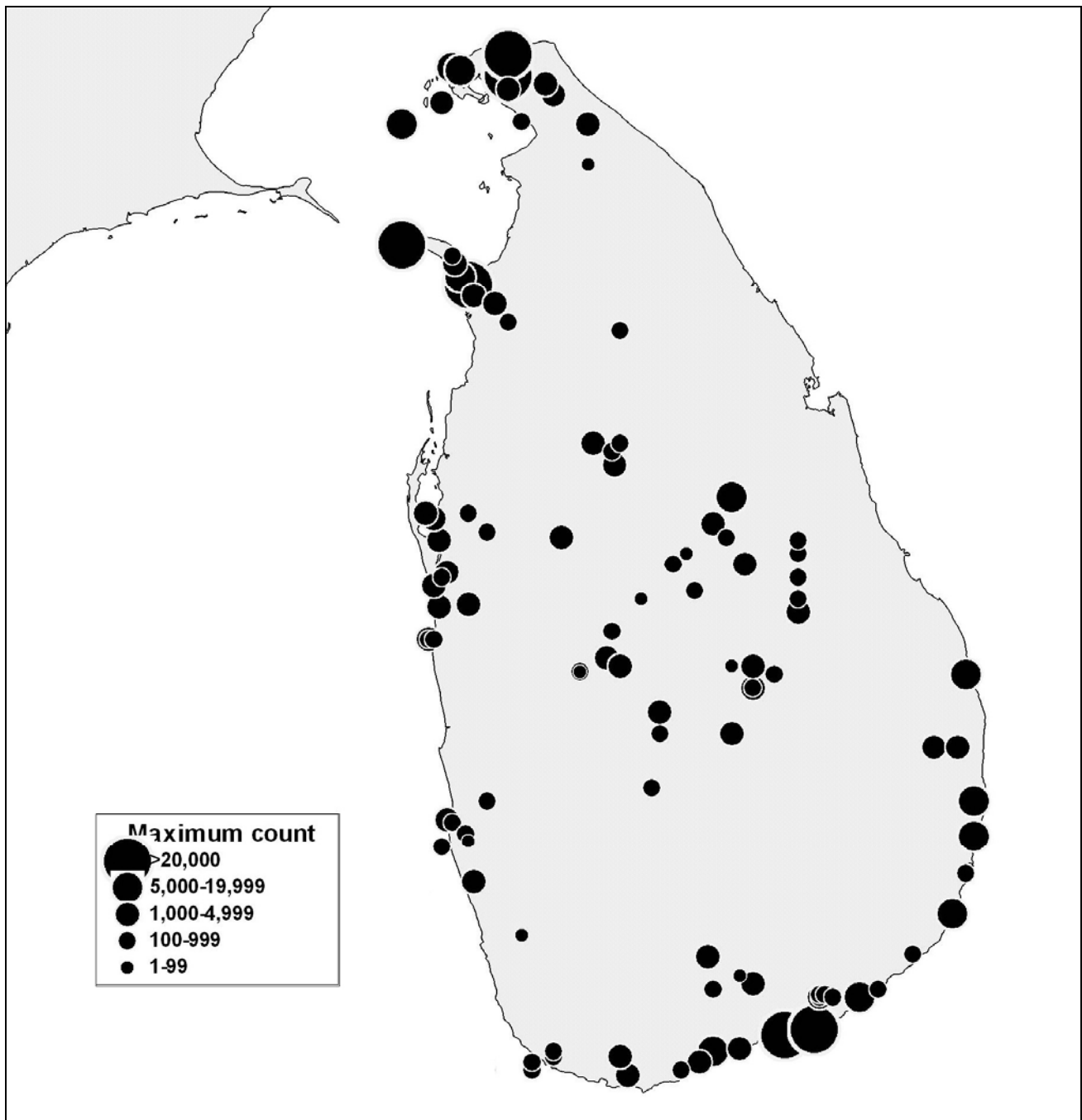
The highest count totals of two Vulnerable species during this period (Table 19) were as follows: Spot-billed Pelican (848 in 2002) and Lesser Adjutant (7 in 2003). The national populations of the two species have been estimated at 3,000 and 120–170 individuals, respectively, by Udaya Sirivardana (pers. comm., Sept. 2005).

Highest count totals of seven Near Threatened species were: Oriental Darter (167 in 2003), Painted Stork (527 in 2003), Black-necked Stork (1 in 2001), Black-headed Ibis (1,675 in 2002), Black-tailed Godwit (7,688 in 2004), Grey-headed Fish-eagle (10 in 2004) and Pallid Harrier (6 in 2002).

Major threats reported to wetlands were fishing, agricultural development, and pollution from agricultural and industrial sources. According to Warakagoda and Sirivardana (2006), wetlands throughout the island face constant threats, among which are infilling and other anthropogenic transformation, pollution and changes of water level; many wetlands have already been destroyed or badly damaged. Hunting (despite a total ban), raiding of heronries and a loss of nesting sites have also been recorded.

The counts were coordinated and carried out by the Ceylon Bird Club.

**Figure 13: AWC site coverage and numerical distribution of waterbirds in Sri Lanka, 2002–2004**



**Table 18: Wetland sites surveyed during the AWC in Sri Lanka, 2002–2004**

Province <sup>1</sup>	Site Name	Status <sup>2</sup>	Threats <sup>3</sup>	2002	2003	2004
CP	Himbiliyakada Wewa		G		74	
CP	Kandy Area: Kandy Lake		289L	232	242	309
CP	Kandy Area: Mahaweli River		24689GKL	2,812	3,735	
CP	Kotmale Reservoir				839	754
CP	Matale to Dambulla Roadside		G		310	
CP	Minipe Canal		6CDG	1,462	1,309	3,341
CP	Namini Wewa		6G		37	
CP	Sigiriya Area		2			96
CP	Victoria Reservoir		46ACDEG	416	1,810	
EP	Akkaraipattu to Batticaloa				11,328	
EP	Akkaraipattu to Panama				6,816	
EP	Ampara to Akkaraipattu				1,137	
EP	Ampara				2,045	
EP	Lahugala to Arugam Bay					5,227
EP	Maduru Oya National Park	I		1,963		
EP	Panama to Okanda				705	
EP	Potuvil to Lahugala				997	
EP	Ruhuna East National Park		7FG		3,354	6,503
NCP	Anuradhapura to Maradankadawala				274	
NCP	Anuradhapura Tanks			2,159	1,604	
NCP	Anuradhapura–Medawacchiya–Giant's Tank		G		862	
NCP	Aralaganwila to Dehiattakandiya			395		
NCP	Dimbulagala Area			782		
NCP	Giritale Tank	I				709
NCP	Kaudulla Tank			775		8,420
NCP	Minneriya National Park					4,932
NCP	Galewela			71		
NCP	Kandalama Tank		CFGL	219		
NCP	Katuvanvila – Mutugala Tanks			476		
NCP	Kolakanaveli Tank			188		
NCP	Mahakandarawa Tank			371		
NCP	Nacchaduwa Reservoir			632	1,210	
NCP	Parakrama Samudraya			1,073		4,028
NCP	Pimburettawa Tank	I		2,533		
NCP	Wasgomuwa National Park		7	3,204	1,131	
NCP	Wendaru Wewa					436
NP	Adam's Bridge Islands		H		40,375	6,417
NP	Delft Island		1	8,059	6,263	
NP	Giant's Tank	I	G	1,212	456	1,828
NP	Jaffna Lagoon	I	G	2,326	1,751	
NP	Jaffna–Arali–Punnalai		1	3,182	2,566	6,103
NP	Kaitadi Kulam		1	93	1,134	129
NP	Kayts Island and Mandaitivu	I	4	3,086	4,628	14,437
NP	Kattaadampam			589		
NP	Kilinocchi					89
NP	Kora Kulam				2,672	2,239
NP	Elephant Pass					2,727
NP	Mannar Causeway		G	9,079	12,407	2,440
NP	Mannar Lagoon			2,317		
NP	Medawacchiya – Mannar Road			278		
NP	Mirusuvil Marsh					1,720
NP	Pooneryn Peninsula					417
NP	Punkudutivu Island		1	102	1,278	
NP	Toddaveli Bay				517	38
NP	Uppu Aru Lagoon		1	3,269	11,617	25,368
NP	Vadamaradchi Lagoon		G	5,957	6,224	29,632
NP	Vankalai Triangle				107,525	10,216
NP	Vavuniya Area					870
NWP	Anaivilundawa Tanks	R, I		213	2,186	
NWP	Batalagoda Tank		G		34	1,289
NWP	Chilaw Sandspit and Bay		GH	410	728	
NWP	Galgamuwa Area			452	1,592	
NWP	Karikattai (Pottuvillu) Tank				534	
NWP	Karukkapone Bay			2,046		
NWP	Karukkapone, Inland			133		
NWP	Katupota Tank			2,734		
NWP	Kimbulwana Tank		GK		134	
NWP	Kobeigane Tank					768
NWP	Kurunegala Tank		G		61	77
NWP	Mundel Lake	I		1,040		

Province <sup>1</sup>	Site Name	Status <sup>2</sup>	Threats <sup>3</sup>	2002	2003	2004
NWP	Navadankulama			3,242	2,424	
NWP	Palavi Salt Pans			2,009		1,852
NWP	Puttalam Lagoon			3,146		
NWP	Puttalam Salt Pans			3,745		223
NWP	Tabbowa Tank			481		651
NWP	Tittawella Tank			212	134	651
SP	Akmimana		468ACDG		231	385
SP	Attaragoda Mangroves	R, I	L		88	72
SP	Bundala National Park		36G	118,705	2,361	3,285
SP	Debara Wewa		CD	515	786	372
SP	Galle Coast		6789ACDH	40	45	182
SP	Hambantota Wetlands		346789A	4,663		57,934
SP	Kalametiya – Lunama Sanctuary		46789CD	709		4,266
SP	Matara Coast		46DGI		987	1,459
SP	Mawella Kalapuwa		4689CDG			457
SP	Nakulugamuwa Marsh		689CD	154		231
SP	Nandugala Marshes		3468CDG	139	4,273	1,527
SP	Palatupana Saltern		G	7,023	515	5,430
SP	Pannagamuwa Wewa		36G		220	
SP	Pottana		27CF			153
SP	Ruhuna National Park: Block I	I	L	368	972	495
SP	Tangalla Mangrove		4689ACD			5,979
SP	Tangalla Marshes			1,008		1,361
SP	Tissa Wewa		6G	270	336	689
SP	Wakwella Marshes		678CD		188	
SP	Walahanduwa Paddy Fields		6ACD	52	202	261
SP	Wirawila Tank	I	6G	1,344	1,219	961
SP	Yodakandiya Tank		6G	691	639	798
SABP	Chandrika Wewa		8G	883		221
SABP	Kiri-Ibban–Ara					52
SABP	Suriya Wewa		7FG		3,369	121
UVAP	Belagan Wewa		6G		288	530
UVAP	Girandurukotte Area: Mahiyangana to Ulhitiya		G	138		
UVAP	Uda Walawe National Park	I	2467GL	1,382		2,084
UVAP	Ulhitiya and Ratkinda			605	67	
WP	Beira Lake		28ABCFGIKL	394	150	458
WP	Bellanwila–Pillewa–Attidiya Marshes	I	23689AGIL	336	324	202
WP	Bolgoda System		2AG	490	237	1,340
WP	Colombo Harbour to Kelani Estuary		589	1,152		29
WP	Kotte Marshes		238I			358
WP	Maharagama		89GI		44	
WP	Talangama Tank		89GI	321	340	247

**Notes:**

Province<sup>1</sup>: CP – Central Province, EP – Eastern Province, NCP – North Central Province, NP, Northern Province, NWP – North Western Province, SP – Southern Province, SABP – Sabaragamuwa Province, UVAP – UVA Province, WP – Western Province.

Status<sup>2</sup>: R – Ramsar site, I – Wetland IBA identified by BirdLife International (2005), pl – part of an Wetland IBA identified by BirdLife International (2005).

Threats<sup>3</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

**Table 19: Waterbird species counts reported during the AWC in Sri Lanka, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		230	701	333
Spot-billed Pelican	<i>Pelecanus philippensis</i>	VU	848	548	558
Great Cormorant	<i>Phalacrocorax carbo</i>		163	12	93
Indian Cormorant	<i>Phalacrocorax fuscicollis</i>		2,263	3,531	3,051
Little Cormorant	<i>Phalacrocorax niger</i>		3,803	4,352	3,526
unidentified cormorants	Phalacrocoracidae spp.		3,674	1,383	8,272
Oriental Darter	<i>Anhinga melanogaster</i>	NT	136	167	71
Grey Heron	<i>Ardea cinerea</i>		537	279	445
Eastern White Egret	<i>Ardea modesta</i>		614	875	795
Intermediate Egret	<i>Ardea intermedia</i>		308	613	350
Purple Heron	<i>Ardea purpurea</i>		133	200	152
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		8,133	14,840	20,858
Green-backed Heron	<i>Butorides striatus</i>		21	11	14
Indian Pond Heron	<i>Ardeola grayii</i>		1,661	2,506	2,742
Little Egret	<i>Egretta garzetta</i>		1,693	1,962	1,793

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Western Reef Egret	<i>Egretta gularis</i>		1	4	
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		50	724	542
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		193	118	70
Yellow Bittern	<i>Ixobrychus sinensis</i>		41	69	35
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		1	5	1
Black Bittern	<i>Ixobrychus flavicollis</i>		20	78	24
unidentified Ardeidae	Ardeidae spp.		23	36	
Painted Stork	<i>Mycteria leucocephala</i>	NT	470	475	527
Asian Openbill	<i>Anastomus oscitans</i>		1,334	1,500	5,078
Woolly-necked Stork	<i>Ciconia episcopus</i>		33	29	27
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT	1		
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	3	7	6
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	1,675	854	1,538
Glossy Ibis	<i>Plegadis falcinellus</i>		14		14
Eurasian Spoonbill	<i>Platalea leucorodia</i>		73	315	240
Greater Flamingo	<i>Phoenicopterus ruber</i>		4,394	6,410	
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		2,941	2,824	1,661
Comb Duck	<i>Sarkidiornis melanotos</i>			1	
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		25	57	15
Eurasian Wigeon	<i>Anas penelope</i>		1,937	6,346	14,581
Common Teal	<i>Anas crecca</i>		2	58	258
Spot-billed Duck	<i>Anas poecilorhyncha</i>			47	13
Northern Pintail	<i>Anas acuta</i>		6,903	107,258	34,488
Garganey	<i>Anas querquedula</i>		6,791	11,123	15,838
Northern Shoveler	<i>Anas clypeata</i>		746	792	2,022
unidentified ducks	Anatinae spp.		16,483	12,010	1,166
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		114	236	218
Ruddy-breasted Crake	<i>Porzana fusca</i>			2	
Watercock	<i>Gallicrex cinerea</i>		12	30	8
Purple Swampphen	<i>Porphyrio porphyrio</i>		601	2,053	888
Common Moorhen	<i>Gallinula chloropus</i>		33	129	32
Common Coot	<i>Fulica atra</i>			160	95
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		472	1,297	530
Greater Painted Snipe	<i>Rostratula benghalensis</i>			2	2
Crab Plover	<i>Dromas ardeola</i>		3	34	8
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>			4	
Black-winged Stilt	<i>Himantopus himantopus</i>		5,466	2,041	3,725
Pied Avocet	<i>Recurvirostra avosetta</i>			150	2
Stone Curlew	<i>Burhinus oedicephalus</i>		12	2	19
Great Thick-knee	<i>Burhinus (Esacus) recurvirostris</i>		59	37	68
Indian Courser	<i>Cursorius coromandelicus</i>			1	
Collared Pratincole	<i>Glareola pratincola</i>				9
Oriental Pratincole	<i>Glareola maldivarum</i>				17
Small Pratincole	<i>Glareola lactea</i>		10	42	101
Yellow-wattled Lapwing	<i>Vanellus malabaricus</i>		92	55	57
Grey-headed Lapwing	<i>Vanellus cinereus</i>			1	
Red-wattled Lapwing	<i>Vanellus indicus</i>		419	453	585
Pacific Golden Plover	<i>Pluvialis fulva</i>		954	351	879
Grey Plover	<i>Pluvialis squatarola</i>		63	19	64
Great Ringed Plover	<i>Charadrius hiaticula</i>		2		1
Little Ringed Plover	<i>Charadrius dubius</i>		103	13	236
Kentish Plover	<i>Charadrius alexandrinus</i>		387	279	543
Lesser Sandplover	<i>Charadrius mongolus</i>		4,521	2,331	6,119
Greater Sandplover	<i>Charadrius leschenaultii</i>		13	69	16
Pintail Snipe	<i>Gallinago stenura</i>		79	28	63
Common Snipe	<i>Gallinago gallinago</i>			1	
Black-tailed Godwit	<i>Limosa limosa</i>	NT	3,082	5,775	7,688
Bar-tailed Godwit	<i>Limosa lapponica</i>		5	17	1
Whimbrel	<i>Numenius phaeopus</i>		56	57	30
Eurasian Curlew	<i>Numenius arquata</i>		134	91	109
Spotted Redshank	<i>Tringa erythropus</i>			1	
Common Redshank	<i>Tringa totanus</i>		551	279	1,467
Marsh Sandpiper	<i>Tringa stagnatilis</i>		1,394	623	9,343
Common Greenshank	<i>Tringa nebularia</i>		85	21	122
Green Sandpiper	<i>Tringa ochropus</i>		8	8	3
Wood Sandpiper	<i>Tringa glareola</i>		225	215	171
Terek Sandpiper	<i>Xenus cinereus</i>		16	41	22
Common Sandpiper	<i>Actitis hypoleucos</i>		95	129	136
Ruddy Turnstone	<i>Arenaria interpres</i>		173	118	111
Red Knot	<i>Calidris canutus</i>			25	
Great Knot	<i>Calidris tenuirostris</i>		4	32	32
Sanderling	<i>Calidris alba</i>		85	57	22

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Stint	<i>Calidris minuta</i>		5,972	1,011	13,098
Temminck's Stint	<i>Calidris temminckii</i>		7		1
Curlew Sandpiper	<i>Calidris ferruginea</i>		3,323	1,015	22,784
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		69		71
Ruff	<i>Philomachus pugnax</i>		8	4	8
Red-necked Phalarope	<i>Phalaropus lobatus</i>		2	2	1
unidentified shorebirds	Charadrii spp.		105,544	11,097	28,864
Heuglin's Gull	<i>Larus heuglini</i>			870	1,101
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>		93	2,149	1,670
Brown-headed Gull	<i>Larus brunnicephalus</i>		1,525	443	370
Common Black-headed Gull	<i>Larus ridibundus</i>			2	
unidentified gulls	Laridae spp.		11	261	
Gull-billed Tern	<i>Gelochelidon nilotica</i>		825	1,011	561
Caspian Tern	<i>Sterna caspia</i>		259	455	661
Lesser Crested Tern	<i>Sterna bengalensis</i>		3,390	26,288	37
Sandwich Tern	<i>Sterna sandvicensis</i>		1	40	
(Greater) Crested Tern	<i>Sterna bergii</i>		247	13,946	237
Common Tern	<i>Sterna hirundo</i>		3,711	355	9
Little Tern	<i>Sterna albifrons</i>		2,064	119	204
Bridled Tern	<i>Sterna anaethetus</i>				20
Whiskered Tern	<i>Chlidonias hybridus</i>		4,647	4,713	6,056
White-winged Black Tern	<i>Chlidonias leucopterus</i>		512	7	26
unidentified terns	Sterninae spp.		433	645	6,171
<b>Total Waterbirds</b>			<b>220,342</b>	<b>264,862</b>	<b>236,689</b>
Osprey*	<i>Pandion haliaetus</i>				2
Black Kite	<i>Milvus migrans</i>		6		
Brahminy Kite*	<i>Haliastur indus</i>		167	26	136
White-bellied Fish-eagle*	<i>Haliaeetus leucogaster</i>		22	3	30
Grey-headed Fish-eagle*	<i>Ichthyophaga ichthyaetus</i>	NT	8	2	10
Crested Serpent-eagle	<i>Spilornis cheela</i>				2
Pallid Harrier*	<i>Circus macrourus</i>	NT	6	1	
Montagu's Harrier*	<i>Circus pygargus</i>		2		1
Western Marsh Harrier*	<i>Circus aeruginosus</i>		1	1	4
Changeable Hawk-eagle	<i>Spizaetus cirrhatu</i>				1
Common Kingfisher	<i>Alcedo atthis</i>		1		
Pied Kingfisher	<i>Ceryle rudis</i>		2		

**Notes:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

\* – For other waterbirds, the Ceylon Bird Club counting effort focuses only the species marked \* during the AWC. The Club does not take account of other raptor species and kingfishers in their work, although some counters record them on the count sheets and these are reported here.

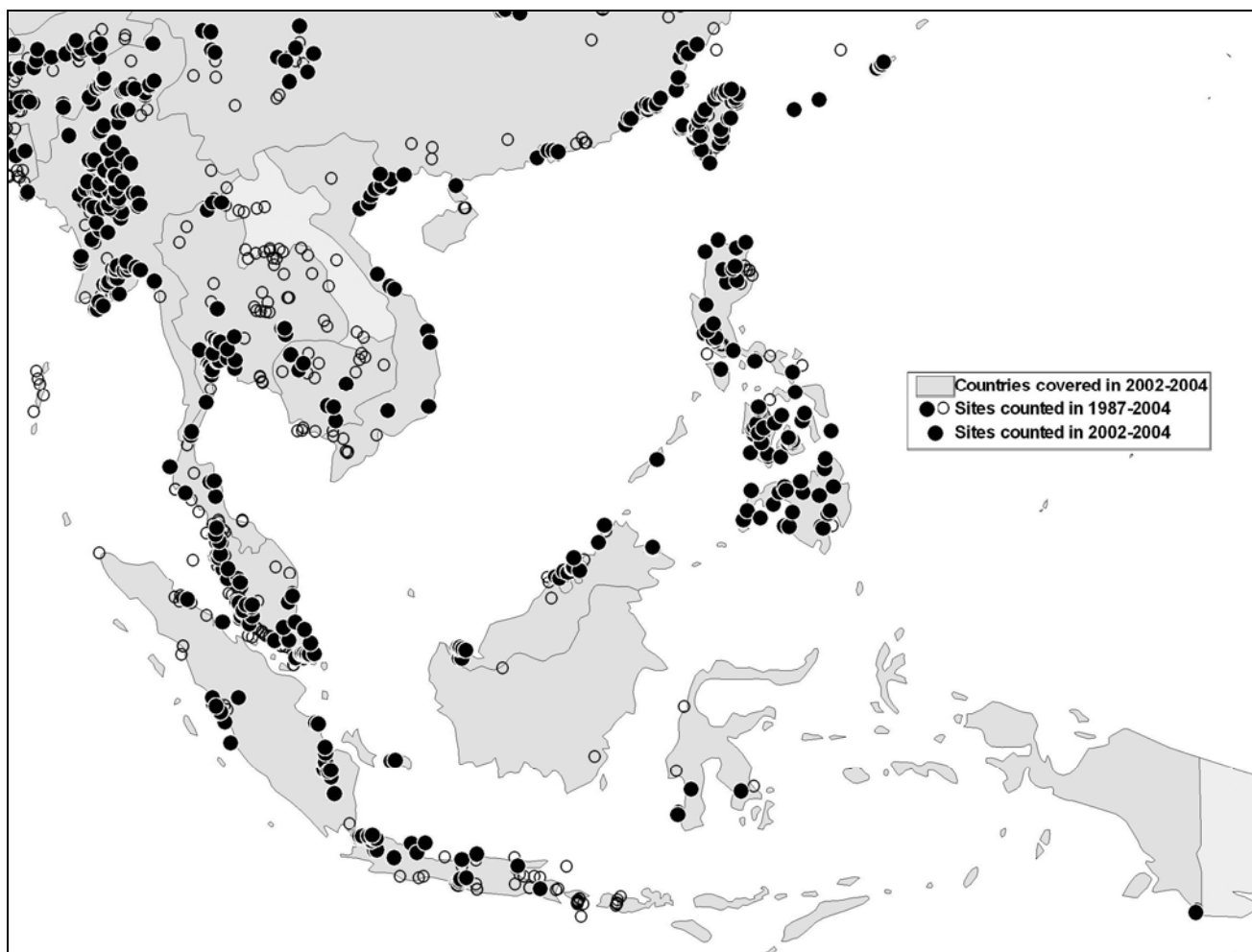
### 3.3 Southeast Asia

#### 3.3.1 Overview

A total of 408 sites were surveyed during 2002 and 2004 (Figure 14 and Table 20). Waterbird totals recorded were 307,319 (202 sites), 272,061 (243 sites) and 466,403 (180 sites) in AWC 2002, 2003 and 2004, respectively. Of the sites surveyed by the AWC, 11 were Ramsar sites, 58 IBAs, five EAAF Waterbird network sites, one World Heritage Site and three MAB Biosphere Reserves. Four sites recorded more than 20,000 waterbirds. Sixty-two sites recorded more than 1% of the biogeographic population of at least one waterbird species.

Totals of 180 waterbird and 30 wetland-dependent species (including two seabird, 14 raptor, 10 kingfisher and four wagtail species) were recorded. The highest count totals of the most numerous species (more than 10,000 birds) were Lesser Whistling Duck (110,146 in 2004), Asian Openbill (55,336 in 2004), Little Egret (22,433 in 2004), Cattle Egret (22,120 in 2003), Common Coot (19,655 in 2002), Tufted Duck (16,946 in 2002), Whiskered Tern (12,674 in 2004), Indian Cormorant (11,250 in 2004), Cotton Pygmy Goose (10,854 in 2004), Brown-headed Gull (10,632 in 2003) and Common Tern (10,446 in 2004).

**Figure 14: Sites covered by the AWC in the Southeast Asia region, 1987–2004**



The highest count totals of 22 globally threatened species were as follows: Critically Endangered: White-shouldered Ibis (2 in 2004) and Christmas Island Frigatebird (700 in 2003); Endangered: White-bellied Heron (1 in 2002), Storm's Stork (16 in 2002), Greater Adjutant (84 in 2004), Black-faced Spoonbill (68 in 2003), White-winged Duck (11 in 2003), Nordmann's Greenshank (74 in 2004) and Spoon-billed Sandpiper (4 in 2004); Vulnerable: Spot-billed Pelican (2,909 in 2004), Chinese Egret (1,003 in 2004), Milky Stork (133 in

2002), Lesser Adjutant (315 in 2003), Philippine Duck (4,632 in 2004), Baer's Pochard (7 in 2002), Sarus Crane (248 in 2004), Masked Finfoot (3 in 2004), Wood Snipe (1 in 2002 and 2003), Saunders's Gull (9 in 2002), Indian Skimmer (2 in 2003), Greater Spotted Eagle (12 in 2002) and Imperial Eagle (1 in 2002).

Highest count totals of 15 Near Threatened species were: Oriental Darter (2,100 in 2003), Painted Stork (1,948 in 2004), Black-necked Stork (16 in 2002), Black-headed Ibis (387 in 2004), Falcated Duck (9 in 2002), Ferruginous Duck (3,213 in 2002), Javan Plover (10 in 2003), Malaysian Plover (32 in 2004), Asian Dowitcher (532 in 2002), Black-tailed Godwit (1,700 in 2004), Black-bellied Tern (37 in 2004), White-tailed Eagle (11 in 2004), Grey-headed Fish-eagle (22 in 2004), Lesser Fish-eagle (6 in 2002) and Blyth's Kingfisher (1 in 2003).

**Table 20: Waterbird species counts reported during the AWC in Southeast Asia, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		832	549	2,022
Great Crested Grebe	<i>Podiceps cristatus</i>		37	27	66
Horned Grebe	<i>Podiceps auritus</i>		1		
Black-necked Grebe	<i>Podiceps nigricollis</i>		7		
Spot-billed Pelican	<i>Pelecanus philippensis</i>	VU	1,542	2,711	2,909
Australian Pelican	<i>Pelecanus conspicillatus</i>			1	2
unidentified pelicans	Pelecanidae spp.			1	
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>		3,170	5	
Great Cormorant	<i>Phalacrocorax carbo</i>		1,958	1,928	2,362
Indian Cormorant	<i>Phalacrocorax fuscicollis</i>		2,436	7,362	11,250
Little Pied Cormorant	<i>Phalacrocorax melanoleucus</i>			2	1
Little Cormorant	<i>Phalacrocorax niger</i>		3,601	7,278	7,770
unidentified cormorants	Phalacrocoracidae spp.		3,072	3,669	166
Oriental Darter	<i>Anhinga melanogaster</i>	NT	486	2,100	1,361
Grey Heron	<i>Ardea cinerea</i>		1,315	1,730	3,112
Eastern White Egret	<i>Ardea modesta</i>		2,208	4,281	9,868
Intermediate Egret	<i>Ardea intermedia</i>		4,495	2,281	8,892
White-bellied (Imperial) Heron	<i>Ardea insignis</i>	EN	1		
Great-billed Heron	<i>Ardea sumatrana</i>		7	42	8
Purple Heron	<i>Ardea purpurea</i>		1,573	1,302	1,101
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		14,511	22,120	14,855
Green-backed Heron	<i>Butorides striatus</i>		258	450	518
Indian Pond Heron	<i>Ardeola grayii</i>		304	75	7
Chinese Pond Heron	<i>Ardeola bacchus</i>		2,004	3,379	3,296
Javan Pond Heron	<i>Ardeola speciosa</i>		179	235	232
unidentified pond herons	<i>Ardeola</i> spp.		1,654	3,047	1,278
Little Egret	<i>Egretta garzetta</i>		13,391	9,295	22,433
Chinese Egret	<i>Egretta eulophotes</i>	VU	184	398	1,003
Eastern Reef Heron	<i>Egretta sacra</i>		69	114	242
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		803	880	396
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		2,692	7,267	3,501
Rufous Night-heron	<i>Nycticorax caledonicus</i>		2	331	1
Eurasian Bittern	<i>Botaurus stellaris</i>		1	2	1
Yellow Bittern	<i>Ixobrychus sinensis</i>		72	91	227
Schrenck's Bittern	<i>Ixobrychus eurhythmus</i>		1		4
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		111	73	99
Black Bittern	<i>Ixobrychus flavicollis</i>		58	14	51
unidentified bitterns	<i>Ixobrychus</i> spp.		1		
unidentified Ardeidae	Ardeidae spp.		9,397	4,184	3,876
Milky Stork	<i>Mycteria cinerea</i>	VU	133	42	10
Painted Stork	<i>Mycteria leucocephala</i>	NT	1,680	1,077	1,948
Asian Openbill	<i>Anastomus oscitans</i>		3,395	3,257	55,336
Black Stork	<i>Ciconia nigra</i>		238	32	156
Woolly-necked Stork	<i>Ciconia episcopus</i>		40	58	125
Storm's Stork	<i>Ciconia stormi</i>	EN	16		13
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT	16	4	6
Greater Adjutant	<i>Leptoptilos dubius</i>	EN	21	12	84
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	271	315	281
unidentified storks	Ciconiidae spp.		363	2	7
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	264	213	387
White-shouldered Ibis	<i>Pseudibis davisoni</i>	CR			2
Glossy Ibis	<i>Plegadis falcinellus</i>		768	411	42
Eurasian Spoonbill	<i>Platalea leucorodia</i>		1	2	
Black-faced Spoonbill	<i>Platalea minor</i>	EN	55	68	63
Fulvous Whistling Duck	<i>Dendrocygna bicolor</i>		1		
Wandering Whistling Duck	<i>Dendrocygna arcuata</i>		7,638	1,574	4,158
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		50,806	46,740	110,146



English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Greylag Goose	<i>Anser anser</i>		348	516	716
Bar-headed Goose	<i>Anser indicus</i>		988	3,583	2,979
Ruddy Shelduck	<i>Tadorna ferruginea</i>		4,054	5,271	7,483
Common Shelduck	<i>Tadorna tadorna</i>		33	8	24
Radjah Shelduck	<i>Tadorna radjah</i>		68		
White-winged Duck	<i>Cairina scutulata</i>	EN	8	11	5
Comb Duck	<i>Sarkidiornis melanotos</i>		169	4	503
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		3,006	699	10,854
Mandarin Duck	<i>Aix galericulata</i>				2
Eurasian Wigeon	<i>Anas penelope</i>		1,615	570	226
Falcated Duck	<i>Anas falcata</i>	NT	9	3	7
Gadwall	<i>Anas strepera</i>		2,048	2,543	2,404
Common Teal	<i>Anas crecca</i>		1,283	334	459
Sunda Teal	<i>Anas gibberifrons</i>		71	9	
Mallard	<i>Anas platyrhynchos</i>		39	62	231
Spot-billed Duck	<i>Anas poecilorhyncha</i>		4,943	943	2,239
Pacific Black Duck	<i>Anas superciliosa</i>		4	4	2
Philippine Duck	<i>Anas luzonica</i>	VU	3,621	2,334	4,632
Northern Pintail	<i>Anas acuta</i>		1,156	2,578	7,426
Garganey	<i>Anas querquedula</i>		3,411	2,191	6,086
Northern Shoveler	<i>Anas clypeata</i>		3,090	2,121	3,284
Red-crested Pochard	<i>Netta rufina</i>		11	30	63
Common Pochard	<i>Aythya ferina</i>		2,751	569	741
Baer's Pochard	<i>Aythya baeri</i>	VU	7		2
Ferruginous Duck	<i>Aythya nyroca</i>	NT	3,213	988	1,077
Tufted Duck	<i>Aythya fuligula</i>		16,946	5,419	7,393
Common Goldeneye	<i>Bucephala clangula</i>		1	4	8
Goosander	<i>Mergus merganser</i>		117	89	102
unidentified ducks	Anatinae spp.		7,716	1,482	659
Sarus Crane	<i>Grus antigone</i>	VU	224	3	248
Common Crane	<i>Grus grus</i>		1,157	1,533	3,394
unidentified cranes	Gruidae spp.			3	
Red-legged Crake	<i>Rallina fasciata</i>		111	66	
Barred Rail	<i>Gallirallus torquatus</i>		36	12	359
Buff-banded Rail	<i>Gallirallus philippensis</i>		52	15	98
Slaty-breasted Rail	<i>Gallirallus striatus</i>		9	14	20
Water Rail	<i>Rallus aquaticus</i>		46	36	6
Brown Crake	<i>Amauornis akool</i>			1	
Black-tailed (Elwes's) Crake	<i>Amauornis bicolor</i>			2	2
White-breasted Waterhen	<i>Amauornis phoenicurus</i>		1,199	460	464
Baillon's Crake	<i>Porzana pusilla</i>		10	17	
Ruddy-breasted Crake	<i>Porzana fusca</i>		30	28	303
White-browed Crake	<i>Porzana cinereus</i>		136	44	49
Watercock	<i>Gallixrex cinerea</i>		349	316	112
Purple Swampphen	<i>Porphyrio porphyrio</i>		4,368	5,458	5,031
Common Moorhen	<i>Gallinula chloropus</i>		716	1,098	1,265
Dusky Moorhen	<i>Gallinula tenebrosa</i>			12	10
Common Coot	<i>Fulica atra</i>		19,655	976	2,017
unidentified rails	Rallidae spp.		120	96	14
Masked Finfoot	<i>Heliopais personata</i>	VU	2	1	3
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		1,067	733	1,069
Bronze-winged Jacana	<i>Metopidius indicus</i>		449	278	356
unidentified jacanas	Jacanidae spp.			7	
Greater Painted Snipe	<i>Rostratula benghalensis</i>		13	15	53
Australian Pied Oystercatcher	<i>Haematopus longirostris</i>		3		
Ibisbill	<i>Ibidorhyncha struthersii</i>		19		
Black-winged Stilt	<i>Himantopus himantopus</i>		2,085	2,075	3,159
Great Thick-knee	<i>Burhinus (Esacus) recurvirostris</i>		3		14
Oriental Pratincole	<i>Glareola maldivarum</i>		17	7	404
Small Pratincole	<i>Glareola lactea</i>		1,160	2,920	3,967
Northern Lapwing	<i>Vanellus vanellus</i>		10	2	6
River Lapwing	<i>Vanellus duvaucelli</i>		40	78	58
Grey-headed Lapwing	<i>Vanellus cinereus</i>		267	89	151
Red-wattled Lapwing	<i>Vanellus indicus</i>		188	304	346
unidentified lapwings	<i>Vanellus</i> spp.			100	
Pacific Golden Plover	<i>Pluvialis fulva</i>		2,023	3,104	2,576
Grey Plover	<i>Pluvialis squatarola</i>		1,499	2,355	1,803
Long-billed Plover	<i>Charadrius placidus</i>			8	10
Little Ringed Plover	<i>Charadrius dubius</i>		878	694	1,062
Kentish Plover	<i>Charadrius alexandrinus</i>		2,138	2,281	3,564
Javan Plover	<i>Charadrius javanicus</i>	NT	5	10	
Malaysian Plover	<i>Charadrius peronii</i>	NT	6	30	32

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Lesser Sandplover	<i>Charadrius mongolus</i>		3,730	7,964	8,853
Greater Sandplover	<i>Charadrius leschenaultii</i>		777	2,328	1,206
Oriental Plover	<i>Charadrius veredus</i>			6	
unidentified <i>Charadrius</i> plovers	<i>Charadrius</i> spp.		963	4,143	2,576
Eurasian Woodcock	<i>Scolopax rusticola</i>		1		1
Solitary Snipe	<i>Gallinago solitaria</i>		1		
Wood Snipe	<i>Gallinago nemoricola</i>	VU	1	1	
Pintail Snipe	<i>Gallinago stenura</i>		32	59	120
Swinhoe's Snipe	<i>Gallinago megala</i>				11
Common Snipe	<i>Gallinago gallinago</i>		408	268	401
unidentified snipe	<i>Gallinago</i> spp.		104	75	44
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT	532	19	46
Black-tailed Godwit	<i>Limosa limosa</i>	NT	885	1,431	1,700
Bar-tailed Godwit	<i>Limosa lapponica</i>		4,053	1,070	1,320
unidentified godwits	<i>Limosa</i> spp.		1,541	57	
Little Curlew	<i>Numenius minutus</i>		110	565	624
Whimbrel	<i>Numenius phaeopus</i>		1,422	2,380	2,156
Eurasian Curlew	<i>Numenius arquata</i>		717	1,301	1,157
Far Eastern Curlew	<i>Numenius madagascariensis</i>		30	206	20
unidentified curlews	<i>Numenius</i> spp.		471	165	411
Spotted Redshank	<i>Tringa erythropus</i>		108	155	423
Common Redshank	<i>Tringa totanus</i>		2,485	4,658	5,624
Marsh Sandpiper	<i>Tringa stagnatilis</i>		1,333	3,167	3,170
Common Greenshank	<i>Tringa nebularia</i>		1,267	1,755	2,685
Nordmann's Greenshank	<i>Tringa guttifer</i>	EN	7	14	74
Green Sandpiper	<i>Tringa ochropus</i>		320	141	261
Wood Sandpiper	<i>Tringa glareola</i>		1,034	930	2,091
unidentified <i>Tringa</i> sandpipers	<i>Tringa</i> spp.		2,759	2,350	3,644
Terek Sandpiper	<i>Xenus cinereus</i>		1,171	808	1,097
Common Sandpiper	<i>Actitis hypoleucos</i>		712	1,619	1,092
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		55	102	127
Ruddy Turnstone	<i>Arenaria interpres</i>		213	450	147
Red Knot	<i>Calidris canutus</i>		179	414	19
Great Knot	<i>Calidris tenuirostris</i>		827	1,809	2,647
Sanderling	<i>Calidris alba</i>		7	112	24
Red-necked Stint	<i>Calidris ruficollis</i>		2,635	2,493	4,376
Little Stint	<i>Calidris minuta</i>				5
Temminck's Stint	<i>Calidris temminckii</i>		323	179	667
Long-toed Stint	<i>Calidris subminuta</i>		17	208	629
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>		18		29
Curlew Sandpiper	<i>Calidris ferruginea</i>		599	1,687	1,574
Dunlin	<i>Calidris alpina</i>		130	20	325
Spoon-billed Sandpiper	<i>Eurynorhynchus pygmaeus</i>	EN	1	3	4
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		9	84	207
Ruff	<i>Philomachus pugnax</i>				6
unidentified <i>Calidris</i> sandpipers	<i>Calidris</i> spp.		3	365	75
Red-necked Phalarope	<i>Phalaropus lobatus</i>		4	2	
unidentified shorebirds	<i>Charadrii</i> spp.		8,181	3,978	6,442
Common (Mew) Gull	<i>Larus canus</i>		3	20	
Herring Gull	<i>Larus argentatus</i>		395	655	6
Heuglin's Gull	<i>Larus heuglini</i>		4	4	35
Yellow-legged Gull	<i>Larus cachinnans</i>				2
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>		706	160	215
Brown-headed Gull	<i>Larus brunnicephalus</i>		1,471	10,632	2,051
Common Black-headed Gull	<i>Larus ridibundus</i>		2,359	1,131	1,803
Slender-billed Gull	<i>Larus genei</i>		1	4	
Saunders's Gull	<i>Larus saundersi</i>	VU	9		2
unidentified gulls	<i>Laridae</i> spp.		99	117	1
Gull-billed Tern	<i>Gelochelidon nilotica</i>		489	479	489
Caspian Tern	<i>Sterna caspia</i>		40	136	147
Lesser Crested Tern	<i>Sterna bengalensis</i>		471	185	20
(Greater) Crested Tern	<i>Sterna bergii</i>		1,259	289	40
River Tern	<i>Sterna aurantia</i>		40	138	357
Black-naped Tern	<i>Sterna sumatrana</i>		12	65	4,369
Common Tern	<i>Sterna hirundo</i>		6,794	5,244	10,446
Little Tern	<i>Sterna albifrons</i>		555	2,172	3,236
Black-bellied Tern	<i>Sterna melanogaster</i>	NT	14		37
Whiskered Tern	<i>Chlidonias hybridus</i>		6,347	1,102	12,674
White-winged Black Tern	<i>Chlidonias leucopterus</i>		912	703	1,273
unidentified <i>Sterna</i> terns	<i>Sterna</i> spp.		1,700		
unidentified terns	<i>Sterninae</i> spp.		4,509	605	3,780
White Tern	<i>Gygis alba</i>			10	

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Indian Skimmer	<i>Rynchops albicollis</i>	VU		2	1
<b>Total Waterbirds</b>			<b>307,319</b>	<b>272,061</b>	<b>466,403</b>
Christmas Island Frigatebird	<i>Fregata andrewsi</i>	CR		700	
Lesser Frigatebird	<i>Fregata ariel</i>			2,000	
unidentified frigatebirds	<i>Fregata</i> spp.		2		60
Osprey	<i>Pandion haliaetus</i>		15	12	24
Black-shouldered Kite	<i>Elanus caeruleus</i>		11	7	25
Black Kite	<i>Milvus migrans</i>		114	74	20
Brahminy Kite	<i>Haliastur indus</i>		69	89	181
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>		13	15	26
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT	6	3	11
Lesser Fish-eagle	<i>Ichthyophaga humilis</i>	NT	6	5	
Grey-headed Fish-eagle	<i>Ichthyophaga ichthyaetus</i>	NT	19	15	22
Hen Harrier	<i>Circus cyaneus</i>		9	2	7
Pied Harrier	<i>Circus melanoleucos</i>		28	16	19
Western Marsh Harrier	<i>Circus aeruginosus</i>		69	48	7
Eastern Marsh Harrier	<i>Circus spilotus</i>		25	8	39
unidentified Harriers	<i>Circus</i> spp.		17		
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	12	1	6
Imperial Eagle	<i>Aquila heliaca</i>	VU	1		
Ruddy Kingfisher	<i>Halcyon coromanda</i>			1	
Stork-billed Kingfisher	<i>Halcyon capensis</i>		8	10	8
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		164	366	75
Black-capped Kingfisher	<i>Halcyon pileata</i>		20	40	4
Collared Kingfisher	<i>Todiramphus chloris</i>		67	48	70
Blue-eared Kingfisher	<i>Alcedo meninting</i>		14	24	3
Blyth's Kingfisher	<i>Alcedo hercules</i>	NT		1	
Common Kingfisher	<i>Alcedo atthis</i>		103	119	44
Small Blue Kingfisher	<i>Alcedo caeruleascens</i>				1
Pied Kingfisher	<i>Ceryle rudis</i>		21	24	80
White Wagtail	<i>Motacilla alba</i>		64	108	355
Grey Wagtail	<i>Motacilla cinerea</i>		1	2	19
Citrine Wagtail	<i>Motacilla citreola</i>		18		
Yellow Wagtail	<i>Motacilla flava</i>		5	3	10
unidentified wagtails	<i>Motacilla</i> spp.			3,500	3,000

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.3.2 Brunei Darussalam

An AWC count was conducted in 2002 only and covered nine sites (Figure 15 and Table 21), three of which were IBAs, as identified by BirdLife International (2005). In total, 654 individuals of 23 waterbird species were recorded (Table 22), the highlights including three Vulnerable Chinese Egrets at Brunei Bay and seven Near Threatened Oriental Darters.

Information on threats to the wetlands was not provided. The count was coordinated by Dr. Pushpa Thambipillai and Prof. Joe Charles of Brunei University.

**Table 21: Wetland sites surveyed during the AWC in Brunei, 2002**

Site Name	Status <sup>1</sup>	2002
Brunei Bay Mudflats	IBA	19
Luagan Lalak		3
Mentiri Prawn Farm		32
Muara Beach		3
Serasa Beach/Housing		18
Seria–Panaga Main Road		243
Tutong Sewage Tanks		157
Sungai Seria Estuary	IBA	142
Wasan	IBA	40

**Note:** Status<sup>1</sup>: Wetland IBA identified by BirdLife International (2005).

Figure 15: AWC site coverage and numerical distribution of waterbirds in Brunei in 2002

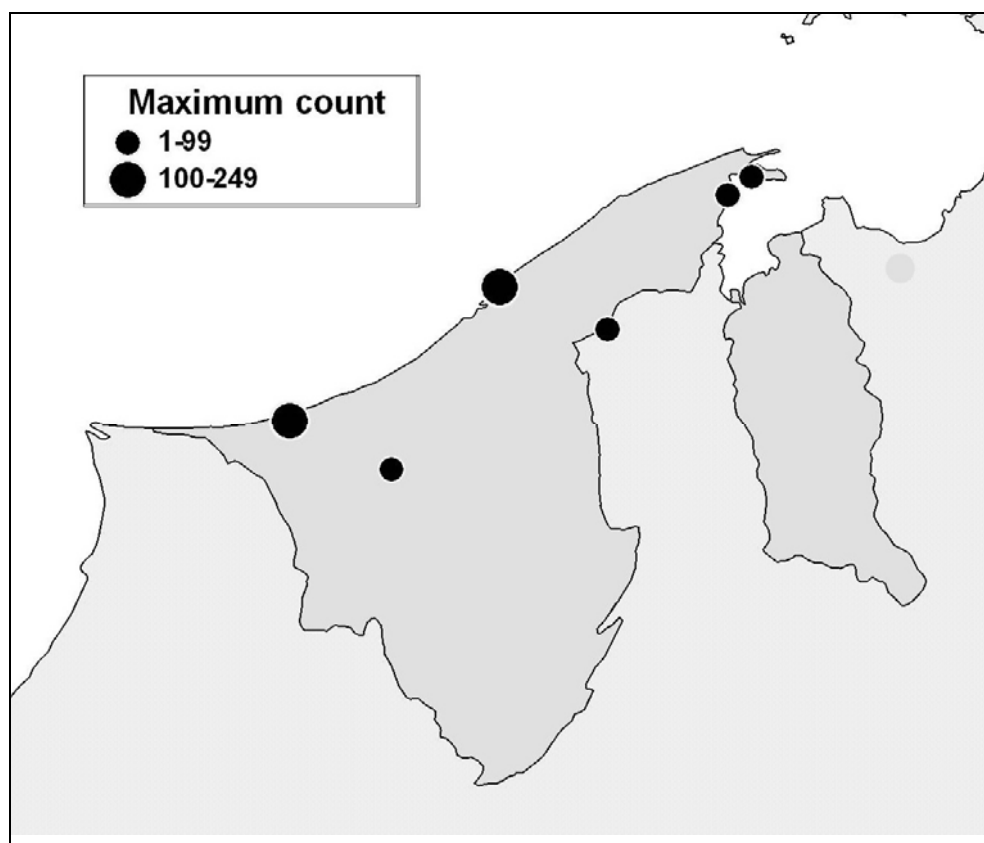


Table 22: Waterbird species counts reported during the AWC in Brunei, 2002

English Name	Scientific Name	GTS <sup>1</sup>	2002
Oriental Darter	<i>Anhinga melanogaster</i>	NT	7
Eastern White Egret	<i>Ardea modesta</i>		111
Intermediate Egret	<i>Ardea intermedia</i>		72
Purple Heron	<i>Ardea purpurea</i>		5
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		287
Green-backed Heron	<i>Butorides striatus</i>		4
Little Egret	<i>Egretta garzetta</i>		28
Chinese Egret	<i>Egretta eulophotes</i>	VU	3
Eastern Reef Heron	<i>Egretta sacra</i>		5
Yellow Bittern	<i>Ixobrychus sinensis</i>		2
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		3
Black Bittern	<i>Ixobrychus flavicollis</i>		2
White-breasted Waterhen	<i>Amauornis phoenicurus</i>		6
Common Moorhen	<i>Gallinula chloropus</i>		1
Pacific Golden Plover	<i>Pluvialis fulva</i>		4
Little Ringed Plover	<i>Charadrius dubius</i>		34
Kentish Plover	<i>Charadrius alexandrinus</i>		15
Lesser Sandplover	<i>Charadrius mongolus</i>		26
Common Redshank	<i>Tringa totanus</i>		1
Wood Sandpiper	<i>Tringa glareola</i>		2
Common Sandpiper	<i>Actitis hypoleucos</i>		15
Red-necked Stint	<i>Calidris ruficollis</i>		5
Long-toed Stint	<i>Calidris subminuta</i>		16
<b>Total Waterbirds</b>			<b>654</b>
unidentified frigatebirds	<i>Fregata</i> spp.		2
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>		1

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006); VU – Vulnerable; NT – Near Threatened.

### 3.3.3 Cambodia

Seven sites were surveyed for AWC 2002–2004, including five IBAs, one World Heritage Site and a MAB Biosphere Reserve (Figure 16 and Table 23). Waterbird totals recorded were 42,210 (5 sites), 26,437 (1 site) and 42,107 (6 sites) respectively. The data were summarised in Goes (2004).

One site, Prek Toal, recorded more than 20,000 waterbirds (26,450 in 2003), and another, Ang Tropeing Thmor Reservoir, recorded 19,985 birds in 2002. Both sites recorded more than 1% of the biogeographic populations of nine species of waterbird.

Totals of 60 species of waterbirds and seven species of raptors were recorded (Table 24). The most numerous species were Lesser Whistling Duck (16,252 in 2002), Indian Cormorant (11,249 in 2004), Whiskered Tern (5,802 in 2004), Asian Openbill (2,479 in 2002), Spot-billed Pelican (2,766 in 2004) and Garganey (2,000 in 2002).

The highest count totals of seven globally threatened species during this period (Table 24) were as follows: Critically Endangered: White-shouldered Ibis (2 in 2004); Endangered: Greater Adjutant (84 in 2002); Vulnerable: Spot-billed Pelican (2,766 in 2004), Milky Stork (3 in 2003), Lesser Adjutant (207 in 2004), Sarus Crane (231 in 2004) and Masked Finfoot (1 in 2002 and 2003). Highest count totals of five Near Threatened species were: Oriental Darter (1,919 in 2003), Painted Stork (1,908 in 2004), Black-necked Stork (2 in 2004), Black-headed Ibis (185 in 2004) and Grey-headed Fish-eagle (13 in 2004).

Major threats reported included changes in the hydrological patterns of the Mekong River, which may cause modification to the structure of flooded forest, fish breeding habitats, and the filling of deep pools with sediment. Other threats include potential land clearance and overuse of natural resources, e.g. fish, building and fuel wood, and illegal harvesting and fishing activities. The Tonle Sap area faces threats such as loss of flooded forest habitat, over-exploitation of fisheries resources and wildlife, exotic pests (*Giant Mimosa Mimosa pigra* and Water Hyacinth *Eichhornia crassipes*) and pollution, mostly from agriculture (pesticides and fertilisers) (Hong Chamnan, pers. comm., Sept. 2006).

The census was coordinated by the Wildlife Conservation Society – Cambodia Program.

**Figure 16: AWC site coverage and numerical distribution of waterbirds in Cambodia, 2002–2004**

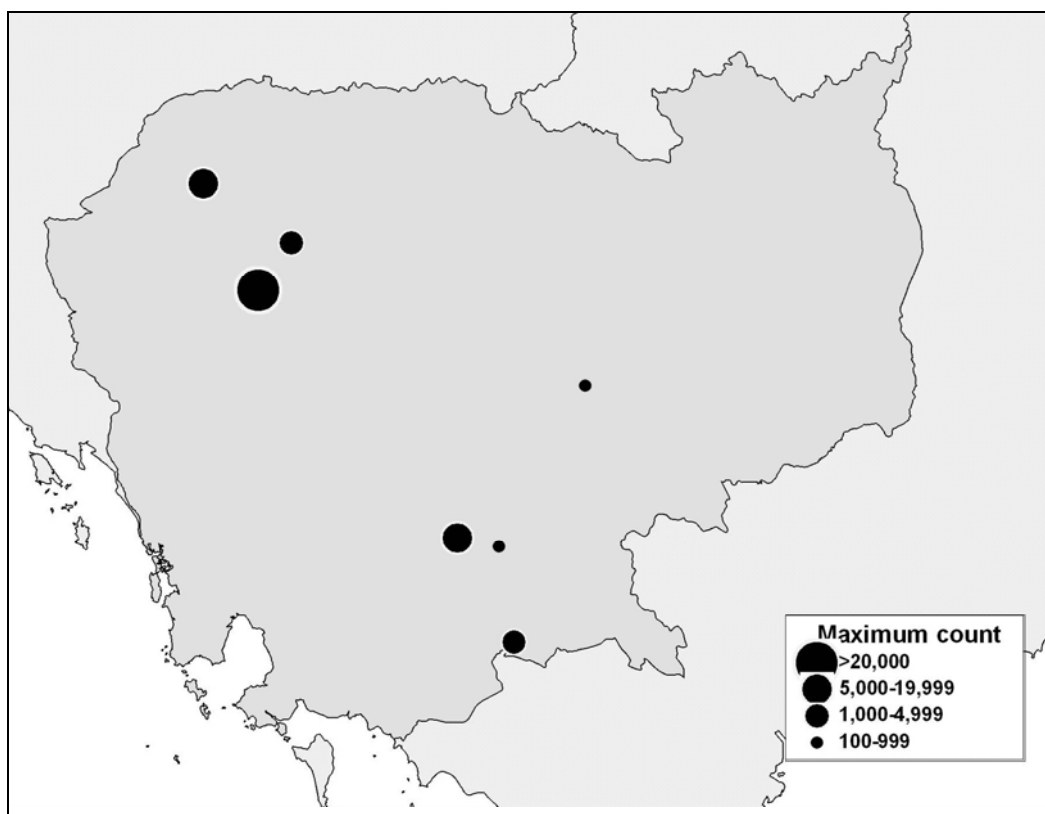


Table 23: Wetland sites surveyed during the AWC in Cambodia, 2002–2004

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Banteay Meanchey	Ang Tropeing Thmor Reservoir (Sarus Crane Reserve)	I	6FIKL	19,985		9,246
Battambang	Prek Toal	I	4FH	18,227	2,6450	24,357
Kampong Thom	Chinit River		8I			429
Kandal	Bassac Marshes (Prassat Tuyo Fishing Village)	I		1,390		
Kandal	Basset Marsh (Samrong Lake )	I	I	463		5,802
Kandal	Boeng Veal Samnap	I	FI			604
Siem Reap	Angkor (West Baray, Angkor Wat and Angkor Thom)	W, M	246GL	2,196		1,688

**Notes:**

Status<sup>1</sup>: I – Wetland IBA identified by BirdLife International (2005), W – UNESCO World Heritage Site, M – MAB Biosphere Reserve.

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

Table 24: Waterbird species counts reported during the AWC in Cambodia, 2002–2004

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		100		41
Spot-billed Pelican	<i>Pelecanus philippensis</i>	VU	1,540	2,691	2,766
Great Cormorant	<i>Phalacrocorax carbo</i>		196	701	889
Indian Cormorant	<i>Phalacrocorax fuscicollis</i>		2,434	7,321	11,249
Little Cormorant	<i>Phalacrocorax niger</i>		1,724	545	1,112
unidentified cormorants	Phalacrocoracidae spp.		3,071	3,664	164
Oriental Darter	<i>Anhinga melanogaster</i>	NT	235	1,919	1,080
Grey Heron	<i>Ardea cinerea</i>		167	230	277
Eastern White Egret	<i>Ardea modesta</i>		236	561	548
Intermediate Egret	<i>Ardea intermedia</i>		184	213	821
Purple Heron	<i>Ardea purpurea</i>		312	390	273
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		427	2	295
Green-backed Heron	<i>Butorides striatus</i>		7	115	39
unidentified pond herons	<i>Ardeola</i> spp.		1,346	1,721	1054
Little Egret	<i>Egretta garzetta</i>		523	290	782
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		625		
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		544	467	558
Yellow Bittern	<i>Ixobrychus sinensis</i>		1	5	64
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		3		9
Black Bittern	<i>Ixobrychus flavicollis</i>			6	20
unidentified Ardeidae	Ardeidae spp.			1,707	640
Milky Stork	<i>Mycteria cinerea</i>	VU		3	2
Painted Stork	<i>Mycteria leucocephala</i>	NT	1,625	1,040	1,908
Asian Openbill	<i>Anastomus oscitans</i>		2,479	2,451	2,433
Woolly-necked Stork	<i>Ciconia episcopus</i>				34
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT			2
Greater Adjutant	<i>Leptoptilos dubius</i>	EN	18	9	84
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	89	149	207
unidentified storks	Ciconiidae spp.		362		
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	61	86	185
White-shouldered Ibis	<i>Pseudibis davisoni</i>	CR			2
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		16,252		3,670
Comb Duck	<i>Sarkidiornis melanotos</i>		155		502
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		1,287	2	909
Spot-billed Duck	<i>Anas poecilorhyncha</i>		6	4	66
Northern Pintail	<i>Anas acuta</i>				1
Garganey	<i>Anas querquedula</i>		2,000		874
Sarus Crane	<i>Grus antigone</i>	VU	212		231
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		8	5	51
Ruddy-breasted Crake	<i>Porzana fusca</i>		1		286
Watercock	<i>Gallicrex cinerea</i>		1		19
Purple Swamphen	<i>Porphyrio porphyrio</i>		609	24	879
Common Moorhen	<i>Gallinula chloropus</i>		3	95	75
Masked Finfoot	<i>Heliopais personata</i>	VU	1	1	
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		316		502
Bronze-winged Jacana	<i>Metopidius indicus</i>		40		124
Black-winged Stilt	<i>Himantopus himantopus</i>		22		35
Oriental Pratincole	<i>Glareola maldivarum</i>		1		
Grey-headed Lapwing	<i>Vanellus cinereus</i>		5		1
Red-wattled Lapwing	<i>Vanellus indicus</i>		2		

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Pacific Golden Plover	<i>Pluvialis fulva</i>		5		
Little Ringed Plover	<i>Charadrius dubius</i>		16		62
Pintail Snipe	<i>Gallinago stenura</i>				2
Common Snipe	<i>Gallinago gallinago</i>		14		178
unidentified snipe	<i>Gallinago</i> spp.		11	20	7
Spotted Redshank	<i>Tringa erythropus</i>				3
Common Redshank	<i>Tringa totanus</i>				17
Marsh Sandpiper	<i>Tringa stagnatilis</i>		2		
Common Greenshank	<i>Tringa nebularia</i>		13		65
Wood Sandpiper	<i>Tringa glareola</i>		13		11
Common Sandpiper	<i>Actitis hypoleucos</i>		1		112
Long-toed Stint	<i>Calidris subminuta</i>				72
Brown-headed Gull	<i>Larus brunnicephalus</i>		49		
Caspian Tern	<i>Sterna caspia</i>				5
Common Tern	<i>Sterna hirundo</i>				8
Whiskered Tern	<i>Chlidonias hybridus</i>		2,856		5,802
<b>Total Waterbirds</b>			<b>42,210</b>	<b>26,437</b>	<b>42,107</b>
Osprey	<i>Pandion haliaetus</i>		2	2	1
Black-shouldered Kite	<i>Elanus caeruleus</i>		1		
Black Kite	<i>Milvus migrans</i>		3		
Brahminy Kite	<i>Haliastur indus</i>		17		5
Grey-headed Fish-eagle	<i>Ichthyophaga ichthyaetus</i>	NT	12	11	13
Pied Harrier	<i>Circus melanoleucos</i>		5		
Eastern Marsh Harrier	<i>Circus spilintus</i>		11		

**Note:**

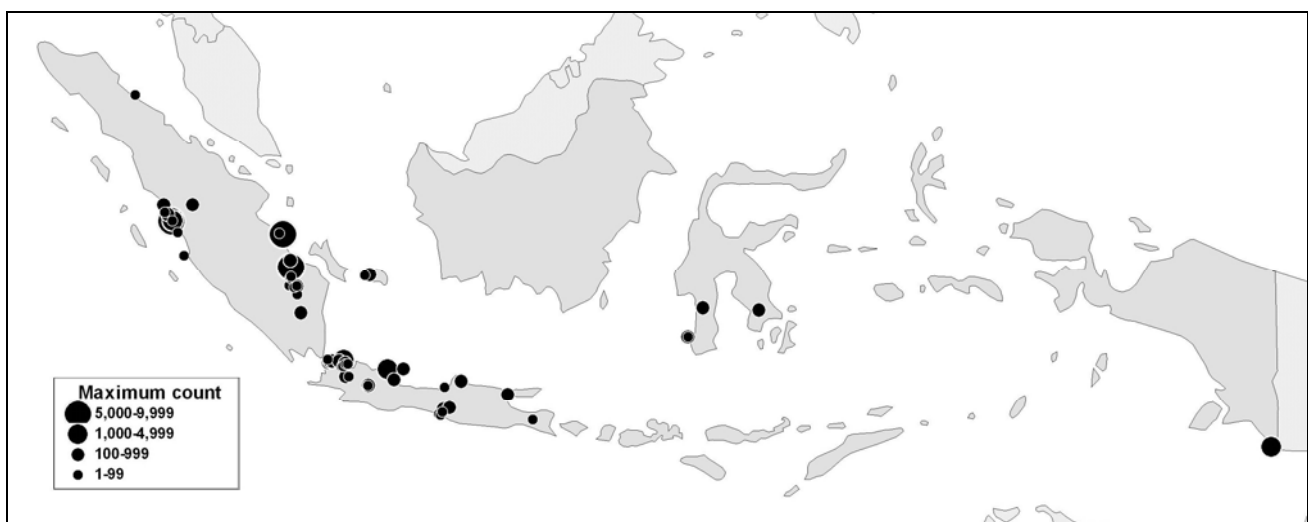
GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.3.4 Indonesia

Sixty-nine sites, including one Ramsar site and six IBAs, were surveyed at least once in all three years (Figure 17 and Table 25). Waterbird totals recorded were 27,410 (40 sites), 12,623 (34 sites) and 1,369 (14 sites) in 2002, 2003 and 2004 respectively. Three sites recorded more than 1% of the biogeographic population of at least one waterbird species.

A total of 92 waterbird species were recorded in all three years, together with three raptor and four kingfisher species (Table 26). The most numerous species recorded were Cattle Egret (6,928 in 2003), Little Black Cormorant (3,170 in 2002), Bar-tailed Godwit (3,008 in 2002), Common Tern (2,527 in 2002), Lesser Sandplover (1,633 in 2002) and Greater Crested Tern (1,259 in 2002).

**Figure 17: AWC site coverage and numerical distribution of waterbirds in Indonesia, 2002–2004**



The highest count totals of six globally threatened species during this period (Table 26) were as follows: Endangered: Storm's Stork (5 in 2002), White-winged Duck (8 in 2002) and Nordmann's Greenshank (5 in 2002); Vulnerable: Chinese Egret (2 in 2002), Lesser Adjutant (64 in 2002) and Milky Stork (133 in 2002).

Six Near Threatened species were recorded: Oriental Darter (44 in 2002), Black-headed Ibis (15 in 2002), Javan Plover (10 in 2003), Malaysian Plover (5 in 2002), Asian Dowitcher (500 in 2002) and Black-tailed Godwit (658 in 2002).

Major threats to wetlands and waterbirds were fishing, pollution, agriculture and tourism development, hunting of waterbirds, clearance of vegetation and reclamation activities.

The census was coordinated by Wetlands International – Indonesia Office.

**Table 25: Wetland sites surveyed during the AWC in Indonesia, 2002–2004**

Region/Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Bangka-Belitung	Pantai Kelayang		GL			90
Bangka-Belitung	Pantai Serdang		8GIL			31
Bangka-Belitung	Pulau Selat Nasik		EG			100
Banten	Bojonegara		C	86	70	
Banten	Dua Island Nature Reserve		CFL	179		
Banten	Kramat Watu			176	455	
Banten	Kronjo			305	206	
Banten	Sawah Luhur		8CD	213	344	
Banten	Sawah Cikupa (Toll road to Merak)		7CD			54
Banten	Situ Cipondoh		38ABGL	15	11	
Banten	Tanjung Kait			25	516	
Banten	Tirtayasa			400	672	
Irian Jaya	Pantai Merauke			1,452		
Jakarta	Hutan Kota Kemayoran		2	25		
Jakarta	Kamal Muara (North Coast Java)		4	271		
Jakarta	Muara Angke		2358AIL	78		
Jakarta	Pulau Rambut	I	AB	3,797		
Jakarta	Taman Burung (Bird Park)-TMII		FIL	422	496	
Jambi	Berbak National Park	pR, I				34
Jambi	Sungai Cemara Beach (Pesisir Pantai Jambi)	I		8,505		
Java Central	Kompleks TNI Kodam IV		4F			50
Java Central	Pantai Pangkalan		2F			133
Java Central	Rawa Jombor, Klaten		46GFL			137
Java East	Rawa Pulo		6G			74
Java East	Tambak Wonorejo		AF	18	451	
Java West	Antapani			30		
Java West	Bukit Sentul		F	7		
Java West	Danau LSI – Kampus IPB		238G	98	164	
Java West	Kiara Condong (Pindad)			200		
Java West	Margahayu Raya			82		
Java West	Rawa Sonokeling, Pabrik Gula Jatitujuh		3DF	45	152	
Java West	Sindang Sari			5		
Java West	Tambak Karang Song		C	1,876		
Java West	Tol Padalarang – Cileunyi			9	12	
Jogjakarta	Kebun Binatang Raya Gembira Loka		F		23	190
Jogjakarta	Muara Opak		68CEF			3
Jogjakarta	Muara Progo		6CDFGL			26
Jogjakarta	Pantai Trisik		289G	15		
Lampung	Rawa Pacing		46CFHI	378	298	
Riau	Bangkinang		24GIK			100
Sulawesi S.E.	Rawa Aopa National Park	I	23CD			249
Sulawesi S.E.	Sungai Walanae and Danau Tempe	I	23468FL			174
Sulawesi South	Balang Tonjong		23568CD	53		
Sulawesi South	Rawa Hutan Nipah along Sungai Tello		4689BCD	99		
Sulawesi South	Tanjung (Tg.) Merdeka, Tg. Bayam, Tg. Bunga		268CEKL	107		
Sumatra North	Pantai Cermin – Sungai Perbaungan R.M.		68ADL	83		
Sumatra South	Banyuasin Delta (Banyuasin Peninsula–Sembilang NP)	I	24GH	5,455	97	
Sumatra South	Ibul Besar – Pegayut		8GI			5
Sumatra South	Jembatan Musi 2 – Jembatan Ogan		8GI			28
Sumatra South	Lebak Bayas – Beti – Pampangan		7G			309
Sumatra South	Lebak Danau Teloko – Kayu Agung		4			32
Sumatra South	Lebak Kuro, Pampangan		G			53
Sumatra South	Lebak Meranje		68EH	85		



Region/Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Sumatra South	Lebak Pampangan		G			132
Sumatra South	Lebak Rambutan – Pampangan		G			41
Sumatra South	Lebak Tanjung Aur		8G		85	
Sumatra South	Saka Tiga Seberang		8G			9
Sumatra South	Tanjung Api – Api Highway Km 9		68CI	17	9	20
Sumatra South	Tanjung Atap		78G1			27
Sumatra South	Tanjung Serei		8B		362	
Sumatra West	Anau – Painan		6		5	
Sumatra West	Dusun Anau, Desa Simpang Carocok		4F	13		
Sumatra West	Gasam Gadang		1		403	
Sumatra West	Koto Tengah		4KL	20		
Sumatra West	Lunang Silaut		46	7		
Sumatra West	Rimbo Panti Nature Reserve		6C	450		
Sumatra West	Parupuk Taping		24GIJK	2,288	1,547	
Sumatra West	Patenggangan		J		5,377	
Sumatra West	Ujung Lambung		4G		31	

**Notes:**

Status<sup>1</sup>: 1 – Wetland IBA identified by BirdLife International (2005),

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

**Table 26: Waterbird species counts reported during the AWC in Indonesia, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>			12	
Australian Pelican	<i>Pelecanus conspicillatus</i>			1	2
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>		3,170	5	
Little Pied Cormorant	<i>Phalacrocorax melanoleucos</i>			2	1
Little Cormorant	<i>Phalacrocorax niger</i>		37	81	
unidentified cormorants	Phalacrocoracidae spp.		1		2
Oriental Darter	<i>Anhinga melanogaster</i>	NT	44	11	2
Grey Heron	<i>Ardea cinerea</i>		45	41	183
Eastern White Egret	<i>Ardea modesta</i>		111	105	26
Intermediate Egret	<i>Ardea intermedia</i>		159	46	6
Great-billed Heron	<i>Ardea sumatrana</i>		4	14	1
Purple Heron	<i>Ardea purpurea</i>		89	53	9
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		3,860	6,982	405
Green-backed Heron	<i>Butorides striatus</i>		37	30	4
Javan Pond Heron	<i>Ardeola speciosa</i>		169	226	55
Little Egret	<i>Egretta garzetta</i>		444	355	53
Chinese Egret	<i>Egretta eulophotes</i>	VU	2		
Eastern Reef Heron	<i>Egretta sacra</i>		3	2	
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		1		
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		983	601	30
Rufous Night-heron	<i>Nycticorax caledonicus</i>		1		
Yellow Bittern	<i>Ixobrychus sinensis</i>		5	14	26
Schrenck's Bittern	<i>Ixobrychus eurhythmus</i>		1		4
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		37	28	36
Black Bittern	<i>Ixobrychus flavicollis</i>		14		20
unidentified Ardeidae	Ardeidae spp.		20	1,600	6
Milky Stork	<i>Mycteria cinerea</i>	VU	133	31	
Woolly-necked Stork	<i>Ciconia episcopus</i>		7	4	4
Storm's Stork	<i>Ciconia stormi</i>	EN	5		
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	64	41	3
unidentified storks	Ciconiidae spp.			1	6
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	15		
Glossy Ibis	<i>Plegadis falcinellus</i>		338	254	2
Wandering Whistling Duck	<i>Dendrocygna arcuata</i>		3	17	42
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		136	12	12
Radjah Shelduck	<i>Tadorna radjah</i>		68		
White-winged Duck	<i>Cairina scutulata</i>	EN	8		
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>			2	6
Sunda Teal	<i>Anas gibberifrons</i>		71	9	
Pacific Black Duck	<i>Anas superciliosa</i>		4	4	2
unidentified ducks	Anatinae spp.		1		6
Red-legged Crane	<i>Rallina fasciata</i>			1	
Buff-banded Rail	<i>Gallirallus philippensis</i>		7		
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		55	73	17

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Baillon's Crake	<i>Porzana pusilla</i>		7		
Ruddy-breasted Crake	<i>Porzana fusca</i>		2	6	4
White-browed Crake	<i>Porzana cinereus</i>		8	4	9
Watercock	<i>Gallicrex cinerea</i>				21
Purple Swamphen	<i>Porphyrio porphyrio</i>		15	5	71
Common Moorhen	<i>Gallinula chloropus</i>		23	28	50
Dusky Moorhen	<i>Gallinula tenebrosa</i>			12	10
unidentified rails	Rallidae spp.			40	14
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>				6
Bronze-winged Jacana	<i>Metopidius indicus</i>				1
Australian Pied Oystercatcher	<i>Haematopus longirostris</i>		3		
Black-winged Stilt	<i>Himantopus himantopus</i>			4	
Pacific Golden Plover	<i>Pluvialis fulva</i>		105	12	13
Grey Plover	<i>Pluvialis squatarola</i>		29	24	
Little Ringed Plover	<i>Charadrius dubius</i>		20		
Kentish Plover	<i>Charadrius alexandrinus</i>		6	488	
Javan Plover	<i>Charadrius javanicus</i>	NT	5	10	
Malaysian Plover	<i>Charadrius peronii</i>	NT	5		
Lesser Sandplover	<i>Charadrius mongolus</i>		1,633	5	
Greater Sandplover	<i>Charadrius leschenaultii</i>		156		
Pintail Snipe	<i>Gallinago stenura</i>		2	6	
unidentified snipe	<i>Gallinago</i> spp.		2		
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT	500		
Black-tailed Godwit	<i>Limosa limosa</i>	NT	658	21	
Bar-tailed Godwit	<i>Limosa lapponica</i>		3,008		
unidentified godwits	<i>Limosa</i> spp.		1,480		
Whimbrel	<i>Numenius phaeopus</i>		111	1	
Eurasian Curlew	<i>Numenius arquata</i>		15	8	
Far Eastern Curlew	<i>Numenius madagascariensis</i>		12		
unidentified curlews	<i>Numenius</i> spp.		418		
Common Redshank	<i>Tringa totanus</i>		157	67	
Marsh Sandpiper	<i>Tringa stagnatilis</i>		220	5	
Common Greenshank	<i>Tringa nebularia</i>		110	16	
Nordmann's Greenshank	<i>Tringa guttifer</i>	EN	5		
Green Sandpiper	<i>Tringa ochropus</i>		20	54	
Wood Sandpiper	<i>Tringa glareola</i>		44	10	
Terek Sandpiper	<i>Xenus cinereus</i>		397		50
Common Sandpiper	<i>Actitis hypoleucos</i>		80	140	49
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		6		
Ruddy Turnstone	<i>Arenaria interpres</i>		2		
Red Knot	<i>Calidris canutus</i>		24		
Great Knot	<i>Calidris tenuirostris</i>		426		
Red-necked Stint	<i>Calidris ruficollis</i>		126		
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>		18		
Curlew Sandpiper	<i>Calidris ferruginea</i>		35		
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		4		
Red-necked Phalarope	<i>Phalaropus lobatus</i>		4		
unidentified shorebirds	Charadrii spp.		851	1	50
Common Black-headed Gull	<i>Larus ridibundus</i>		3		
Gull-billed Tern	<i>Gelochelidon nilotica</i>		210		
Lesser Crested Tern	<i>Sterna bengalensis</i>		26		
(Greater) Crested Tern	<i>Sterna bergii</i>		1,259	22	30
Black-naped Tern	<i>Sterna sumatrana</i>				20
Common Tern	<i>Sterna hirundo</i>		2,527	691	
Little Tern	<i>Sterna albifrons</i>		102	78	
Whiskered Tern	<i>Chlidonias hybridus</i>		307	197	
White-winged Black Tern	<i>Chlidonias leucopterus</i>		372		
unidentified <i>Sterna</i> terns	<i>Sterna</i> spp.		1,700		
White Tern	<i>Gygis alba</i>			10	
<b>Total Waterbirds</b>			<b>27,410</b>	<b>12,623</b>	<b>1,369</b>
unidentified frigatebirds	<i>Fregata</i> spp.				60
Black-shouldered Kite	<i>Elanus caeruleus</i>			5	5
Brahminy Kite	<i>Haliastur indus</i>		2	1	1
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>			1	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>			1	6
Collared Kingfisher	<i>Todiramphus chloris</i>		10	14	1
Common Kingfisher	<i>Alcedo atthis</i>		1		
Small Blue Kingfisher	<i>Alcedo caeruleascens</i>				1

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.3.5 Malaysia

Sixty-one sites were surveyed at least once in all three years (Figure 18 and Table 27). Details of the census have been disseminated as annual reports (Yeap 2002, Yeap *et al.* 2003, 2004).

Waterbird totals recorded were 18,147 (25 sites), 32,532 (43 sites) and 27,867 (42 sites) in 2002, 2003 and 2004 respectively. The sites covered included one Ramsar site, one EAAF Waterbird Network site and seven IBAs. Eight sites recorded more than 1% of the biogeographic population of at least one waterbird species.

Eighty-five waterbird species were recorded in all three years, together with two frigatebird, 11 raptor and seven kingfisher species (Table 28). The most numerous species recorded were Lesser Sandplover (3,283 in 2003 and 3,179 in 2004), Common Redshank (2,630 in 2003 and 2,552 in 2004), Little Egret (2,062 in 2003), Chinese Pond Heron (1,660 in 2003) and Whimbrel (1,649 in 2003).

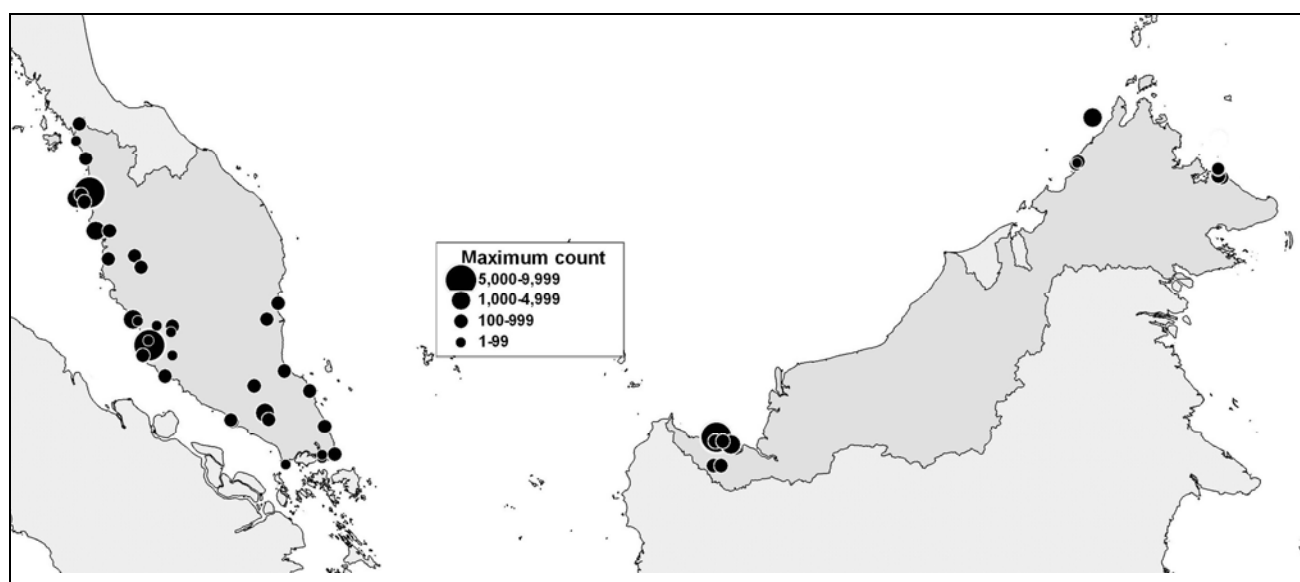
Highest count totals of eight globally threatened species during this period (Table 28) were as follows: Critically Endangered: Christmas Island Frigatebird (700 at Mantanani Island in 2003); Endangered: Storm's Stork (13 in 2004), Nordmann's Greenshank (31 in 2004) and Spoon-billed Sandpiper (1 in 2002); Vulnerable: Chinese Egret (431 in 2004), Milky Stork (8 in 2003 and 2004), Lesser Adjutant (94 in 2003), Greater Spotted Eagle (7 in 2002) and Imperial Eagle (1 in 2002).

Highest count totals of five Near Threatened species were Oriental Darter (54 in 2002), Malaysian Plover (29 in 2004), Asian Dowitcher (23 in 2004), Black-tailed Godwit (1,347 in 2004) and White-tailed Eagle (1 in 2004). Two Painted Storks reported were free-flying birds from the National Zoo in Kuala Lumpur.

Threats to the wetlands and waterbirds reported were clearance of vegetation, fishing, reclamation, pollution caused by domestic sewage, solid waste, use of pesticides and fertilisers, and hunting.

The census was coordinated by the Malaysian Nature Society.

**Figure 18: AWC site coverage and numerical distribution of waterbirds in Malaysia, 2002–2004**



**Table 27: Wetland sites surveyed during the AWC in Malaysia, 2002–2004**

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Johor	Institut Jabatan Haiwan Kluang				158	138
Johor	Kg. Punggai				120	221
Johor	Kuala Mersing				567	75
Johor	Kuala Sedili				702	228
Johor	Parit Jawa, Southwest Johor coast	pl	4BG	382	690	255
Johor	Pasir Gogok				10	
Johor	Sungai Balang, Southwest Johor coast	pl	C	106	158	98

State	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Johor	Sungai Chodan		39GL	36		
Johor	Tanjung Piai, Southwest Johor coast	R, pl	89L		48	
Johor	Tg. Pengelis Penggereng				43	
Johor	Yong Peng Heronry		4	341	335	1,329
Kedah	Kuala Kedah – Kuala Sungai Kangkong Coast		49CDFIK	766	427	
Kuala Lumpur	Plaza Dwtasik, Bandar Seri Permatasuri		4GIL		5	
Kuala Lumpur	Taman Desa Oxidation Pond		1	103	75	192
Kuala Lumpur	Twin Lakes, Bandar Tasik Selatan		46GIL		32	
Melaka	Batang Tiga Ricefields		C	182	24	93
Pahang	Kuala Rompin				57	32
Pahang	Laka Paddy Field				114	280
Pahang	Pekan Pahang				496	176
Pahang	Sungai Galing River Bank		4I		212	239
Pahang	Tanjung Sepat		1		39	
Penang	Batu Maung (Batu Uban/Free Trade Zone)		249C			818
Penang	Gurney Dive					191
Penang	Kuala Bekah (Telok Air Tawar) – Kuala Muda	I	249CFGI	1,959	7,526	4,319
Penang	Mak Mandin		49GK	1,014		
Penang	Pantai Mas (Pantai Aceh Village)				1,437	
Perak	Chikus			135	325	374
Perak	Kamunting Ex-Mining Pools		459AFGHI		206	190
Perak	Kinta Nature Park (Proposed)			80	447	392
Perak	Kota Bahru			95		
Perak	Malim Nawar Ex-Mining Pools		459AEFHI	916	958	728
Perak	Matang Forest and Northern Kuala Gula	I		4,057	1,269	1,015
Perak	Pinji Eastate/Pinji Ponds			208		
Perlis	Kuala Perlis – Kuala Sanglang Coast		4CDFGIK		63	52
Perlis	Timah – Tasoh Dam		2468CDK	156	43	22
Putrajaya	Putrajaya Wetlands					50
Sabah	Kinabatangan: Kg. Mumiang/Tg. Bidadas	I	48ABCDH			461
Sabah	Kinabatangan: Lower Floodplain		24689ABCD	231		112
Sabah	Kinabatangan: Terusan Kinabatangan		2489ABCDH	389		277
Sabah	Kota Kinabalu City (Likas) Bird Sanctuary				49	
Sabah	Likas Lagoon				127	
Sabah	Mantanani Island	I	4FHL		2,719	
Sabah	Sembulan				163	
Sarawak	Bako – Buntal Bay and Surrounding Areas	I	489CDFHKL	1,695	5,998	2,726
Sarawak	K Samarahan – K Sadong (Asajaya–Pendang)		F		2,254	1,474
Sarawak	Kampung Chupak		CDFG	169	311	190
Sarawak	Sejingkat Power Station		4AFGJ		440	564
Sarawak	Semengok Fisheries Centre			189		
Sarawak	Sri Aman Ricefields			39		
Sarawak	Sungai Kera/Rampangi				201	
Selangor	Bandar Tasek Puteri		8			714
Selangor	Berjantai Mining Pools		4		41	94
Selangor	Kapar Power Station Ash Ponds, North Central (NC) Selangor coast	S, pl	9AI	4,455	8,933	7,657
Selangor	Kuala Selangor Nature Park, NC Selangor coast	pl	89CDIK	24	18	9
Selangor	Pantai Remis, Jeram, NC Selangor coast	pl	8L			45
Selangor	Pulau Tengah, NC Selangor coast	pl				685
Selangor	Rasa Ex-Mining Ponds		GI			34
Selangor	Sekinchan Ricefields, NC Selangor coast	pl	CD			27
Selangor	Sungai Nibong – Sekinchan Coastline, NC Selangor coast	pl				3,910
Selangor	Tumbuk Estate		8	545	828	513
Selangor	Ulu Yam Mining Pools		6CDI		113	192

**Notes:**

Status<sup>1</sup>: R – Ramsar site, I – Wetland IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway.

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

**Table 28: Waterbird species counts reported during the AWC in Malaysia, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		82	60	144
Oriental Darter	<i>Anhinga melanogaster</i>	NT	54		48
Grey Heron	<i>Ardea cinerea</i>		61	183	933
Eastern White Egret	<i>Ardea modesta</i>		345	397	249

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Intermediate Egret	<i>Ardea intermedia</i>		156	80	75
Great-billed Heron	<i>Ardea sumatrana</i>				1
Purple Heron	<i>Ardea purpurea</i>		265	444	301
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		1,281	642	1,028
Green-backed Heron	<i>Butorides striatus</i>		76	84	161
Chinese Pond Heron	<i>Ardeola bacchus</i>		455	1,660	526
Javan Pond Heron	<i>Ardeola speciosa</i>		7		
unidentified pond herons	<i>Ardeola spp.</i>		108	11	
Little Egret	<i>Egretta garzetta</i>		987	2,062	1,136
Chinese Egret	<i>Egretta eulophotes</i>	VU	2	31	439
Eastern Reef Heron	<i>Egretta sacra</i>		3	5	1
unidentified egrets	<i>Egretta/Bubulcus spp.</i>		1	648	69
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		270	273	1,362
Rufous Night-heron	<i>Nycticorax caledonicus</i>			4	
Yellow Bittern	<i>Ixobrychus sinensis</i>		18	28	51
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		12	18	22
Black Bittern	<i>Ixobrychus flavicollis</i>			1	
unidentified bitterns	<i>Ixobrychus spp.</i>		1		
unidentified Ardeidae	<i>Ardeidae spp.</i>		605	11	488
Milky Stork	<i>Mycteria cinerea</i>	VU		8	8
Painted Stork	<i>Mycteria leucocephala</i>	NT		2	
Storm's Stork	<i>Ciconia stormi</i>	EN	11		13
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	79	94	31
Wandering Whistling Duck	<i>Dendrocygna arcuata</i>				22
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		23	34	37
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		154	7	2
unidentified ducks	<i>Anatinae spp.</i>		2		
Slaty-breasted Rail	<i>Gallirallus striatus</i>		4	7	15
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		120	163	218
Ruddy-breasted Crake	<i>Porzana fusca</i>		3	3	2
White-browed Crake	<i>Porzana cinereus</i>		40	37	6
Watercock	<i>Gallicrex cinerea</i>		12	6	5
Purple Swampphen	<i>Porphyrio porphyrio</i>		20	38	82
Common Moorhen	<i>Gallinula chloropus</i>		66	66	99
unidentified rails	<i>Rallidae spp.</i>		5	2	
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>				2
Greater Painted Snipe	<i>Rostratula benghalensis</i>		2	7	7
Black-winged Stilt	<i>Himantopus himantopus</i>		30	44	24
Oriental Pratincole	<i>Glareola maldivarum</i>		1	5	15
Grey-headed Lapwing	<i>Vanellus cinereus</i>		12	1	16
Red-wattled Lapwing	<i>Vanellus indicus</i>		9	79	44
Pacific Golden Plover	<i>Pluvialis fulva</i>		646	733	1,238
Grey Plover	<i>Pluvialis squatarola</i>		107	583	523
Little Ringed Plover	<i>Charadrius dubius</i>		20	98	147
Kentish Plover	<i>Charadrius alexandrinus</i>		31	71	20
Malaysian Plover	<i>Charadrius peronii</i>	NT	1	18	29
Lesser Sandplover	<i>Charadrius mongolus</i>		866	3,283	3,179
Greater Sandplover	<i>Charadrius leschenaultii</i>		20	1,579	736
unidentified <i>Charadrius</i> plovers	<i>Charadrius spp.</i>		150		
Pintail Snipe	<i>Gallinago stenura</i>		7	13	29
Common Snipe	<i>Gallinago gallinago</i>		2	8	20
unidentified snipe	<i>Gallinago spp.</i>		85	41	5
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT		2	23
Black-tailed Godwit	<i>Limosa limosa</i>	NT	108	293	1,347
Bar-tailed Godwit	<i>Limosa lapponica</i>		868	589	787
Whimbrel	<i>Numenius phaeopus</i>		577	1,649	881
Eurasian Curlew	<i>Numenius arquata</i>		556	1,185	866
Far Eastern Curlew	<i>Numenius madagascariensis</i>		18	206	20
unidentified curlews	<i>Numenius spp.</i>				47
Common Redshank	<i>Tringa totanus</i>		1,470	2,630	2,552
Marsh Sandpiper	<i>Tringa stagnatilis</i>		185	543	365
Common Greenshank	<i>Tringa nebularia</i>		275	598	187
Nordmann's Greenshank	<i>Tringa guttifer</i>	EN	2	7	39
Green Sandpiper	<i>Tringa ochropus</i>		1		
Wood Sandpiper	<i>Tringa glareola</i>		72	139	187
Terek Sandpiper	<i>Xenus cinereus</i>		660	287	372
Common Sandpiper	<i>Actitis hypoleucos</i>		139	313	199
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		10	2	2
Ruddy Turnstone	<i>Arenaria interpres</i>		37	161	8
Red Knot	<i>Calidris canutus</i>		5	409	14
Great Knot	<i>Calidris tenuirostris</i>		83	1,178	656
Sanderling	<i>Calidris alba</i>				2

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Red-necked Stint	<i>Calidris ruficollis</i>		468	996	786
Temminck's Stint	<i>Calidris temminckii</i>		237	1	
Long-toed Stint	<i>Calidris subminuta</i>			74	275
Curlew Sandpiper	<i>Calidris ferruginea</i>		540	1,179	619
Spoon-billed Sandpiper	<i>Eurynorhynchus pygmaeus</i>	EN	1		
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		3	50	22
Red-necked Phalarope	<i>Phalaropus lobatus</i>			2	
unidentified shorebirds	Charadrii spp.		1,127	3,545	1,875
Brown-headed Gull	<i>Larus brunnicephalus</i>		176	8	150
Common Black-headed Gull	<i>Larus ridibundus</i>		1		29
unidentified gulls	Laridae spp.			57	
Gull-billed Tern	<i>Gelochelidon nilotica</i>		126	268	274
Caspian Tern	<i>Sterna caspia</i>		6	23	22
Lesser Crested Tern	<i>Sterna bengalensis</i>		445	150	18
(Greater) Crested Tern	<i>Sterna bergii</i>			250	
Black-naped Tern	<i>Sterna sumatrana</i>		2	4	105
Common Tern	<i>Sterna hirundo</i>		140	152	77
Little Tern	<i>Sterna albifrons</i>		80	668	234
Whiskered Tern	<i>Chlidonias hybridus</i>		750	25	28
White-winged Black Tern	<i>Chlidonias leucopterus</i>		394	673	311
unidentified terns	Sterninae spp.		1,268	544	880
<b>Total Waterbirds</b>			<b>18,147</b>	<b>32,532</b>	<b>27,867</b>
Christmas Island Frigatebird	<i>Fregata andrewsi</i>	CR		700	
Lesser Frigatebird	<i>Fregata ariel</i>			2,000	
Osprey	<i>Pandion haliaetus</i>			3	1
Black-shouldered Kite	<i>Elanus caeruleus</i>		1		10
Black Kite	<i>Milvus migrans</i>		30		
Brahminy Kite	<i>Haliastur indus</i>		39		144
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>		11	7	20
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT			1
Hen Harrier	<i>Circus cyaneus</i>		1		
Pied Harrier	<i>Circus melanoleucos</i>		4		11
Eastern Marsh Harrier	<i>Circus spilintus</i>		9		20
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	7		3
Imperial Eagle	<i>Aquila heliaca</i>	VU	1		
Ruddy Kingfisher	<i>Halcyon coromanda</i>			1	
Stork-billed Kingfisher	<i>Halcyon capensis</i>		7	2	
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		5		34
Black-capped Kingfisher	<i>Halcyon pileata</i>			1	3
Collared Kingfisher	<i>Todiramphus chloris</i>		4	33	69
Blue-eared Kingfisher	<i>Alcedo meninting</i>		3		
Common Kingfisher	<i>Alcedo atthis</i>		3	2	6
Yellow Wagtail	<i>Motacilla flava</i>				2
unidentified wagtails	<i>Motacilla</i> spp.			3,500	3,000

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.3.6 Myanmar

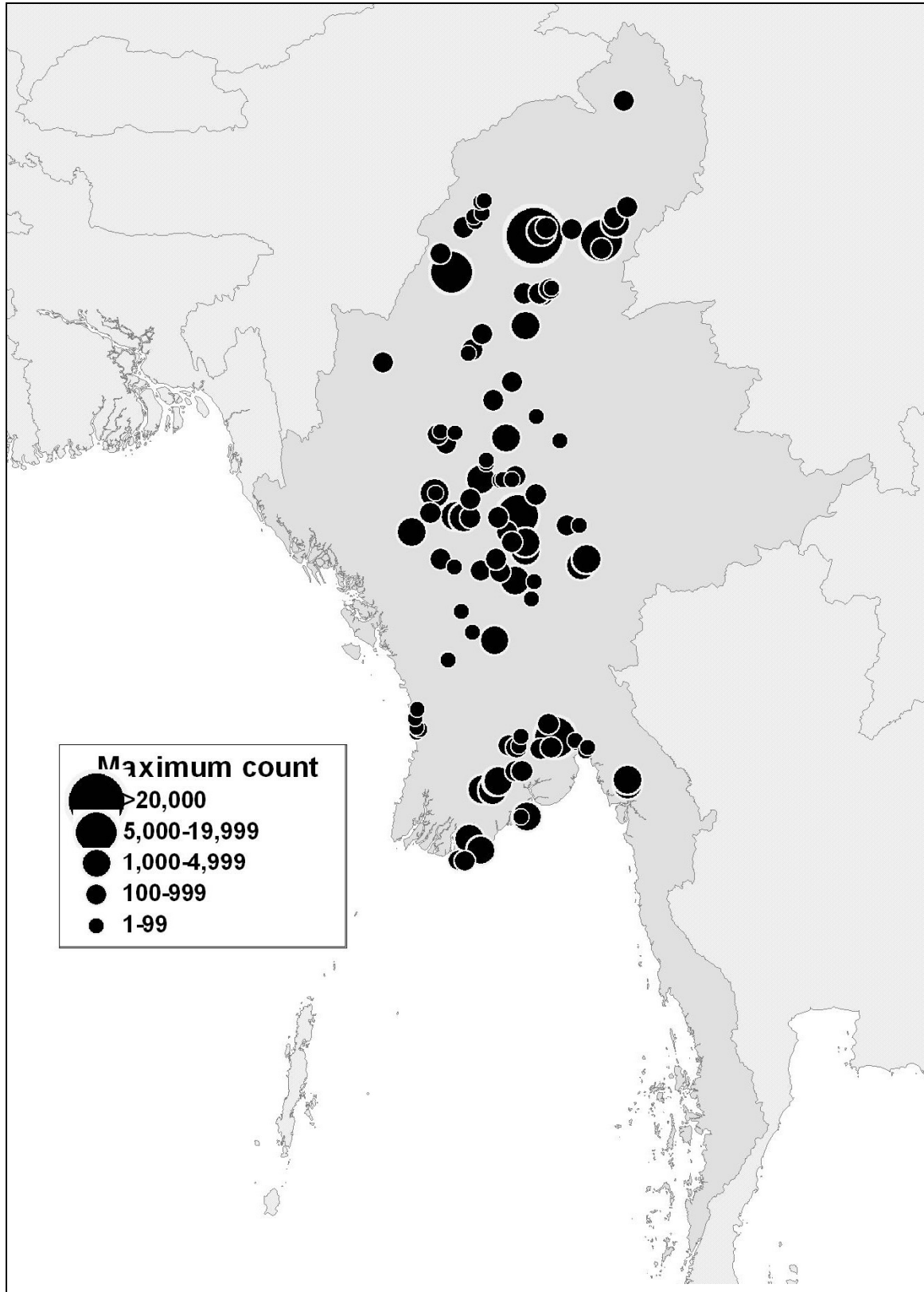
A total of 114 sites, including one Ramsar site and 11 IBAs, were surveyed at least once in the 3-year period (Figure 19 and Table 29). Total numbers of waterbirds recorded were 90,016 (49 sites), 77,953 (75 sites) and 58,340 (24 sites) respectively in 2002, 2003 and 2004. Some of the data were summarised in Van der Ven 2002, 2003 and 2004. Indaw-Gyi Lake was the only site that recorded more than 20,000 waterbirds (31,371 in 2002). A total of 17 sites recorded more than 1% of the biogeographic population of at least one waterbird species.

One hundred and thirty-six waterbird species were recorded in all three years, together with 13 raptor and eight kingfisher species (Table 30). The most numerous species recorded were Lesser Whistling Duck (21,951 in 2003), Common Coot (19,359 in 2002), Cattle Egret (8,809 in 2003), Ruddy Shelduck (7,479 in 2004), Northern Pintail (6,665 in 2004), Spot-billed Duck (4,893 in 2002), Small Pratincole (3,767 in 2004), Bar-headed Goose (3,583 in 2003), Purple Swampphen (3,493 in 2003) and Common Crane (3,394 in 2004).

The highest count totals of 11 globally threatened species were as follows: Endangered: White-bellied Heron (1 in 2002), Greater Adjutant (3 in 2002 and 2003) and White-winged Duck (11 in 2004); Vulnerable: Spot-

billed Pelican (140 in 2004), Lesser Adjutant (40 in 2004), Baer's Pochard (4 in 2002), Sarus Crane (17 in 2004), Masked Finfoot (3 in 2004), Wood Snipe (1 in 2002 and 2003), Indian Skimmer (2 in 2003) and Greater Spotted Eagle (5 in 2002).

**Figure 19: AWC site coverage and numerical distribution of waterbirds in Myanmar, 2002–2004**



Highest count totals of 11 Near Threatened species were: Oriental Darter (228 in 2004), Painted Stork (7 in 2004), Black-necked Stork (4 in 2003 and 2004), Black-headed Ibis (201 in 2004), Falcated Duck (7 in 2004), Ferruginous Duck (3,210 in 2002), Black-bellied Tern (37 in 2004), White-tailed Eagle (10 in 2004), Grey-headed Fish-eagle (9 in 2004), Lesser Fish-eagle (6 in 2002) and Blyth's Kingfisher (1 in 2003).

The main threats and issues affecting wetland habitats and waterbirds included drainage of wetlands for agricultural and aquacultural development, and upland reservoir construction, which may affect the natural flooding regime of downstream wetlands; other threats included over-fishing, pollution and hunting.

The census was coordinated by the Myanmar Bird and Nature Society.

**Table 29: Wetland sites surveyed during the AWC in Myanmar, 2002–2004**

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Ayeyarwady	Bobakone Swamp		689HJ		1,547	
Ayeyarwady	Gayetgyi Island (Khat-Tar Island)		78G	580	556	195
Ayeyarwady	Kadonlay Island (Kyuntharyar) (Gadonegalay Island)		38GJ	98	570	
Ayeyarwady	Maletto Lake		48CDFGHJ	2,198		
Ayeyarwady	Ma-U-Pin: Ngapyawkyum, Mazali, Maletto, Hlaing Thar		67CDF		1,871	
Ayeyarwady	Ma-U-Pin: Yelegale, Tarmalo, Aungheite		467CDF		1,024	
Ayeyarwady	Meinmahla Kyun Wildlife Sanctuary		3L	940	3,715	613
Ayeyarwady	Tamalo Inn Lake (Orchid Farm)		4H	1,431		
Bago	Baw Ni Dam				100	
Bago	Kan Ma Inn Lake		2678G		195	
Bago	Kyi Lake		6			69
Bago	Moyingyi Wetland Sanctuary	R, I		6,391	13,289	
Bago	Ngapyat Lake		4			54
Bago	Taung Na Win Dam				1,288	
Bago	North (Myaut) Na Win Dam				41	
Kachin	Byee Lake		3CG			207
Kachin	Indaw R: Changgwa – Kahtangyaung		3BCDH			259
Kachin	Indaw R: Shwetaung – Chaungwa		6CDH			1,821
Kachin	Indaw – Gyi Lake	I	6BCDHI	31,371	12,648	19,146
Kachin	Irrawaddy R: at Myitkyina				209	
Kachin	Irrawaddy R: Myitkyina to Sinbo	I	HFG	8,567	15,067	13,558
Kachin	Nam Lah, Nam Yah Rivers (Rivers around Putao)			190		
Kachin	Nam Sam Chaung (Near Ayeyarwady)	I		172		
Kachin	Sahmaw		3			581
Kachin	Yaimaw (Waimaw)		3CD			1,215
Kayin	Kan-Thar-Yar Lake		G	1,004		
Kayin	Kyaut Ka Lut Lake		1	1,071		
Magway	Beikthano Lake		FG	574	330	7
Magway	Irrawaddy R: Magwe – Minbu	I	HK	979	415	
Magway	Kyeoh Lake		FG	183	249	
Magway	Man Stream					17
Magway	Shweyaungtaw Lake		FG	767	71	
Magway	Wetkathay Lake		3CD			30
Magway	Weththigian (Kan) Lake Wildlife Sanctuary		24679BFGHI	675	3,369	355
Magway	Wun Chaung Reservoir		CD		574	
Mandalay	Chaungmagyi Lake	I	G		638	
Mandalay	Htein Inn			55		
Mandalay	Irrawaddy R: Pagan–Nyaung U		68HK	332	1,377	
Mandalay	Khat Lan Dam (Khetlan Dam)		HK		50	
Mandalay	Kyar Twinn Lake		4FH	109		
Mandalay	Kye Ni Kan	I	78H	1,718	1,850	
Mandalay	Kyet Mauk Taung Dam		1	1,217	818	
Mandalay	Lat Pan Pya Dam				2,211	
Mandalay	Lawkananda Wildlife Sanctuary		8G		39	
Mandalay	Minhla-Nyaung Yan Lake		68GJ	6,381		
Mandalay	Me Aung Kan		G	1,375	125	
Mandalay	Mondai Dam			454		
Mandalay	Myauk Pin Le				20	
Mandalay	Myinzin (Kan) Lake		48FHIL	2		
Mandalay	Ngalaik Reservoir		1	4,223	2,700	
Mandalay	Pan Tawa Lake		468FHGJK		614	
Mandalay	Pyauk Pya Reservoir		GK	1,859	735	
Mandalay	Sedawgyi Reservoir			59	81	
Mandalay	Shauk Taw Yoe Lake		H		93	
Mandalay	Taung Pin Le Dam		289G		20	
Mandalay	Thitson Reservoir			733	663	



Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Mandalay	Wae Laung Dam		GIK	722		
Mandalay	Yesin Reservoir				59	
Mandalay	Yit Lake		678HJ		290	
Mon	Insein Maung Lake		248G		2	
Mon	Inwa Lake		248G		20	
Mon	Sittang Golf Club Lake (near Sittang Paper Mill)		28F		42	
Mon	Sittang River (Theinzayat – Kaywe)		268H		24	
Rakhine	Byaing Kyun Island				27	
Rakhine	Ka Toe Chaung				12	
Rakhine	Kyeintali Stream				7	
Rakhine	Ma Gyi Ngu				7	
Rakhine	Satthwa Stream				6	
Rakhine	Yahaing Kwin Lake				5	
Rakhine	Ya-Hi Kwin Dam				20	
Sagaing	Ahlong In Lake		6G		74	
Sagaing	Chindwin R: Kalewa–Hkamti and to the north		6EH			17,231
Sagaing	Chindwin R: Myitha–Homalin–Kawya–Htamanthi		47EHI		648	
Sagaing	Htantaw In Lake		6HK		59	
Sagaing	Indawlay Lake		6ACDFHI	297	100	
Sagaing	Irrawaddy R: Katha and upstream (23 km)		6FH	396		
Sagaing	Kabo Weir		6K	25	400	
Sagaing	Kanthayar In Lake		H		69	
Sagaing	Kauk Taung Lake		6G			250
Sagaing	Khat Tha In Lake		34679FH		156	
Sagaing	Khaung Khon In Lake		34679FH		212	
Sagaing	Komeywa Inn		6K		22	
Sagaing	Kye Inn (Within Chatthin Nature Reserve)		G	694		
Sagaing	Kyein Lake		K	531	130	
Sagaing	Maha Nandar Lake	I	46CDGK	494	35	
Sagaing	Mayin Lake		3			23
Sagaing	Motar Lay (Modalay) Inn		6H	106		
Sagaing	Myittha River	I	36BCD			561
Sagaing	Nan Ezu Stream (Htamanthi Wildlife Sanc)		G		48	34
Sagaing	Nan Pacon River		1			7
Sagaing	Nan Phi Lin River		E			16
Sagaing	Nga Yant In Lake		G		78	
Sagaing	Pa Du Inn (Badu Inn)		4679CD	549	126	
Sagaing	Pet Let In Lake		6		52	
Sagaing	Swegu Taung In Lake		6GK		183	
Sagaing	Thapanseik Dam		K		75	
Sagaing	Yemyetkyi Inn		467CDFHI	1,556		
Sagaing/ Mandalay	Irrawaddy R: Katha to Tagaung (100 km)			1,143		
Sagaing/ Mandalay	Irrawaddy R: Tagaung to Thabeikkyin (74 km)			451		
Shan	Heho Kan			147		
Shan	Inle (Kan) Lake Wildlife Sanctuary	I	4678CFHIL	2,298	4,937	
Shan	Inya Kan			78		
Shan	Kimda Dam		27HKL		126	
Shan	Nadi Kan	I		62		
Shan	Sagar Kan (connected to Inle Kan)			2,486		
Yangon	Gyo Phyu		4G		24	
Yangon	Hlawga Reservoir		4G		322	
Yangon	Hlawga Wildlife Park, Rangoon		L	175	236	
Yangon	Letkok Kon (Let Khoke Kong)		3CDFH	2,704		2,669
Yangon	Nga Moe Yeik		46H		129	
Yangon	Phugyi Reservoir		46G		104	
Yangon	Tabuhla Dam		28FGK		29	
Yangon	Toe Island		36H			66
Yangon	U To		6L		852	

**Notes:**

Status<sup>1</sup>: R – Ramsar site, I – Wetland IBA identified by BirdLife International (2005).

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

Table 30: Waterbird species counts reported during the AWC in Myanmar, 2002–2004

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		500	317	85
Great Crested Grebe	<i>Podiceps cristatus</i>		37	27	62
Horned Grebe	<i>Podiceps auritus</i>		1		
Black-necked Grebe	<i>Podiceps nigricollis</i>		7		
Spot-billed Pelican	<i>Pelecanus philippensis</i>	VU	2	20	140
unidentified pelicans	Pelecanidae spp.			1	
Great Cormorant	<i>Phalacrocorax carbo</i>		1,682	1,087	1,392
Indian Cormorant	<i>Phalacrocorax fuscicollis</i>		2	3	
Little Cormorant	<i>Phalacrocorax niger</i>		1,836	2,753	1,187
unidentified cormorants	Phalacrocoracidae spp.			5	
Oriental Darter	<i>Anhinga melanogaster</i>	NT	142	170	228
Grey Heron	<i>Ardea cinerea</i>		532	436	274
Eastern White Egret	<i>Ardea modesta</i>		374	416	528
Intermediate Egret	<i>Ardea intermedia</i>		440	429	65
White-bellied (Imperial) Heron	<i>Ardea insignis</i>	EN	1		
Purple Heron	<i>Ardea purpurea</i>		342	190	69
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		1,291	8,809	900
Green-backed Heron	<i>Butorides striatus</i>		6	5	11
Indian Pond Heron	<i>Ardeola grayii</i>		304	75	7
unidentified pond herons	<i>Ardeola</i> spp.		200	671	72
Little Egret	<i>Egretta garzetta</i>		1,101	973	759
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		30	40	
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		26	212	284
Yellow Bittern	<i>Ixobrychus sinensis</i>		3	5	2
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>			9	
unidentified Ardeidae	Ardeidae spp.		680	861	670
Painted Stork	<i>Mycteria leucocephala</i>	NT	5		7
Asian Openbill	<i>Anastomus oscitans</i>		911	667	113
Black Stork	<i>Ciconia nigra</i>		238	32	155
Woolly-necked Stork	<i>Ciconia episcopus</i>		24	54	87
Black-necked Stork	<i>Ephippiorhynchus asiaticus</i>	NT	1	4	4
Greater Adjutant	<i>Leptoptilos dubius</i>	EN	3	3	
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	34	21	40
unidentified storks	Ciconiidae spp.		1	1	
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT	188	127	201
Glossy Ibis	<i>Plegadis falcinellus</i>		430	157	20
Fulvous Whistling Duck	<i>Dendrocygna bicolor</i>		1		
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		17,278	21,951	7,842
Greylag Goose	<i>Anser anser</i>		348	516	716
Bar-headed Goose	<i>Anser indicus</i>		988	3,583	2,979
Ruddy Shelduck	<i>Tadorna ferruginea</i>		4,054	5,271	7,479
Common Shelduck	<i>Tadorna tadorna</i>		29	8	24
White-winged Duck	<i>Cairina scutulata</i>	EN		11	5
Comb Duck	<i>Sarkidiornis melanotos</i>		14	4	1
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		1,220	501	110
Eurasian Wigeon	<i>Anas penelope</i>		215	65	157
Falcated Duck	<i>Anas falcata</i>	NT		2	7
Gadwall	<i>Anas strepera</i>		2,048	2,543	2,402
Common Teal	<i>Anas crecca</i>		778	159	41
Mallard	<i>Anas platyrhynchos</i>		39	62	230
Spot-billed Duck	<i>Anas poecilorhyncha</i>		4,893	929	1,746
Northern Pintail	<i>Anas acuta</i>		283	1,783	6,665
Garganey	<i>Anas querquedula</i>		555	620	21
Northern Shoveler	<i>Anas clypeata</i>		454	268	461
Red-crested Pochard	<i>Netta rufina</i>		11	30	63
Common Pochard	<i>Aythya ferina</i>		2,751	569	741
Baer's Pochard	<i>Aythya baeri</i>	VU	4		
Ferruginous Duck	<i>Aythya nyroca</i>	NT	3,210	988	1,031
Tufted Duck	<i>Aythya fuligula</i>		2,090	1,712	2,000
Common Goldeneye	<i>Bucephala clangula</i>		1	4	8
Goosander	<i>Mergus merganser</i>		117	89	102
unidentified ducks	Anatinae spp.		2,548	1,463	
Sarus Crane	<i>Grus antigone</i>	VU	12	3	17
Common Crane	<i>Grus grus</i>		1,157	1,533	3,394
unidentified cranes	Gruidae spp.			3	
Red-legged Crane	<i>Rallina fasciata</i>		111	65	
Slaty-breasted Rail	<i>Gallirallus striatus</i>			7	
Water Rail	<i>Rallus aquaticus</i>		4	30	
Brown Crane	<i>Amaurornis akool</i>			1	
Black-tailed (Elwes's) Crane	<i>Amaurornis bicolor</i>			2	

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		474	126	4
Baillon's Crake	<i>Porzana pusilla</i>		2	14	
Ruddy-breasted Crake	<i>Porzana fusca</i>		1		
Watercock	<i>Gallinula cinerea</i>		310	299	1
Purple Swamphen	<i>Porphyrio porphyrio</i>		3,077	3,493	2,426
Common Moorhen	<i>Gallinula chloropus</i>		270	749	379
Common Coot	<i>Fulica atra</i>		19,359	918	1,787
unidentified rails	Rallidae spp.		111	54	
Masked Finfoot	<i>Heliopais personata</i>	VU	1		3
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		633	614	97
Bronze-winged Jacana	<i>Metopidius indicus</i>		313	168	46
unidentified jacanas	Jacanidae spp.			7	
Greater Painted Snipe	<i>Rostratula benghalensis</i>		6		
Ibisbill	<i>Ibidorhyncha struthersii</i>		19		
Black-winged Stilt	<i>Himantopus himantopus</i>		519	491	42
Great Thick-knee	<i>Burhinus (Esacus) recurvirostris</i>		3		14
Oriental Pratincole	<i>Glareola maldivarum</i>		15		31
Small Pratincole	<i>Glareola lactea</i>		1,160	2,920	3,767
Northern Lapwing	<i>Vanellus vanellus</i>		4	2	6
River Lapwing	<i>Vanellus duvaucelli</i>		40	78	58
Grey-headed Lapwing	<i>Vanellus cinereus</i>		243	43	50
Red-wattled Lapwing	<i>Vanellus indicus</i>		132	147	14
Pacific Golden Plover	<i>Pluvialis fulva</i>		85	2	198
Grey Plover	<i>Pluvialis squatarola</i>			3	23
Long-billed Plover	<i>Charadrius placidus</i>			8	9
Little Ringed Plover	<i>Charadrius dubius</i>		201	150	165
Kentish Plover	<i>Charadrius alexandrinus</i>		57	352	363
Lesser Sandplover	<i>Charadrius mongolus</i>		625	44	853
Greater Sandplover	<i>Charadrius leschenaultii</i>		432	77	
Eurasian Woodcock	<i>Scolopax rusticola</i>		1		1
Solitary Snipe	<i>Gallinago solitaria</i>		1		
Wood Snipe	<i>Gallinago nemoricola</i>	VU	1	1	
Pintail Snipe	<i>Gallinago stenura</i>		1	8	4
Swinhoe's Snipe	<i>Gallinago megala</i>				9
Common Snipe	<i>Gallinago gallinago</i>		9	157	26
unidentified snipe	<i>Gallinago</i> spp.		6	14	
Bar-tailed Godwit	<i>Limosa lapponica</i>		101		1
Whimbrel	<i>Numenius phaeopus</i>		6	2	20
Eurasian Curlew	<i>Numenius arquata</i>		73	61	8
unidentified curlews	<i>Numenius</i> spp.		20	100	
Spotted Redshank	<i>Tringa erythropus</i>		18	9	1
Common Redshank	<i>Tringa totanus</i>		168	28	131
Marsh Sandpiper	<i>Tringa stagnatilis</i>			476	4
Common Greenshank	<i>Tringa nebularia</i>		42	22	268
Green Sandpiper	<i>Tringa ochropus</i>		223	5	29
Wood Sandpiper	<i>Tringa glareola</i>		77	163	36
Terek Sandpiper	<i>Xenus cinereus</i>		16	3	40
Common Sandpiper	<i>Actitis hypoleucos</i>		142	233	186
Ruddy Turnstone	<i>Arenaria interpres</i>			60	11
Sanderling	<i>Calidris alba</i>				22
Red-necked Stint	<i>Calidris ruficollis</i>		5		12
Little Stint	<i>Calidris minuta</i>				5
Temminck's Stint	<i>Calidris temminckii</i>		74	36	91
Long-toed Stint	<i>Calidris subminuta</i>			2	12
Curlew Sandpiper	<i>Calidris ferruginea</i>		1	83	31
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		2		25
Ruff	<i>Philomachus pugnax</i>				3
unidentified <i>Calidris</i> sandpipers	<i>Calidris</i> spp.			2	
unidentified shorebirds	Charadrii spp.		1,031	242	46
Common (Mew) Gull	<i>Larus canus</i>		3	20	
Herring Gull	<i>Larus argentatus</i>		65	104	
Heuglin's Gull	<i>Larus heuglini</i>		4	4	6
Yellow-legged Gull	<i>Larus cachinnans</i>				1
Great Black-headed (Pallas's) Gull	<i>Larus ichthyæus</i>		622	160	209
Brown-headed Gull	<i>Larus brunnicephalus</i>		1,239	601	411
Common Black-headed Gull	<i>Larus ridibundus</i>		677	208	214
Slender-billed Gull	<i>Larus genei</i>		1		
unidentified gulls	Laridae spp.		41	60	
Gull-billed Tern	<i>Gelochelidon nilotica</i>		149		4
Caspian Tern	<i>Sterna caspia</i>		11		19
River Tern	<i>Sterna aurantia</i>		40	138	357
Common Tern	<i>Sterna hirundo</i>				1

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Tern	<i>Sterna albibrons</i>		73	460	33
Black-bellied Tern	<i>Sterna melanogaster</i>	NT	14		37
Whiskered Tern	<i>Chlidonias hybridus</i>		69	370	65
White-winged Black Tern	<i>Chlidonias leucopterus</i>		5		20
unidentified terns	Sternae spp.		325	5	
Indian Skimmer	<i>Rynchops albicollis</i>	VU		2	1
<b>Total Waterbirds</b>			<b>90,016</b>	<b>77,953</b>	<b>58,340</b>
Osprey	<i>Pandion haliaetus</i>		13	5	12
Black-shouldered Kite	<i>Elanus caeruleus</i>		9	1	10
Black Kite	<i>Milvus migrans</i>		81	74	20
Brahminy Kite	<i>Haliaeetus indus</i>		6	86	24
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>		1		
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT	6	3	10
Lesser Fish-eagle	<i>Ichthyophaga humilis</i>	NT	6	5	
Grey-headed Fish-eagle	<i>Ichthyophaga ichthyaetus</i>	NT	7	4	9
Hen Harrier	<i>Circus cyaneus</i>		8	2	7
Pied Harrier	<i>Circus melanoleucos</i>		19	16	8
Western Marsh Harrier	<i>Circus aeruginosus</i>		37	48	7
Eastern Marsh Harrier	<i>Circus spiliotus</i>		4	8	2
unidentified harriers	<i>Circus</i> spp.		17		
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	5	1	3
Stork-billed Kingfisher	<i>Halcyon capensis</i>		1	8	8
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		159	364	35
Black-capped Kingfisher	<i>Halcyon pileata</i>		19	38	1
Collared Kingfisher	<i>Todiramphus chloris</i>			1	
Blue-eared Kingfisher	<i>Alcedo meninting</i>		11	24	3
Blyth's Kingfisher	<i>Alcedo hercules</i>	NT		1	
Common Kingfisher	<i>Alcedo atthis</i>		53	117	23
Pied Kingfisher	<i>Ceryle rudis</i>		21	24	78
White Wagtail	<i>Motacilla alba</i>		64	108	355
Grey Wagtail	<i>Motacilla cinerea</i>		1	2	19
Citrine Wagtail	<i>Motacilla citreola</i>		18		
Yellow Wagtail	<i>Motacilla flava</i>		5	3	8

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.3.7 The Philippines

Seventy-two sites were surveyed during 2002–2004 (Figure 20 and Table 31). Total numbers of waterbirds recorded were 83,048 (48 sites), 52,844 (50 sites) and 113,412 (60 sites) in 2002, 2003 and 2004 respectively.

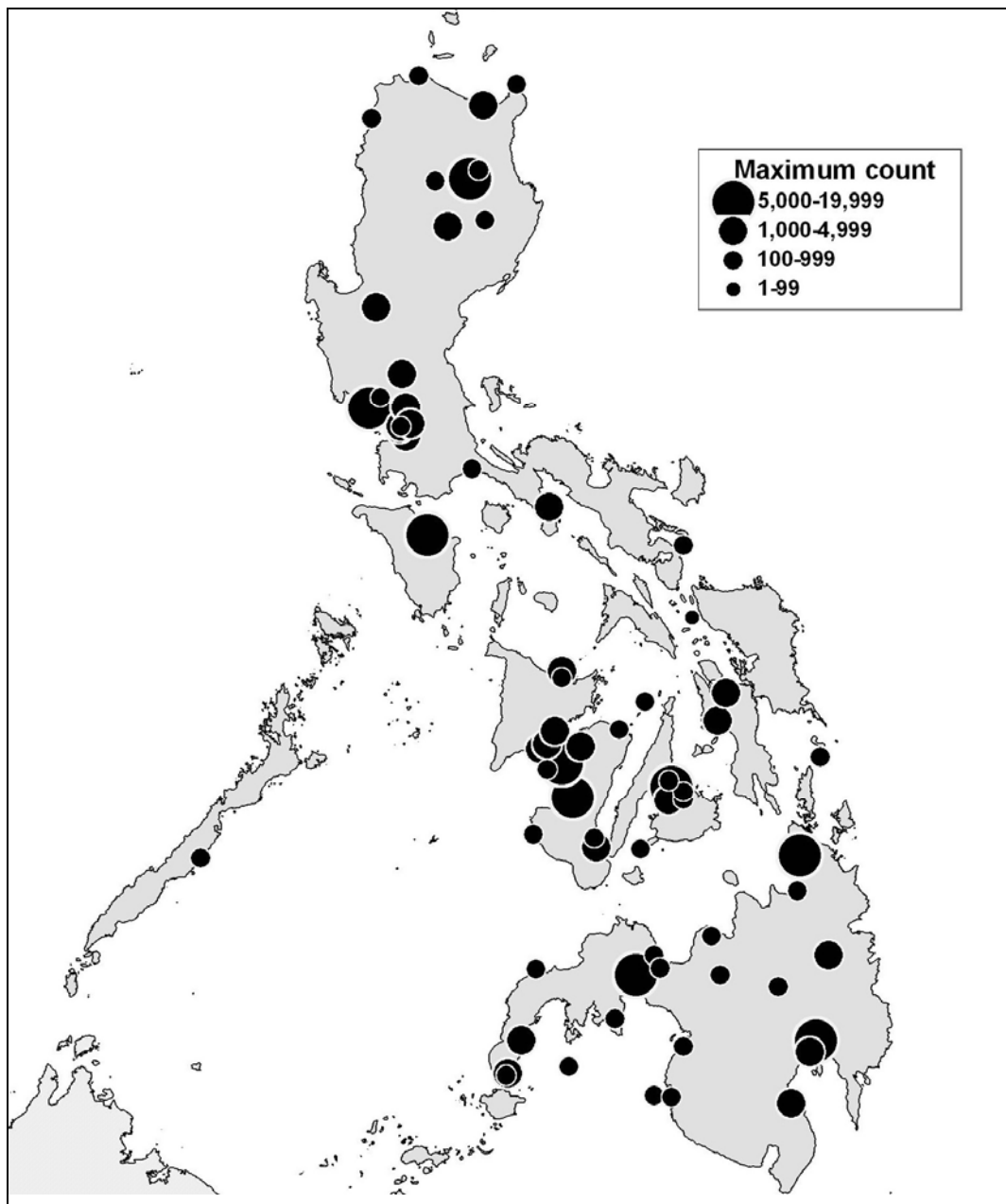
Three Ramsar sites (also IBAs), namely, Agusan Marsh Wildlife Sanctuary, Naujan Lake and Olango Island Wildlife Sanctuary, were surveyed. Naujan Lake and Olango are EAAF Migratory Network sites for Anatidae and shorebirds respectively. In addition, seven IBAs were surveyed, namely Buguey Lagoon, Candaba Swamp, Manila Bay, Pagbilao Bay, Ragay Gulf, Calituban and Tahong Island and Sagay Marine Reserve Area.

Although no site recorded more than 20,000 waterbirds, 22 sites recorded more than 1% of the biogeographic population of at least one waterbird species.

Eighty-four species of waterbirds, two raptor and two kingfisher species were recorded (Table 32). The most numerous species were Tufted Duck (14,853 in 2002), Little Egret (13,742 in 2004), Common Tern (10,174 in 2004), Wandering Whistling Duck (7,635 in 2002), Whiskered Tern (6,525 in 2004) and Cattle Egret (5,691 in 2004).

The globally threatened species recorded were the Vulnerable Chinese Egret (highest count 563 in 2004) and Philippine Duck (4,632 in 2004). Near Threatened species recorded were Asian Dowitcher (32 in 2002) and Black-tailed Godwit (816 in 2003).

**Figure 20: AWC site coverage and numerical distribution of waterbirds in the Philippines, 2002–2004**



Major threats to wetlands in the Philippines reported include:

- habitat loss and deterioration due to conversion of wetlands to other land uses with perceived higher economic value (such as aquaculture farms, resorts and reclamation areas) and diversion of rivers for irrigation and dam construction, which leads to drying up of river beds, modification of the habitat of riverine flora and fauna, and detrimental impacts on the movements of migratory fish;
- over-fishing and over-harvesting of forestry and freshwater products;
- climate change and pollution arising from domestic, industrial and agricultural sources that in turn lead to water-quality problems such as algal blooms and oxygen depletion;
- and introduction of exotic species and disease leading to the displacement of endemic and native species through predation, competition for food and other resources, and proliferation of invasive alien species due to the absence of natural predators (Carlo Custodio, pers. comm., Sept. 2006).

The census was coordinated by the Protected Areas and Wildlife Bureau, the Philippines.

**Table 31: Wetland sites surveyed during the AWC in the Philippines, 2002–2004**

Region	Site Name	Status <sup>1</sup>	2002	2003	2004
Luzon	Brgy. Baluarte				1,442
Luzon	Buguey Lagoon	I	312	3,566	1,319
Luzon	Candaba Swamp	I	1,190	575	1,061
Luzon	Carague Lake		46	429	385
Luzon	Coastal Area, Bacoor		616		
Luzon	Coastal Road Lagoons, NCR				3,652
Luzon	Diburiburan			112	
Luzon	Imus River Estuary, Alima Coastal Fishponds				1,215
Luzon	Iwahig Prison and Penal Farm				941
Luzon	Magat Dam		4,408	3,116	1,399
Luzon	Malasi Lake		6,557	5,857	6,806
Luzon	Manila Bay: Cavite Area				1,488
Luzon	Manila Bay: Puerto Rivas, Balanga	I	4,233	5,227	12,632
Luzon	Monterey Lake				595
Luzon	Naujan Lake	R, A, I	12,051		
Luzon	Novelita Salt Fishpond			924	2,333
Luzon	Pagbilao Bay	I	540	417	247
Luzon	Paitan Lake				1,420
Luzon	Palau Island		139	44	43
Luzon	Paoay Lake National Park				395
Luzon	Pata Lake				193
Luzon	Prieto-Diaz Wetland Area			410	315
Luzon	Ragay Gulf	I	1,293	291	733
Luzon	Subic Bay			407	
Luzon	Tambo Mudflats and Coastal Lagoons				1,055
Luzon	Tanza Coastal Wetland				4,054
Mindanao	Agusan Marsh Wildlife Sanctuary	R, I	2,838		4,970
Mindanao	Alubijid Wetland		838	783	510
Mindanao	Bonifacio Wetland		381	2,099	5,156
Mindanao	Brgy. Lapaz, Carmen			1,760	9,775
Mindanao	Crispin Betita Fishpond		32	132	86
Mindanao	Dinas Mangrove Forest			285	
Mindanao	Kumalauit Coastal Mudflats		11	153	55
Mindanao	Lake Mainit		10,476		5,815
Mindanao	Malalag Bay: Mudflats			1,092	4,532
Mindanao	Malalag Bay: Taguicon-Balasinon		1,655	1,766	2,733
Mindanao	Mampang Tugbungan Area		444	305	408
Mindanao	Maputi, Banaybanay			980	4,088
Mindanao	Masao				234
Mindanao	Mukas Mangrove Wetland			460	
Mindanao	Murcielagos Islands			622	250
Mindanao	Opol Wetland Area		44	104	78
Mindanao	Porfirio, Roman, Ferdie Santos Fishpond		253	190	99
Mindanao	Pulangi Wetland Area		673	827	72
Mindanao	Sa-Az River Mouth, San Ramon Seacoast		62	154	9
Mindanao	Sinacaban Mangrove		545	182	588
Mindanao	Talon-Talon Wetland		930	241	1,039
Mindanao	Vitali Wetland Area				1,526
Visayas	Bago, Villodolid		9,002	2,785	1,047
Visayas	Bantayan Island Wilderness Area		546	572	543
Visayas	Brgy. Baras Campoyong Mudflat		342	251	588
Visayas	Calituban and Tahong Island	I	68	276	134
Visayas	Carigara Bay Wetlands		1,075	488	507
Visayas	Cordova Wetland		1,998	1,681	3,384
Visayas	Dulungan-Cudian, Ivisan		688	566	
Visayas	Guimaras		686	552	341
Visayas	Himamaylan, Kabankalan and Ileig Wetland		6,604	1,115	3,134
Visayas	Lagbangan Lake		32		
Visayas	Magellan Bay Wetland		818		
Visayas	Mahaba Island		87	157	116
Visayas	Mandurriao, Leganes		1,996	943	1,183
Visayas	North Bais Bay		222		
Visayas	Olango Island Wildlife Sanctuary	R, S, I	1,161	6,296	9,415
Visayas	Ormoc Intertidal Flat		960	839	1,433
Visayas	Panglao Island		423	115	
Visayas	Roxas City, Cudian, Ivisan				1,409
Visayas	Sagay Marine Reserve Area	I	507	210	512
Visayas	Sampunong Bolo Bird Sanctuary		1,199	476	1,350
Visayas	San Jose, Hamtic, Sibalom, San Romogio		1,301	717	1,390
Visayas	Sipalay Hinoba-An Wetland		541	915	897

Region	Site Name	Status <sup>1</sup>	2002	2003	2004
Visayas	Tanjay Wetlands		1,033		
Visayas	Tiwi, Laste, Lanas		1,267	380	283

**Notes:**

Status<sup>1</sup>: R – Ramsar site, I – Wetland IBA identified by BirdLife International (2005), A – Anatidae site of the Migratory Waterbird Network in the East Asian – Australasian Flyway, S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway.

**Table 32: Waterbird species counts reported during the AWC in the Philippines, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		57		
Grey Heron	<i>Ardea cinerea</i>		185	42	438
Eastern White Egret	<i>Ardea modesta</i>		408	1,530	4,530
Intermediate Egret	<i>Ardea intermedia</i>		2,844	1,204	3,802
Great-billed Heron	<i>Ardea sumatrana</i>		3	28	6
Purple Heron	<i>Ardea purpurea</i>		432	59	132
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		3,426	2,459	5,691
Green-backed Heron	<i>Butorides striatus</i>		107	113	254
Chinese Pond Heron	<i>Ardeola bacchus</i>		217	198	635
Javan Pond Heron	<i>Ardeola speciosa</i>		3	9	177
unidentified pond herons	<i>Ardeola</i> spp.			5	2
Little Egret	<i>Egretta garzetta</i>		4,797	3,846	13,742
Chinese Egret	<i>Egretta eulophotes</i>	VU	176	367	563
Eastern Reef Heron	<i>Egretta sacra</i>		56	79	238
unidentified egrets	<i>Egretta</i> spp.		146	192	327
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		145	2	28
Rufous Night-heron	<i>Nycticorax caledonicus</i>		1	327	1
Eurasian Bittern	<i>Botaurus stellaris</i>		1	1	
Yellow Bittern	<i>Ixobrychus sinensis</i>		24	9	46
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		37	6	15
Black Bittern	<i>Ixobrychus flavicollis</i>		42	4	7
unidentified Ardeidae	Ardeidae spp.		8,092	5	842
Wandering Whistling Duck	<i>Dendrocygna arcuata</i>		7,635	1,557	4,094
Eurasian Wigeon	<i>Anas penelope</i>			205	46
Philippine Duck	<i>Anas luzonica</i>	VU	3,621	2,334	4,632
Northern Pintail	<i>Anas acuta</i>		26	587	
Garganey	<i>Anas querquedula</i>		100	816	85
Northern Shoveler	<i>Anas clypeata</i>		2,386	1,842	2,326
Tufted Duck	<i>Aythya fuligula</i>		14,853	3,705	5,371
unidentified ducks	Anatinae spp.		5,076	19	603
Barred Rail	<i>Gallirallus torquatus</i>		36	12	359
Buff-banded Rail	<i>Gallirallus philippensis</i>		45	15	98
Slaty-breasted Rail	<i>Gallirallus striatus</i>		4		
Water Rail	<i>Rallus aquaticus</i>		42	6	4
White-breasted Waterhen	<i>Amauornis phoenicurus</i>		458	3	1
Baillon's Crake	<i>Porzana pusilla</i>			3	
Ruddy-breasted Crake	<i>Porzana fusca</i>		23	1	3
White-browed Crake	<i>Porzana cinereus</i>		3	2	1
Watercock	<i>Gallinago cinerea</i>		21		51
Purple Swamphen	<i>Porphyrio porphyrio</i>			1	2
Common Moorhen	<i>Gallinula chloropus</i>		242	1	51
Common Coot	<i>Fulica atra</i>		11		2
Greater Painted Snipe	<i>Rostratula benghalensis</i>			1	2
Black-winged Stilt	<i>Himantopus himantopus</i>		764	1,041	932
unidentified lapwings	<i>Vanellus</i> spp.			100	
Pacific Golden Plover	<i>Pluvialis fulva</i>		783	487	455
Grey Plover	<i>Pluvialis squatarola</i>		1,205	1,694	1,104
Little Ringed Plover	<i>Charadrius dubius</i>		109	275	462
Kentish Plover	<i>Charadrius alexandrinus</i>		789	1,148	3,050
Lesser Sandplover	<i>Charadrius mongolus</i>		580	2,799	2,461
Greater Sandplover	<i>Charadrius leschenaultii</i>		169	590	450
Oriental Plover	<i>Charadrius veredus</i>			6	
unidentified <i>Charadrius</i> plovers	<i>Charadrius</i> spp.		813	4,093	2,576
Swinhoe's Snipe	<i>Gallinago megala</i>				2
Common Snipe	<i>Gallinago gallinago</i>		43	32	
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT	32	17	23
Black-tailed Godwit	<i>Limosa limosa</i>	NT	34	816	137
Bar-tailed Godwit	<i>Limosa lapponica</i>		76	330	526
unidentified godwits	<i>Limosa</i> spp.		61	57	
Little Curlew	<i>Numenius minutus</i>		110	565	624
Whimbrel	<i>Numenius phaeopus</i>		565	428	1,129

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Eurasian Curlew	<i>Numenius arquata</i>		38	31	56
unidentified curlews	<i>Numenius</i> spp.		33	65	364
Common Redshank	<i>Tringa totanus</i>		445	1,553	1,614
Marsh Sandpiper	<i>Tringa stagnatilis</i>		527	1,486	1,675
Common Greenshank	<i>Tringa nebularia</i>		427	679	1,832
Green Sandpiper	<i>Tringa ochropus</i>		56	81	
Wood Sandpiper	<i>Tringa glareola</i>		261	345	1,267
unidentified <i>Tringa</i> sandpipers	<i>Tringa</i> spp.		2,759	2,350	3,644
Terek Sandpiper	<i>Xenus cinereus</i>		96	293	630
Common Sandpiper	<i>Actitis hypoleucos</i>		232	341	239
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		38	98	125
Ruddy Turnstone	<i>Arenaria interpres</i>		169	210	127
Red Knot	<i>Calidris canutus</i>		150	5	1
Great Knot	<i>Calidris tenuirostris</i>		318	546	1,739
Sanderling	<i>Calidris alba</i>		7	98	
Red-necked Stint	<i>Calidris ruficollis</i>		2,023	1,013	3,256
Temminck's Stint	<i>Calidris temminckii</i>		10	72	464
Long-toed Stint	<i>Calidris subminuta</i>		1		88
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>				29
Curlew Sandpiper	<i>Calidris ferruginea</i>		10	393	419
Dunlin	<i>Calidris alpina</i>				325
unidentified <i>Calidris</i> sandpipers	<i>Calidris</i> spp.		3	363	75
unidentified shorebirds	Charadrii spp.		5,172		3,526
Herring Gull	<i>Larus argentatus</i>		169	551	
Brown-headed Gull	<i>Larus brunnicephalus</i>				860
Common Black-headed Gull	<i>Larus ridibundus</i>		267	651	463
unidentified gulls	Laridae spp.		58		
Gull-billed Tern	<i>Gelochelidon nilotica</i>		4	210	159
Caspian Tern	<i>Sterna caspia</i>		16	45	
(Greater) Crested Tern	<i>Sterna bergii</i>			12	
Black-naped Tern	<i>Sterna sumatrana</i>		10	61	4,244
Common Tern	<i>Sterna hirundo</i>		2,127	4,138	10,174
Little Tern	<i>Sterna albifrons</i>		300	821	2,941
Whiskered Tern	<i>Chlidonias hybridus</i>		2,351	210	6,525
White-winged Black Tern	<i>Chlidonias leucopterus</i>		141		513
unidentified terns	Sternae spp.		2,916	50	2,900
<b>Total Waterbirds</b>			<b>83,048</b>	<b>52,844</b>	<b>113,412</b>
Brahminy Kite	<i>Haliastur indus</i>		5		
Eastern Marsh Harrier	<i>Circus spilintus</i>		1		
Collared Kingfisher	<i>Todiramphus chloris</i>		53		
Common Kingfisher	<i>Alcedo atthis</i>		16		

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.3.8 Singapore

Ten sites were surveyed at least once in 2002–2004 (Figure 21 and Table 33). Waterbird totals recorded were 1,235 (1 site), 3,647 (9 sites) and 2,099 (9 sites) in 2002, 2003 and 2004 respectively. Two IBAs (Kranji and Pulau Ubin) and one EAAF Migratory Waterbird Network site for shorebirds (Sungai Buloh Bird Sanctuary) were surveyed.

Forty waterbird species and four raptor species were recorded in the three years (Table 34). The most numerous species was Pacific Golden Plover, with 1,383 individuals recorded in 2003. The only globally threatened species recorded was the Vulnerable Chinese Egret (1 in 2004), and the only Near Threatened species was Malaysian Plover (8 in 2003).

Information on threats to the wetlands and waterbirds was not provided.

The count was coordinated by the Singapore Nature Society. In 2002 the data were provided by the Sungai Buloh Bird Sanctuary; the counts made at the sites in 2003 and 2004 were much lower as they were made at low tide, however Sungai Buloh is mainly a high-tide roost site for shorebirds and other waterbirds.



Figure 21: AWC site coverage and numerical distribution of waterbirds in Singapore, 2002–2004

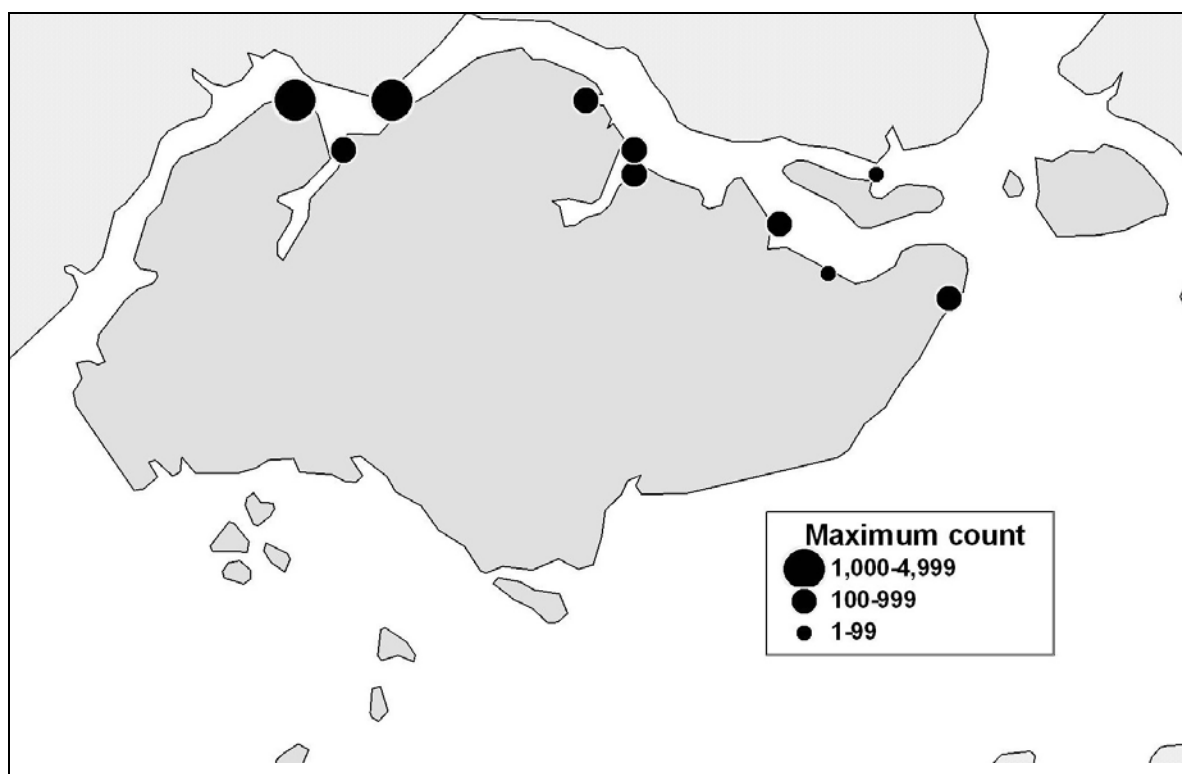


Table 33: Wetland sites surveyed during the AWC in Singapore, 2002–2004

Site Name	Status <sup>1</sup>	2002	2003	2004
Changi Coast (Tanah Merah)			710	150
Khatib Bongsu			281	191
Kranji Dam (Reservoir)	I		108	38
Lorong Halus (Sungei Serangoon Estuary)			65	114
Mandai Mudflat (Sungei Mandai and S. Pangsua Mudflats)			1,732	737
Pasir Ras Mangroves and Mudflats			23	24
Pulau Ubin	I		4	29
Sungei Buloh Bird Sanctuary	S	1,235	432	732
Sungei Selatar Coast			304	
Sungei Seletar Reservoir				99

**Note:**

Status<sup>1</sup>: I – Wetland IBA identified by BirdLife International (2005), S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway.

Table 34: Waterbird species counts reported during the AWC in Singapore, 2002–2004

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>			3	
Grey Heron	<i>Ardea cinerea</i>		2	110	106
Eastern White Egret	<i>Ardea modesta</i>		19	37	20
Intermediate Egret	<i>Ardea intermedia</i>			4	5
Purple Heron	<i>Ardea purpurea</i>		28	9	19
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>			2	21
Green-backed Heron	<i>Butorides striatus</i>		3	79	43
Chinese Pond Heron	<i>Ardeola bacchus</i>		1		1
Little Egret	<i>Egretta garzetta</i>		154	159	318
Chinese Egret	<i>Egretta eulophotes</i>	VU			1
Eastern Reef Heron	<i>Egretta sacra</i>			4	3
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>			1	
Yellow Bittern	<i>Ixobrychus sinensis</i>			11	5
Black Bittern	<i>Ixobrychus flavicollis</i>			3	1
Lesser Whistling Duck	<i>Dendrocygna javanica</i>			2	
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		8	41	58

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
White-browed Crake	<i>Porzana cinereus</i>			1	
Common Moorhen	<i>Gallinula chloropus</i>		2	7	2
Pacific Golden Plover	<i>Pluvialis fulva</i>		344	1,383	497
Grey Plover	<i>Pluvialis squatarola</i>			41	
Little Ringed Plover	<i>Charadrius dubius</i>			9	10
Kentish Plover	<i>Charadrius alexandrinus</i>				1
Malaysian Plover	<i>Charadrius peronii</i>	NT		8	3
Lesser Sandplover	<i>Charadrius mongolus</i>			161	40
Greater Sandplover	<i>Charadrius leschenaultii</i>			2	20
Bar-tailed Godwit	<i>Limosa lapponica</i>				5
Whimbrel	<i>Numenius phaeopus</i>		159	240	107
Eurasian Curlew	<i>Numenius arquata</i>				1
Common Redshank	<i>Tringa totanus</i>		12	336	282
Marsh Sandpiper	<i>Tringa stagnatilis</i>		360	215	207
Common Greenshank	<i>Tringa nebularia</i>		122	267	209
Wood Sandpiper	<i>Tringa glareola</i>			2	
Terek Sandpiper	<i>Xenus cinereus</i>		2	23	2
Common Sandpiper	<i>Actitis hypoleucos</i>			154	63
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		1	2	
Ruddy Turnstone	<i>Arenaria interpres</i>		5	4	1
Sanderling	<i>Calidris alba</i>			8	
Red-necked Stint	<i>Calidris ruficollis</i>			310	41
Curlew Sandpiper	<i>Calidris ferruginea</i>		13		
unidentified gulls	Laridae spp.				1
(Greater) Crested Tern	<i>Sterna bergii</i>			3	6
unidentified terns	Sterninae spp.			6	
<b>Total Waterbirds</b>			<b>1,235</b>	<b>3,647</b>	<b>2,099</b>
Osprey	<i>Pandion haliaetus</i>			2	2
Black-shouldered Kite	<i>Elanus caeruleus</i>			1	
Brahminy Kite	<i>Haliastur Indus</i>			2	7
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>			7	6

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.3.9 Thailand

Forty-nine sites were surveyed at least once in all three years (Figure 22 and Table 35). Waterbird totals recorded were 24,805 (9 sites), 63,566 (27 sites) and 216,515 (21 sites) in 2002, 2003 and 2004 respectively.

Three Ramsar sites (also IBAs), namely Nong Bong Khai, Krabi Mangroves (also an EAAF Migratory Waterbird Network site for shorebirds) and Thale Noi Non-Hunting Area were surveyed. A further five IBAs, namely Inner Gulf (including 6 sub-sites), Bung Boraphet, Ko Pratong, Sanambin Non-Hunting Area and Thung Tha Laad, were also surveyed.

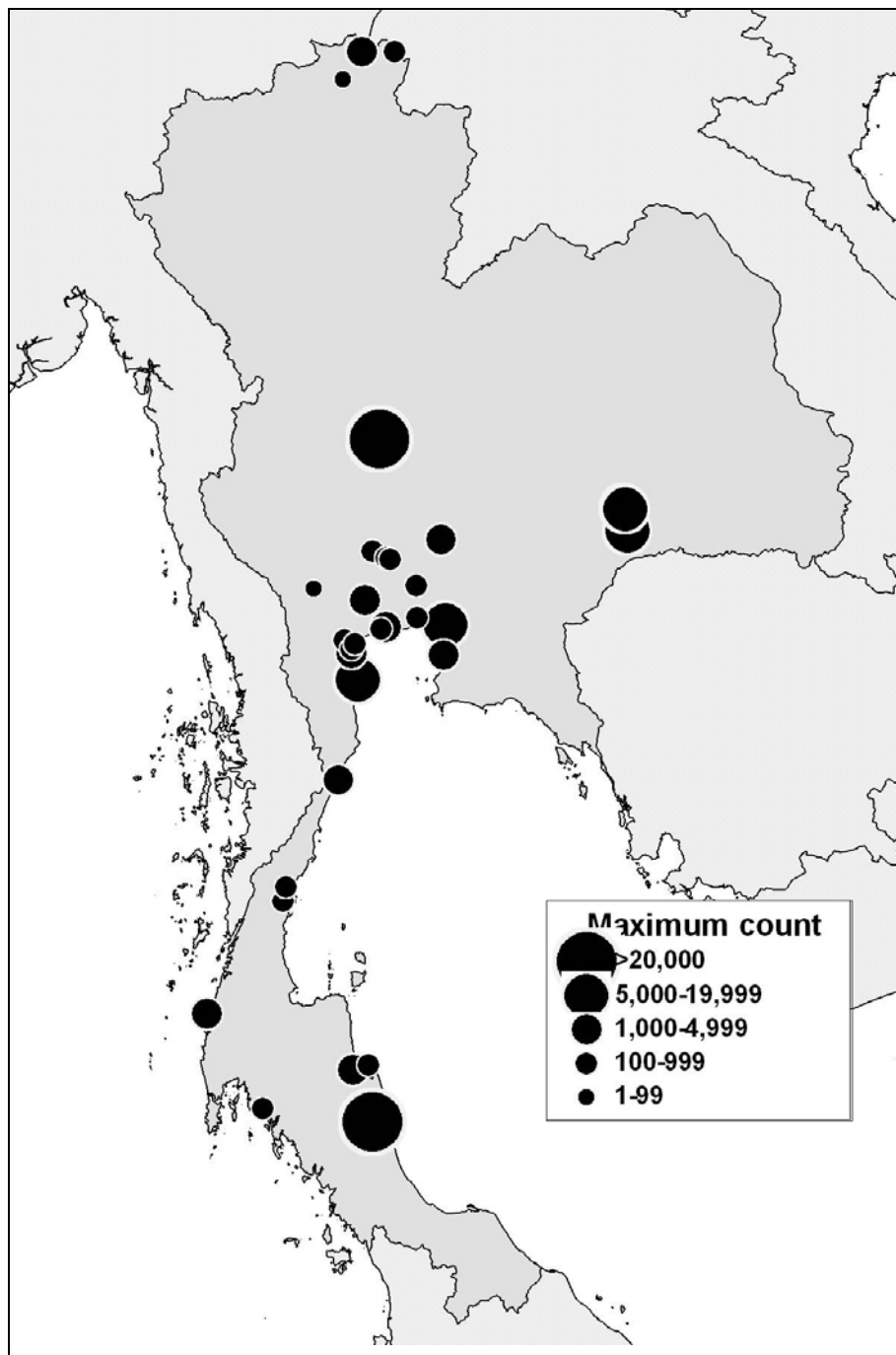
The sites that recorded more than 20,000 waterbirds were Bung Boraphet (154,432 in 2004) and Thale Noi Non-Hunting Area (21,318 in 2004). The great diversity and abundance of waterbirds at Bung Boraphet make it an ideal candidate for designation as a Ramsar site. A total of eight sites recorded more than 1% of the biogeographic population of at least one waterbird species.

A total of 106 waterbird species were recorded in the three years, together with one raptor and two kingfisher species (Table 36). The most numerous species recorded were Lesser Whistling Duck (98,585 in 2004), Asian Openbill (52,790 in 2004), Brown-headed Gull (10,023 in 2003), Cotton Pygmy Goose (9,827 in 2004), Cattle Egret (6,515 in 2004), Black-crowned Night-heron (5,710 in 2003), Little Cormorant (5,471 in 2004) and Garganey (5,106 in 2004).

The highest count totals of six globally threatened species were as follows: Endangered: Black-faced Spoonbill (3 in 2003), Nordmann's Greenshank (35 in 2004) and Spoon-billed Sandpiper (4 in 2004); Vulnerable: Spot-billed Pelican (3 in 2004), Lesser Adjutant (10 in 2003) and Baer's Pochard (3 in 2002).

Highest count totals of five Near Threatened species were: Oriental Darter (3 in 2004), Painted Stork (35 in 2003), Ferruginous Duck (46 in 2004), Malaysian Plover (4 in 2003) and Black-tailed Godwit (276 in 2003).

**Figure 22: AWC site coverage and numerical distribution of waterbirds in Thailand, 2002–2004**



The major threats to the wetlands included urbanisation and industrialisation (such as road development in the Inner Gulf of Thailand); spread of inland brackishwater aquaculture (Lower Central Plains); road developments (Bung Khong Long, Thale Noi Ramsar sites); conversion of traditional prawn ponds and salt pans to intensive aquaculture ponds for non-sustainable rearing of crabs (larvae imported from Myanmar); soil excavation and landfill (widespread in Inner Gulf and Lower Central Plains) and erosion control measures (construction of concrete sea-wall barriers – Inner Gulf)

Hunting of waterbirds is little documented but widespread. Night-netting and dazzling of Watercocks and White-breasted Waterhens was widespread in the late autumn (October–November); presumably these birds are northern migrants (Philip Round, pers. comm., Aug. 2006).

The counts were coordinated jointly by the Bird Conservation Society of Thailand.

**Table 35: Wetland sites surveyed during the AWC in Thailand, 2002–2004**

Province	Site Name	Status <sup>1</sup>	2002	2003	2004
Ayutthaya	Ban Kaew Fa			151	
Ayutthaya	Tmk Fishing Land			585	
Buriram	Ban Paisan		23		
Buriram	Bang Khok Anguan		1,872		
Buriram	Huai Chorakhe Mak (Jorakemak) Nha				6,719
Buriram	Huai Sawai Reservoir			307	
Buriram	Huai Talat Non-Hunting Area		13,628	15,831	998
Buriram	Nong Phai		520		
Buriram	Nong Preu		1,900		
Buriram	Nong Sanoh		72		
Buriram	Nong Thanon Hak		95		
Buriram	Sanambin Non-Hunting Area	I	3,248	11,794	11,306
Si Saket	Nong Lahan				1,140
Chiang Rai	Mekong River (Chiang Saen to Chiang Khong)				435
Chiang Rai	Nong Bong Khai	R, pl	3,447		2,484
Chiang Rai	Nong Bong Khai: Jor Tong Dam				1,574
Chiang Rai	Sri Yonok Temple Pond				7
Chonburi	Bang Pra Non-Hunting Area				1,114
Chonburi	Klong Dom Ru				917
Chumphon	Ao (Bay) Thung Kha-Sawi				414
Chumphon	Nong Yai, Ban Rong Noi, Pak Nam Chumphon			842	601
Kanchanaburi	Khvae-Noi River			6	
Krabi	Pak Nam (Krabi Mangroves, River Mouth)	pR, pl, S		573	
Lampang	Huai Ding, Rong Moh, Bo Baeb Reservoirs			31	
Nakhon Pathom	Kasetsart University (Kampaengsaen)			197	2,153
Nakhon Sawan	Bung Boraphet	I			154,432
Nakhon Si Thammarat	Laem Talumphuk			781	
Nakhon Si Thammarat	Thung Tha Laad	I		1,151	
Pathum Thani	Rangsit Marshes			220	
Pattalung	Thale Noi Non-Hunting Area	R, I			21,318
Petchaburi	Ban Bang Tabun			167	
Petchaburi	Ban Tha			854	
Petchaburi	Pak Thale and Laem Phak Bia, Inner Gulf	pl			6,443
Petchaburi	Wat Khao Takhrao, Inner Gulf	pl		4,747	
Phang Nga	Ko Pratong	I		1,289	
Prachinburi	Kabinchalermratch Park				786
Prachuap Khiri Khan	Wa Ko Educational Park			2,202	
Samut Prakan	Khlong Bang Kaew, Km 1.5, Bang Na Trat Road			122	
Samut Prakan	Bang Pu, Inner Gulf	pl		16,195	
Samut Sakhon	Khok Kham, Inner Gulf	pl		2,263	1,571
Samut Sakhon	Mangrove Education Center, Inner Gulf	pl		220	
Samut Songkhram	Pak Tho			605	
Samut Songkhran	Klong Khon, Inner Gulf	pl		178	
Saraburi	Saraburi			1,011	
Sra Kaew	Phu Ngeun Dam				63
Sra Kaew	Pra Prong Reservoir				1,909
Sra Kaew	Thale Klong Hat				139
Supanburi	Bang Pla Ma			500	
Trat	Nong Samet Irrigation Proj. Reservoir			746	

**Notes:**

Status<sup>1</sup>: R – Ramsar site, pR – part of a Ramsar site, I – Wetland IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway.

**Table 36: Waterbird species counts reported during the AWC in Thailand, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		35	135	1,735
Great Crested Grebe	<i>Podiceps cristatus</i>				4
Spot-billed Pelican	<i>Pelecanus philippensis</i>	VU			3
Great Cormorant	<i>Phalacrocorax carbo</i>		1		
Indian Cormorant	<i>Phalacrocorax fuscicollis</i>			38	1
Little Cormorant	<i>Phalacrocorax niger</i>		4	3,899	5,471
Oriental Darter	<i>Anhinga melanogaster</i>	NT			3
Grey Heron	<i>Ardea cinerea</i>		104	542	538
Eastern White Egret	<i>Ardea modesta</i>		319	920	3,425
Intermediate Egret	<i>Ardea intermedia</i>		380	305	4,094
Purple Heron	<i>Ardea purpurea</i>		35	157	298

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		3,483	3,224	6,515
Green-backed Heron	<i>Butorides striatus</i>			24	6
Chinese Pond Heron	<i>Ardeola bacchus</i>		475	1,444	2,000
unidentified pond herons	<i>Ardeola</i> spp.			639	150
Little Egret	<i>Egretta garzetta</i>		947	966	4,276
Eastern Reef Heron	<i>Egretta sacra</i>			24	
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>			5,710	1,239
Yellow Bittern	<i>Ixobrychus sinensis</i>			19	33
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		4	12	17
Black Bittern	<i>Ixobrychus flavicollis</i>				3
unidentified Ardeidae	Ardeidae spp.				1,230
Painted Stork	<i>Mycteria leucocephala</i>	NT		35	33
Asian Openbill	<i>Anastomus oscitans</i>		5	139	52,790
Black Stork	<i>Ciconia nigra</i>				1
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU		10	
unidentified storks	Ciconiidae spp.				1
Glossy Ibis	<i>Plegadis falcinellus</i>				20
Black-faced Spoonbill	<i>Platalea minor</i>	EN		3	2
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		16,436	24,741	98,585
Ruddy Shelduck	<i>Tadorna ferruginea</i>				4
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		213	187	9,827
Mandarin Duck	<i>Aix galericulata</i>				2
Eurasian Wigeon	<i>Anas penelope</i>				20
Gadwall	<i>Anas strepera</i>				2
Common Teal	<i>Anas crecca</i>		100		96
Mallard	<i>Anas platyrhynchos</i>				1
Spot-billed Duck	<i>Anas poecilorhyncha</i>				400
Northern Pintail	<i>Anas acuta</i>		86	188	760
Garganey	<i>Anas querquedula</i>		285	755	5,106
Northern Shoveler	<i>Anas clypeata</i>			1	467
Baer's Pochard	<i>Aythya baeri</i>	VU	3		2
Ferruginous Duck	<i>Aythya nyroca</i>	NT	3		46
Tufted Duck	<i>Aythya fuligula</i>		3	2	22
Slaty-breasted Rail	<i>Gallirallus striatus</i>				3
Water Rail	<i>Rallus aquaticus</i>				2
White-breasted Waterhen	<i>Amauormis phoenicurus</i>		3	45	106
Ruddy-breasted Crake	<i>Porzana fusca</i>			18	8
White-browed Crake	<i>Porzana cinereus</i>				33
Watercock	<i>Gallinago cinerea</i>			11	15
Purple Swamphen	<i>Porphyrio porphyrio</i>		508	1,897	1,571
Common Moorhen	<i>Gallinula chloropus</i>		81	121	581
Common Coot	<i>Fulica atra</i>		115	58	228
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		111	119	462
Bronze-winged Jacana	<i>Metopidius indicus</i>		25	110	185
Greater Painted Snipe	<i>Rostratula benghalensis</i>		5	7	44
Black-winged Stilt	<i>Himantopus himantopus</i>		48	495	2,126
Oriental Pratincole	<i>Glareola maldivarum</i>			2	358
Small Pratincole	<i>Glareola lactea</i>				200
Grey-headed Lapwing	<i>Vanellus cinereus</i>			45	84
Red-wattled Lapwing	<i>Vanellus indicus</i>			78	288
Pacific Golden Plover	<i>Pluvialis fulva</i>		51	481	175
Grey Plover	<i>Pluvialis squatarola</i>			10	121
Long-billed Plover	<i>Charadrius placidus</i>				1
Little Ringed Plover	<i>Charadrius dubius</i>		37	162	216
Kentish Plover	<i>Charadrius alexandrinus</i>			197	128
Malaysian Plover	<i>Charadrius peronii</i>	NT		4	
Lesser Sandplover	<i>Charadrius mongolus</i>			1,672	2,320
Greater Sandplover	<i>Charadrius leschenaultii</i>			80	
unidentified Charadrius plovers	Charadrius spp.			50	
Pintail Snipe	<i>Gallinago stenura</i>		13	32	85
Common Snipe	<i>Gallinago gallinago</i>		270	71	176
unidentified snipe	Gallinago spp.				32
Black-tailed Godwit	<i>Limosa limosa</i>	NT	23	276	107
Bar-tailed Godwit	<i>Limosa lapponica</i>			150	1
Whimbrel	<i>Numenius phaeopus</i>			60	19
Eurasian Curlew	<i>Numenius arquata</i>			16	226
Spotted Redshank	<i>Tringa erythropus</i>		90	146	419
Common Redshank	<i>Tringa totanus</i>			35	996
Marsh Sandpiper	<i>Tringa stagnatilis</i>		25	439	910
Common Greenshank	<i>Tringa nebularia</i>		43	89	106
Nordmann's Greenshank	<i>Tringa guttifer</i>	EN		7	35
Green Sandpiper	<i>Tringa ochropus</i>			1	205

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Wood Sandpiper	<i>Tringa glareola</i>		422	269	590
Terek Sandpiper	<i>Xenus cinereus</i>			202	3
Common Sandpiper	<i>Actitis hypoleucos</i>		12	370	197
Ruddy Turnstone	<i>Arenaria interpres</i>			15	
Red Knot	<i>Calidris canutus</i>				4
Great Knot	<i>Calidris tenuirostris</i>			85	107
Sanderling	<i>Calidris alba</i>			6	
Red-necked Stint	<i>Calidris ruficollis</i>			174	281
Temminck's Stint	<i>Calidris temminckii</i>		2	70	112
Long-toed Stint	<i>Calidris subminuta</i>			132	182
Curlew Sandpiper	<i>Calidris ferruginea</i>			32	505
Spoon-billed Sandpiper	<i>Eurynorhynchus pygmaeus</i>	EN		3	4
Broad-billed Sandpiper	<i>Limicola falcinellus</i>			34	160
Ruff	<i>Philomachus pugnax</i>				3
unidentified shorebirds	Charadrii spp.			150	845
Heuglin's Gull	<i>Larus heuglini</i>				29
Yellow-legged Gull	<i>Larus cachinnans</i>				1
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>				6
Brown-headed Gull	<i>Larus brunnicephalus</i>			10,023	630
Common Black-headed Gull	<i>Larus ridibundus</i>			50	
Slender-billed Gull	<i>Larus genei</i>			4	
Gull-billed Tern	<i>Gelochelidon nilotica</i>			1	52
Caspian Tern	<i>Sterna caspia</i>			68	101
Lesser Crested Tern	<i>Sterna bengalensis</i>			35	2
(Greater) Crested Tern	<i>Sterna bergii</i>			2	4
Common Tern	<i>Sterna hirundo</i>			263	186
Little Tern	<i>Sterna albifrons</i>			145	28
Whiskered Tern	<i>Chlidonias hybridus</i>			300	254
White-winged Black Tern	<i>Chlidonias leucopterus</i>			30	429
<b>Total Waterbirds</b>			<b>24,805</b>	<b>63,566</b>	<b>216,515</b>
Osprey	<i>Pandion haliaetus</i>				8
White-throated Kingfisher	<i>Halcyon smyrnensis</i>			1	
Black-capped Kingfisher	<i>Halcyon pileata</i>			1	

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.3.10 Vietnam

Seventeen sites, including two Ramsar sites, six IBAs and two MAB Biosphere Reserves, were recorded in the 3-year period (Figure 23 and Table 37). Waterbird totals recorded were 19,760 (16 sites), 2,447 (4 sites) and 4,692 (4 sites) respectively. Detailed information is included in the various BirdLife International reports, including Le Manh Hung *et al.* (2002a,b).

Although no sites recorded more than 20,000 waterbirds, two sites, namely Tra O Lagoon and Xuan Thuy Ramsar site, each recorded more than 1% of the biogeographic population of one waterbird species.

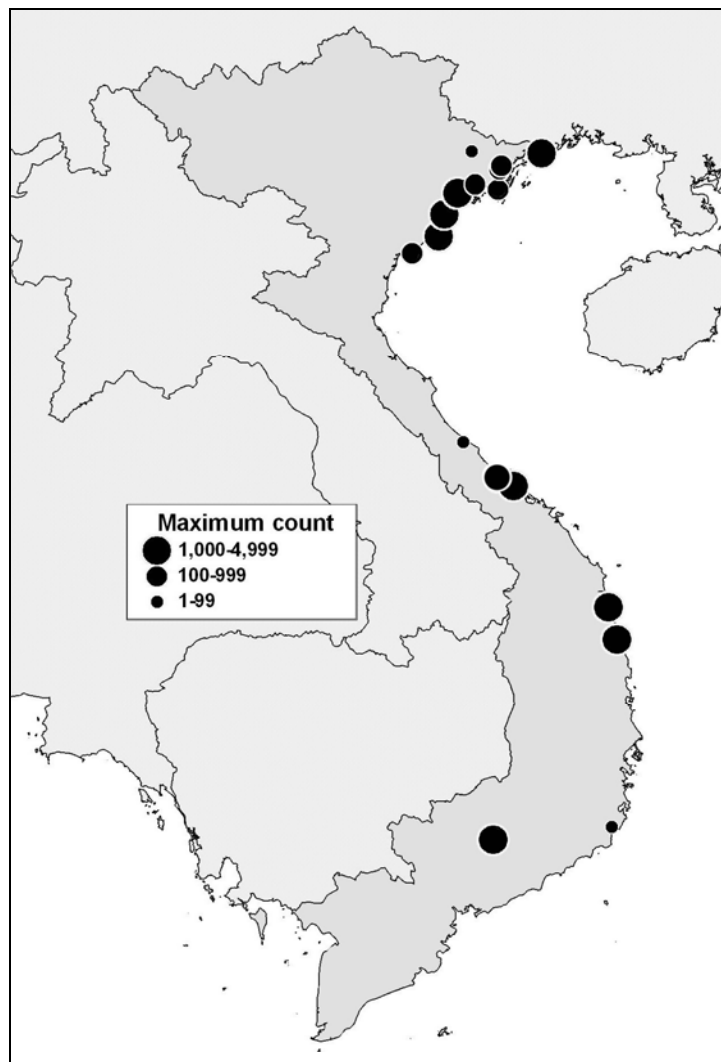
Totals of 74 waterbird, two raptor and three kingfisher species were recorded (Table 38). The highest species counts were all made in 2002: they were Little Egret (4,410), Common Tern (2,000), Common Black-headed Gull (1,411), Eurasian Wigeon (1,400) and Kentish Plover (1,240).

The globally threatened species recorded were: Endangered: Black-faced Spoonbill (highest count of 65 individuals in 2003); Vulnerable: Chinese Egret (1 in 2002), Lesser Adjutant (5 in 2002) and Saunders's Gull (9 in 2002). Near Threatened species recorded were: Oriental Darter (4 in 2003), Painted Stork (50 in 2002), Black-headed Ibis (1 in 2004), Falcated Duck (9 in 2002) and Black-tailed Godwit (109 in 2004).

Threats to wetlands in Vietnam included loss of wetland habitat due to canalisation, drainage and conversion to agriculture and urbanisation; changes in water regimes in catchments due to construction of dams, dikes and water reservoirs; changes in water quality due to pollutants, sulphate oxidation and poorly controlled upstream land use; changes in wetland biodiversity due to the over-exploitation of wetland resources (including fish and other aquatic species, birds, trees and plants). Hence wetland-dependent wildlife is being threatened by habitat loss, hunting and disturbance, and disease (Nguyen Duc Tu, pers. comm., Sept. 2006).

The census was coordinated by the BirdLife International – Vietnam Office.

**Figure 23: AWC site coverage and numerical distribution of waterbirds in Vietnam, 2002–2004**



**Table 37: Wetland sites surveyed during the AWC in Vietnam, 2002–2004**

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Binh Dinh	Tra O Lagoon		H	3,670		
Dong Nai	Cat-Tien National Park (Bau Sau)	R, I, M	G	4,020		
Nam Dinh	Nghia Hung District	I	6FH		155	294
Nam Dinh	Xuan Thuy Ramsar Site	R, I, pM	36FHI	1,770	783	1,658
Ninh Thuan	Dam Nai Lagoon		H	93		
Quang Binh	Le Thuy District		F	11		
Quang Ngai	Lam Binh Lake		G	2,620		
Quang Ninh	Ba Che Estuary		FH	144		
Quang Ninh	Bac Cua Luc		AEH	136		
Quang Ninh	Ha Coi Town		H	89		
Quang Ninh	Ha Nam Island	I	4ACDFG	1,585		1,398
Quang Ninh	Tien Yen Estuary		G	125		
Quang Ninh	Tra Co Peninsula	I	L	1,073		
Quang Ninh	Van Don Island		4ACDFGL	7	331	
Thai Binh	Thai Thuy District	I, pM	34FHI	1,678	1,178	1,376
Thua Thien Hue	Quang Dien District		FH	1,794		
Thua Thien Hue	Tam Giang – Cau Hai Lagoon		FH	1,008		

**Notes:**

Status<sup>1</sup>: R – Ramsar site, I – Wetland IBA identified by BirdLife International (2005), M – MAB Biosphere Reserve, pM – part of MAB Biosphere Reserve.

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

Table 38: Waterbird species counts reported during the AWC in Vietnam, 2002–2004

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		58	22	17
Great Cormorant	<i>Phalacrocorax carbo</i>		79	140	81
Oriental Darter	<i>Anhinga melanogaster</i>	NT	4		
Grey Heron	<i>Ardea cinerea</i>		219	146	366
Eastern White Egret	<i>Ardea modesta</i>		285	315	542
Intermediate Egret	<i>Ardea intermedia</i>		260		24
Purple Heron	<i>Ardea purpurea</i>		65		
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		456		
Green-backed Heron	<i>Butorides striatus</i>		18		
Chinese Pond Heron	<i>Ardeola bacchus</i>		856	77	134
Little Egret	<i>Egretta garzetta</i>		4,410	644	1,367
Chinese Egret	<i>Egretta eulophotes</i>	VU	1		
Eastern Reef Heron	<i>Egretta sacra</i>		2		
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		724	1	
Eurasian Bittern	<i>Botaurus stellaris</i>			1	1
Yellow Bittern	<i>Ixobrychus sinensis</i>		19		
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		15		
Painted Stork	<i>Mycteria leucocephala</i>	NT	50		
Woolly-necked Stork	<i>Ciconia episcopus</i>		9		
Lesser Adjutant	<i>Leptoptilos javanicus</i>	VU	5		
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT			1
Eurasian Spoonbill	<i>Platalea leucorodia</i>		1	2	
Black-faced Spoonbill	<i>Platalea minor</i>	EN	55	65	61
Lesser Whistling Duck	<i>Dendrocygna javanica</i>		681		
Common Shelduck	<i>Tadorna tadorna</i>		4		
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>		132		
Eurasian Wigeon	<i>Anas penelope</i>		1,400	300	3
Falcated Duck	<i>Anas falcata</i>	NT	9	1	
Common Teal	<i>Anas crecca</i>		405	175	322
Spot-billed Duck	<i>Anas poecilorhyncha</i>		44	10	27
Northern Pintail	<i>Anas acuta</i>		761	20	
Garganey	<i>Anas querquedula</i>		471		
Northern Shoveler	<i>Anas clypeata</i>		250	10	30
unidentified ducks	Anatinae spp.		89		50
Slaty-breasted Rail	<i>Gallirallus striatus</i>		1		2
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		67	4	9
Baillon's Crake	<i>Porzana pusilla</i>		1		
White-browed Crake	<i>Porzana cinereus</i>		85		
Watercock	<i>Gallicrex cinerea</i>		5		
Purple Swampphen	<i>Porphyrio porphyrio</i>		139		
Common Moorhen	<i>Gallinula chloropus</i>		28	31	28
Common Coot	<i>Fulica atra</i>		174		
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>		7		
Bronze-winged Jacana	<i>Metopidius indicus</i>		71		
Black-winged Stilt	<i>Himantopus himantopus</i>		702		
Northern Lapwing	<i>Vanellus vanellus</i>		6		
Grey-headed Lapwing	<i>Vanellus cinereus</i>		7		
Red-wattled Lapwing	<i>Vanellus indicus</i>		45		
Pacific Golden Plover	<i>Pluvialis fulva</i>			6	
Grey Plover	<i>Pluvialis squatarola</i>		158		32
Little Ringed Plover	<i>Charadrius dubius</i>		441		
Kentish Plover	<i>Charadrius alexandrinus</i>		1,240	25	2
Pintail Snipe	<i>Gallinago stenura</i>		9		
Common Snipe	<i>Gallinago gallinago</i>		70		1
Black-tailed Godwit	<i>Limosa limosa</i>	NT	62	25	109
Bar-tailed Godwit	<i>Limosa lapponica</i>			1	
Whimbrel	<i>Numenius phaeopus</i>		4		
Eurasian Curlew	<i>Numenius arquata</i>		35		
Common Redshank	<i>Tringa totanus</i>		232	9	32
Marsh Sandpiper	<i>Tringa stagnatilis</i>		14	3	9
Common Greenshank	<i>Tringa nebularia</i>		235	84	18
Green Sandpiper	<i>Tringa ochropus</i>		20		27
Wood Sandpiper	<i>Tringa glareola</i>		143	2	
Common Sandpiper	<i>Actitis hypoleucos</i>		91	56	47
Great Knot	<i>Calidris tenuirostris</i>				145
Red-necked Stint	<i>Calidris ruficollis</i>		8		
Dunlin	<i>Calidris alpina</i>		130	20	
unidentified shorebirds	Charadrii spp.			30	100
Herring Gull	<i>Larus argentatus</i>		161		6
Great Black-headed (Pallas's) Gull	<i>Larus ichthyæetus</i>		84		



English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Brown-headed Gull	<i>Larus brunnicephalus</i>		7		
Common Black-headed Gull	<i>Larus ridibundus</i>		1,411	222	1,097
Saunders's Gull	<i>Larus saundersi</i>	VU	9		2
Caspian Tern	<i>Sterna caspia</i>		7		
Common Tern	<i>Sterna hirundo</i>		2,000		
Whiskered Tern	<i>Chlidonias hybridus</i>		14		
<b>Total Waterbirds</b>			<b>19,760</b>	<b>2,447</b>	<b>4,692</b>
Western Marsh Harrier	<i>Circus aeruginosus</i>		32		
Eastern Marsh Harrier	<i>Circus spilintus</i>				17
Black-capped Kingfisher	<i>Halcyon pileata</i>		1		
Common Kingfisher	<i>Alcedo atthis</i>		30		15
Pied Kingfisher	<i>Ceryle rudis</i>				2

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

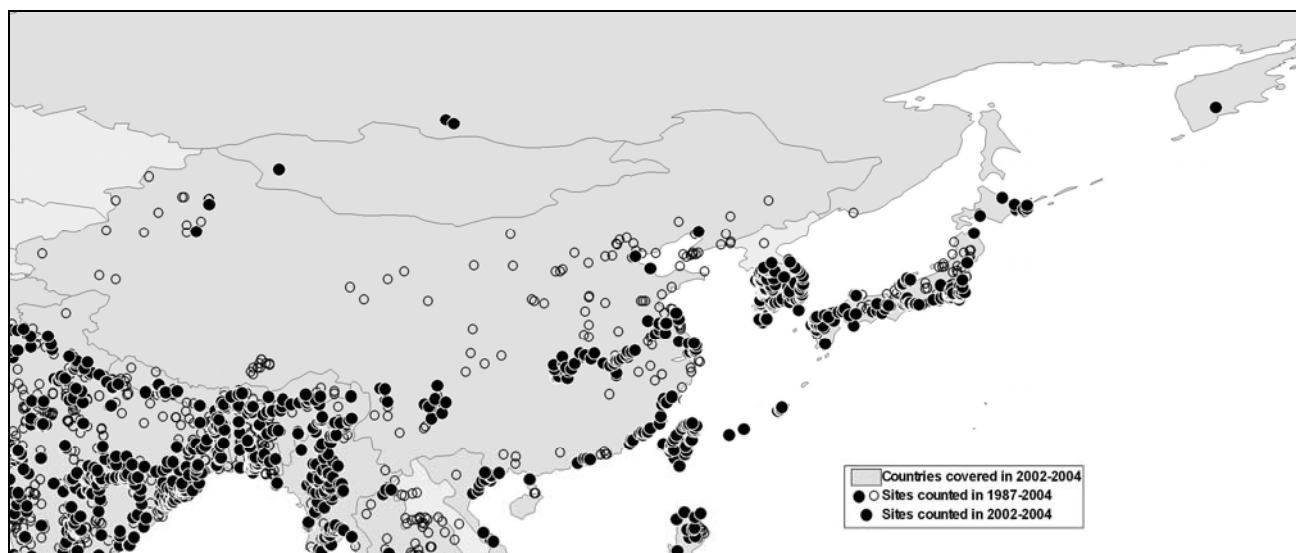
## 3.4 East Asia

### 3.4.1 Overview

A total of 388 sites were surveyed for AWC 2002–2004: 276, 292 and 321 in 2002, 2003 and 2004 respectively (Figure 24 and Table 39). This number does not include those sites surveyed for the annual group-specific counts of Anatidae and cranes in Japan (see section 3.4.3). Waterbird totals recorded (including the annual Anatidae, crane and shorebird counts in Japan) were 3,366,770, 3,582,202 and 4,180,979 in 2002, 2003 and 2004 respectively.

Twenty-eight Ramsar sites, two MAB Biosphere Reserves, 26 Migratory Waterbird Network sites in the East Asian – Australasian Flyway and 111 IBAs were surveyed at least once. Twenty-five sites recorded more than 20,000 waterbirds, and 133 sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

**Figure 24: Sites covered by the AWC in the East Asia Region, 1987–2004**



Totals of 165 waterbird and 35 wetland-dependent species (including three seabird, 21 raptor, four kingfisher, and seven wagtail and pipit species) were recorded. The highest count totals of the most numerous species (more than 50,000 birds) were Mallard (709,500 in 2003), Baikal Teal (VU, 458,039 in 2004), Spot-billed Duck (299,756 in 2004), Common Teal (267,504 in 2004), Greater Scaup (272,309 in 2004), Northern Pintail (214,429 in 2002), Common Pochard (205,225 in 2002), Eurasian Wigeon (200,530 in 2002), Greater White-fronted Goose (182,918 in 2003), Tufted Duck (133,921 in 2004), Bean Goose (127,245 in 2004), Dunlin (120,325 in 2003), Swan Goose (EN, 98,116 in 2004), Tundra Swan (95,535 in 2004), Common Black-headed Gull (75,473 in 2004) and Kentish Plover (60,623 in 2004).

The highest count totals of 24 globally threatened species were as follows: Critically Endangered: Siberian Crane (3,184 in 2004); Endangered: Japanese Night-heron (7 in 2002), Oriental Stork (2,463 in 2004), Black-faced Spoonbill (879 in 2002), Swan Goose (98,116 in 2004), Scaly-sided Merganser (34 in 2004), Red-crowned Crane (2,018 in 2004) and Spoon-billed Sandpiper (1 in 2002); Vulnerable: Dalmatian Pelican (15 in 2002 and 2004), Chinese Egret (13 in 2003), Lesser White-fronted Goose (16,956 in 2004), Baikal Teal (458,039 in 2004), Red-breasted Goose (1 in 2004), Baer's Pochard (636 in 2004), White-naped Crane (6,486 in 2004), Hooded Crane (10,592 in 2004), Black-necked Crane (3,562 in 2004), Swinhoe's Rail (1 in 2004), Saunders's Gull (2,509 in 2004), Relict Gull (3,367 in 2004), Laysan Albatross (1 in 2004), Steller's Sea-eagle (60 in 2002), Greater Spotted Eagle (3 in 2004) and Imperial Eagle (5 in 2002).

Highest count totals of seven Near Threatened species were: Black-headed Ibis (1 in 2003 and 2004), Falcated Duck (29,990 in 2004), Ferruginous Duck (792 in 2004), Asian Dowitcher (1 in 2002), Black-tailed Godwit (771 in 2004), Cinereous Vulture (475 in 2003) and White-tailed Eagle (38 in 2004).

**Table 39: Waterbird species counts reported during the AWC in East Asia, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Red-throated Diver	<i>Gavia stellata</i>		18	21	50
Black-throated Diver	<i>Gavia arctica</i>		484	97	48
Pacific Diver	<i>Gavia pacifica</i>		27	19	13
White-billed Diver	<i>Gavia adamsii</i>				1
unidentified divers	Gaviidae spp.			21	
Little Grebe	<i>Tachybaptus ruficollis</i>		2,106	2,530	9,386
Red-necked Grebe	<i>Podiceps grisegena</i>		7	55	40
Great Crested Grebe	<i>Podiceps cristatus</i>		2,706	2,100	4,865
Horned Grebe	<i>Podiceps auritus</i>		66	71	226
Black-necked Grebe	<i>Podiceps nigricollis</i>		1,486	1,048	2,560
unidentified grebes	Podicipedidae spp.		2	2	
Dalmatian Pelican	<i>Pelecanus crispus</i>	VU	15	14	15
Great Cormorant	<i>Phalacrocorax carbo</i>		15,548	17,893	23,575
Japanese Cormorant	<i>Phalacrocorax capillatus</i>		852	701	797
Pelagic Cormorant	<i>Phalacrocorax pelagicus</i>		123	81	533
unidentified cormorants	Phalacrocoracidae spp.		5	253	16
Grey Heron	<i>Ardea cinerea</i>		5,367	9,067	17,686
Eastern White Egret	<i>Ardea modesta</i>		3,502	4,561	6,856
Intermediate Egret	<i>Ardea intermedia</i>		1,311	94	594
Purple Heron	<i>Ardea purpurea</i>		4	16	20
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		556	177	946
Green-backed Heron	<i>Butorides striatus</i>		3	4	3
Chinese Pond Heron	<i>Ardeola bacchus</i>		259	585	283
Pied Heron	<i>Egretta picata</i>				1
Little Egret	<i>Egretta garzetta</i>		6,454	6,905	6,815
Chinese Egret	<i>Egretta eulophotes</i>	VU	4	13	1
Eastern Reef Heron	<i>Egretta sacra</i>		11	14	34
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		25	34	183
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		1,678	1,385	12,857
Japanese Night-heron	<i>Gorsachius goisagi</i>	EN	7		
Malayan Night-heron	<i>Gorsachius melanolophus</i>				1
unidentified night-heron	<i>Nycticorax</i> spp.				1
Eurasian Bittern	<i>Botaurus stellaris</i>		2	15	24
Yellow Bittern	<i>Ixobrychus sinensis</i>		16	6	31
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		5	4	8
Black Stork	<i>Ciconia nigra</i>		45	14	113
Oriental Stork	<i>Ciconia boyciana</i>	EN	1,435	1,946	2,463
unidentified storks	Ciconiidae spp.			24	
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT		1	1
Eurasian Spoonbill	<i>Platalea leucorodia</i>		6,889	8,329	7,729
Black-faced Spoonbill	<i>Platalea minor</i>	EN	879	707	845
unidentified spoonbills	<i>Platalea</i> spp.				10
Lesser Whistling Duck	<i>Dendrocygna javanica</i>				5
Mute Swan	<i>Cygnus olor</i>		255	160	138
Whooper Swan	<i>Cygnus cygnus</i>		35,046	36,660	37,704
Tundra (Whistling) Swan	<i>Cygnus columbianus</i>		36,737	63,963	95,535
unidentified swans	<i>Cygnus</i> spp.		14,023	158	27
Swan Goose	<i>Anser cygnoides</i>	EN	45,572	55,169	98,116
Bean Goose	<i>Anser fabalis</i>		55,620	70,224	127,245
Greater White-fronted Goose	<i>Anser albifrons</i>		124,753	182,918	172,968
Lesser White-fronted Goose	<i>Anser erythropus</i>	VU	5	16,555	16,956
Greylag Goose	<i>Anser anser</i>		1	80	4,105
Bar-headed Goose	<i>Anser indicus</i>		1,759	3,955	5,330
Lesser Snow Goose	<i>Chen (Anser) caerulescens</i>		18	12	13
unidentified grey geese	<i>Anser</i> spp.		42,404	2,548	5,458
Canada Goose	<i>Branta canadensis</i>		31	28	10
Brent Goose	<i>Branta bernicla</i>		715	693	840
Red-breasted Goose	<i>Branta ruficollis</i>	VU			1
Ruddy Shelduck	<i>Tadorna ferruginea</i>		5,078	10,070	18,883
Common Shelduck	<i>Tadorna tadorna</i>		20,556	24,293	32,361
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>			2	0
Mandarin Duck	<i>Aix galericulata</i>		27,680	30,510	25,768
Eurasian Wigeon	<i>Anas penelope</i>		200,530	190,619	183,275
American Wigeon	<i>Anas americana</i>		63	92	52
Falcated Duck	<i>Anas falcata</i>	NT	10,255	16,020	29,990
Gadwall	<i>Anas strepera</i>		20,253	23,018	25,489
Baikal Teal	<i>Anas formosa</i>	VU	290,482	306,137	458,039
Common Teal	<i>Anas crecca</i>		209,934	226,799	267,504
Mallard	<i>Anas platyrhynchos</i>		694,502	709,500	686,455
Spot-billed Duck	<i>Anas poecilorhyncha</i>		267,940	272,682	299,756

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Northern Pintail	<i>Anas acuta</i>		214,429	209,106	206,163
Garganey	<i>Anas querquedula</i>		71	36	69
Northern Shoveler	<i>Anas clypeata</i>		21,500	22,301	26,548
Red-crested Pochard	<i>Netta rufina</i>		2		721
Canvasback	<i>Aythya valisineria</i>		10	16	2
Common Pochard	<i>Aythya ferina</i>		205,225	190,992	196,359
Baer's Pochard	<i>Aythya baeri</i>	VU	23	18	636
Ferruginous Duck	<i>Aythya nyroca</i>	NT			792
Tufted Duck	<i>Aythya fuligula</i>		97,728	85,999	133,921
Greater Scaup	<i>Aythya marila</i>		192,978	217,098	272,309
Harlequin Duck	<i>Histrionicus histrionicus</i>		2,425	2,340	1,698
Common Scoter	<i>Melanitta nigra</i>		16,058	8,902	8,828
Velvet Scoter	<i>Melanitta fusca</i>		1,785	444	332
Long-tailed Duck	<i>Clangula hyemalis</i>		4,602	927	406
Common Goldeneye	<i>Bucephala clangula</i>		10,428	15,439	18,583
Smew	<i>Mergellus albellus</i>		3,449	2,866	4,370
Red-breasted Merganser	<i>Mergus serrator</i>		6,113	5,219	3,669
Scaly-sided Merganser	<i>Mergus squamatus</i>	EN	2		34
Goosander	<i>Mergus merganser</i>		11,384	12,747	12,858
unidentified ducks	Anatinae spp.		126,931	87,040	89,198
Siberian Crane	<i>Grus leucogeranus</i>	CR	3,101	2,856	3,184
White-naped Crane	<i>Grus vipio</i>	VU	4,450	3,687	6,486
Common Crane	<i>Grus grus</i>		1,358	1,870	3,122
Hooded Crane	<i>Grus monacha</i>	VU	9,302	9,892	10,592
Black-necked Crane	<i>Grus nigricollis</i>	VU	3,261	3,488	3,562
Red-crowned Crane	<i>Grus japonensis</i>	EN	1,724	1,296	2,018
hybrid crane	<i>Grus grus x Grus monacha</i>		1		
Swinhoe's Rail	<i>Coturnicops exquisitus</i>	VU			1
Slaty-breasted Rail	<i>Gallirallus striatus</i>		10	13	5
Water Rail	<i>Rallus aquaticus</i>		4	2	6
Brown Crake	<i>Amauornis akool</i>			3	26
White-breasted Waterhen	<i>Amauornis phoenicurus</i>		91	92	101
Ruddy-breasted Crake	<i>Porzana fusca</i>		16	5	33
Common Moorhen	<i>Gallinula chloropus</i>		850	1,240	2,074
Common Coot	<i>Fulica atra</i>		6,634	10,600	19,261
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>				7
Greater Painted Snipe	<i>Rostratula benghalensis</i>		26	18	9
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>		3,712	5,671	2,405
Black-winged Stilt	<i>Himantopus himantopus</i>		436	634	2,202
Pied Avocet	<i>Recurvirostra avosetta</i>		1,397	15,649	15,632
Northern Lapwing	<i>Vanellus vanellus</i>		4,249	5,063	9,547
Grey-headed Lapwing	<i>Vanellus cinereus</i>		316	312	209
Pacific Golden Plover	<i>Pluvialis fulva</i>		3,979	5,633	7,816
Grey Plover	<i>Pluvialis squatarola</i>		6,014	10,444	7,414
Great Ringed Plover	<i>Charadrius hiaticula</i>		17	12	15
Long-billed Plover	<i>Charadrius placidus</i>		140	111	125
Little Ringed Plover	<i>Charadrius dubius</i>		1,596	1,425	2,720
Kentish Plover	<i>Charadrius alexandrinus</i>		18,308	21,048	60,623
Lesser Sandplover	<i>Charadrius mongolus</i>		632	1,595	1,575
Greater Sandplover	<i>Charadrius leschenaultii</i>		41	380	895
Eurasian Woodcock	<i>Scolopax rusticola</i>		3	3	
Latham's Snipe	<i>Gallinago hardwickii</i>			1	
Pintail Snipe	<i>Gallinago stenura</i>		2	3	23
Swinhoe's Snipe	<i>Gallinago megala</i>		3	1	1
Common Snipe	<i>Gallinago gallinago</i>		718	742	967
unidentified snipe	<i>Gallinago spp.</i>		4		6
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>		21	23	33
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT	1		
Black-tailed Godwit	<i>Limosa limosa</i>	NT	326	481	771
Bar-tailed Godwit	<i>Limosa lapponica</i>		12	59	15
Whimbrel	<i>Numenius phaeopus</i>		118	62	120
Eurasian Curlew	<i>Numenius arquata</i>		3,425	7,875	6,251
Far Eastern Curlew	<i>Numenius madagascariensis</i>		8	8	5
unidentified curlews	<i>Numenius spp.</i>		10	338	1
Spotted Redshank	<i>Tringa erythropus</i>		2,507	12,370	16,136
Common Redshank	<i>Tringa totanus</i>		376	278	1,266
Marsh Sandpiper	<i>Tringa stagnatilis</i>		432	1,214	970
Common Greenshank	<i>Tringa nebularia</i>		1,580	1,535	2,611
Green Sandpiper	<i>Tringa ochropus</i>		154	157	230
Wood Sandpiper	<i>Tringa glareola</i>		431	609	635
Terek Sandpiper	<i>Xenus cinereus</i>		85	3	88
Common Sandpiper	<i>Actitis hypoleucos</i>		534	611	738

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		159	149	126
Ruddy Turnstone	<i>Arenaria interpres</i>		1,137	621	407
Red Knot	<i>Calidris canutus</i>		66		3
Great Knot	<i>Calidris tenuirostris</i>		64	302	180
Sanderling	<i>Calidris alba</i>		2,029	2,300	3,648
Red-necked Stint	<i>Calidris ruficollis</i>		979	732	1,886
Little Stint	<i>Calidris minuta</i>		2	8	3
Temminck's Stint	<i>Calidris temminckii</i>		66	68	40
Long-toed Stint	<i>Calidris subminuta</i>		576	144	617
Pectoral Sandpiper	<i>Calidris melanotos</i>				1
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>			1	12
Curlew Sandpiper	<i>Calidris ferruginea</i>		2		261
Dunlin	<i>Calidris alpina</i>		51,412	120,325	89,725
Spoon-billed Sandpiper	<i>Eurynorhynchus pygmaeus</i>	EN	1		
Ruff	<i>Philomachus pugnax</i>		16	13	50
unidentified <i>Calidris</i> sandpipers	<i>Calidris</i> spp.		389	556	
Grey Phalarope	<i>Phalaropus fulicarius</i>			3	
unidentified shorebirds	Charadrii spp.		49,687	32,731	74,338
Black-tailed Gull	<i>Larus crassirostris</i>		21,319	30,728	16,251
Common (Mew) Gull	<i>Larus canus</i>		4,075	5,577	8,281
Glaucous-winged Gull	<i>Larus glaucescens</i>		16	35	24
Glaucous Gull	<i>Larus hyperboreus</i>		58	410	71
Iceland Gull	<i>Larus glaucooides</i>			1	2
Herring Gull	<i>Larus argentatus</i>		29,642	39,388	27,981
Heuglin's Gull	<i>Larus heuglini</i>		425	575	262
Slaty-backed Gull	<i>Larus schistisagus</i>		4,536	2,026	3,345
Yellow-legged Gull	<i>Larus cachinnans</i>		165	2	293
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>		1	4	17
Common Black-headed Gull	<i>Larus ridibundus</i>		36,945	48,940	75,473
Saunders's Gull	<i>Larus saundersi</i>	VU	1,308	1,568	2,509
Relict Gull	<i>Larus relictus</i>	VU		2	3,367
Black-legged Kittiwake	<i>Larus tridactyla</i>		71	105	45
unidentified gulls	Laridae spp.		579	1,501	5,084
Gull-billed Tern	<i>Gelochelidon nilotica</i>		5	6	3
Caspian Tern	<i>Sterna caspia</i>		219	521	999
(Greater) Crested Tern	<i>Sterna bergii</i>				2
Common Tern	<i>Sterna hirundo</i>			210	18
Little Tern	<i>Sterna albifrons</i>		50	2	27
Whiskered Tern	<i>Chlidonias hybridus</i>		1,493	74	3,947
unidentified waterbirds			5,610		
<b>Total Waterbirds</b>			<b>3,366,770</b>	<b>3,582,202</b>	<b>4,180,979</b>
Laysan Albatross	<i>Phoebastria immutabilis</i>	VU			1
Rhinoceros Auklet	<i>Cerorhinca monocerata</i>		26		
Ancient Murrelet	<i>Synthliboramphus antiquus</i>		287	36	2
Osprey	<i>Pandion haliaetus</i>		23	31	37
Black-shouldered Kite	<i>Elanus caeruleus</i>		27	3	
Black Kite	<i>Milvus migrans</i>		98	140	159
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>		0	0	4
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT	15	22	38
Steller's Sea-eagle	<i>Haliaeetus pelagicus</i>	VU	60	3	
Cinereous Vulture	<i>Aegypius monachus</i>	NT	149	475	456
Hen Harrier	<i>Circus cyaneus</i>		32	39	26
Eastern Marsh Harrier	<i>Circus spiliotus</i>		1	5	1
Japanese Sparrowhawk	<i>Accipiter gularis</i>		2	1	1
Eurasian Sparrowhawk	<i>Accipiter nisus</i>		2	9	8
Northern Goshawk	<i>Accipiter gentilis</i>		3	5	9
Common Buzzard	<i>Buteo buteo</i>		70	61	99
Upland Buzzard	<i>Buteo hemilasius</i>		2	4	1
Rough-legged Hawk	<i>Buteo lagopus</i>		2	5	
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	2	1	3
Imperial Eagle	<i>Aquila heliaca</i>	VU	5	2	4
Golden Eagle	<i>Aquila chrysaetos</i>		4	6	2
Common Kestrel	<i>Falco tinnunculus</i>		82	84	119
Merlin	<i>Falco columbarius</i>		2	3	4
Peregrine Falcon	<i>Falco peregrinus</i>		6	12	18
unidentified raptors			1		2
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		18	49	22
Black-capped Kingfisher	<i>Halcyon pileata</i>		8	22	15
Common Kingfisher	<i>Alcedo atthis</i>		51	82	85
Pied Kingfisher	<i>Ceryle rudis</i>		5	10	16
White Wagtail	<i>Motacilla alba</i>			200	259
Grey Wagtail	<i>Motacilla cinerea</i>			3	3

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Yellow Wagtail	<i>Motacilla flava</i>			13	
Japanese Wagtail	<i>Motacilla grandis</i>			47	43
unidentified wagtails	<i>Motacilla spp.</i>				1
Water Pipit	<i>Anthus spinoletta</i>			1	
Oliver-backed Pipit	<i>Anthus hodgsoni</i>			30	23
Buff-bellied Pipit	<i>Anthus rubescens</i>			815	647
unidentified pipit	<i>Anthus spp.</i>		20		

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.4.2 China

The AWC was coordinated separately in Mainland China, Hong Kong, Macao and Taiwan. Details of the AWC in each region are given in the sections below.

#### 3.4.2.1 Mainland China

Ninety-five sites were surveyed during 2002–2004 (Figure 25 and Table 40), a much higher number than in previous years (see Li and Mundkur 2004). Waterbird totals recorded were 290,802 (18 sites), 443,088 (43 sites) and 842,344 (72 sites) in AWC 2002, 2003 and 2004, respectively. The increase in the number of sites surveyed in 2003 and 2004 was a result of the large-scale waterbird surveys carried out by Wetlands International – China Office in 2003 (Barter and Lei 2003) and WWF – China Office in 2004 (Barter *et al.* 2004) in the Lower Yangtze provinces. In addition, data published in Yang (2005) and in *China Crane News*, Cumulative Vols. 11, 13, 14 and 15 (Wang *et al.* 2002, 2003a,b, 2004) are also included in this report. However, information cited from Yang (2005) and in *China Crane News* in Yunnan and Guizhou provinces focussed mainly on cranes and other large waterbird species, therefore these data do not fully represent the abundance and diversity of waterbirds recorded.

The sites counted for the AWC included 12 Ramsar sites, one MAB Biosphere Reserve, 23 IBAs and nine EAAF Migratory Waterbird Network sites.

Seven sites recorded more than 20,000 waterbirds: Anqingyanjiang Nature Reserve (NR) (total count of 10 sub-sites recorded 138,066 individuals in 2004), Sheng Jin Hu NR (33,775 in 2004), East Dongting Lake NR (82,730 in 2003 and 81,386 in 2004), South Dongting Lake NR (32,728 in 2004), Yancheng NR, which covers the entire coast of Jiangsu Province (131,867 in 2004), Poyang Lake (including the Poyang Lake NR, which recorded more than 200,000 waterbirds in all three years, with a highest count of 272,218 in 2004) and Lashihai Lake NR (21,707 in 2004). A total of 38 sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

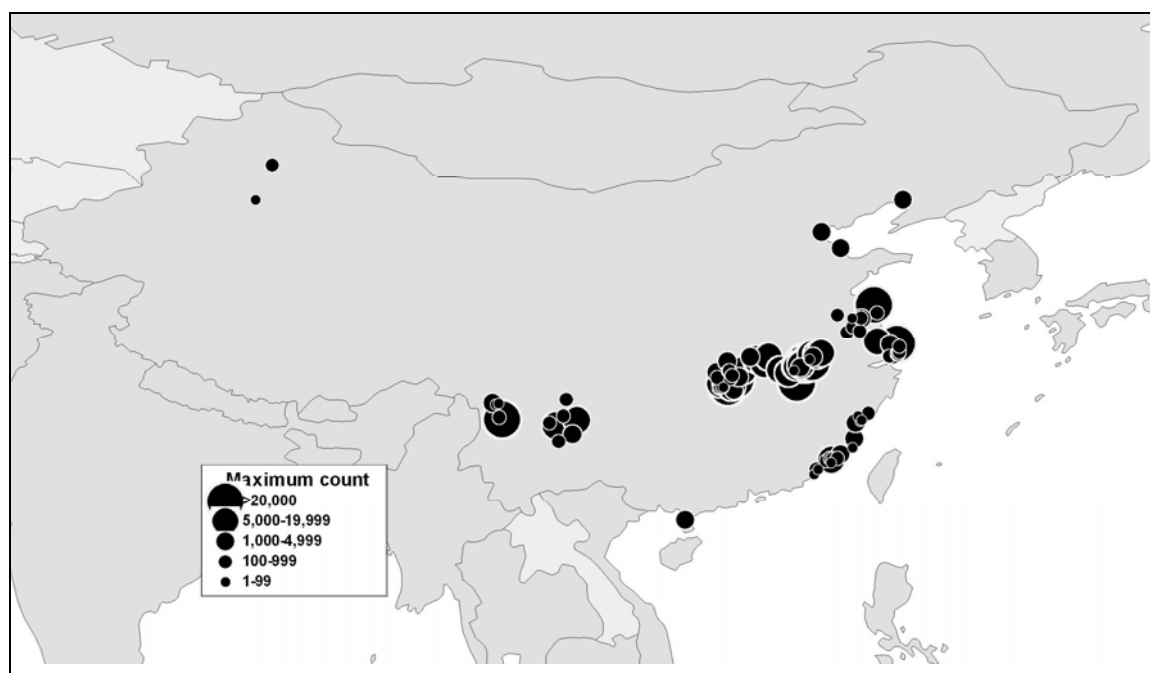
Totals of 115 waterbird, six raptor and four kingfisher species were recorded (Table 41). The highest count totals were for Swan Goose (98,080 in 2004), Bean Goose (80,868 in 2004), Greater White-fronted Goose (52,909 in 2003), Dunlin (52,508 in 2003), Common Black-headed Gull (51,700 in 2004), Tundra Swan (50,168 in 2004), Common Teal (43,246 in 2004) and Spot-billed Duck (32,719 in 2004).

Highest count totals of 17 globally threatened species were as follows: Critically Endangered: Siberian Crane (3,184 in 2004, mainly at Poyang Lake); Endangered: Oriental Stork (2,453 in 2004), Black-faced Spoonbill (2 in 2004), Swan Goose (98,080 in 2004), Scaly-sided Merganser (31 in 2004) and Red-crowned Crane (612 in 2004); Vulnerable: Chinese Egret (13 in 2003), Lesser White-fronted Goose (16,947 in 2004), Baikal Teal (28 in 2004), Baer's Pochard (630 in 2004), White-naped Crane (3,463 in 2004), Hooded Crane (933 in 2004), Black-necked Crane (3,526 in 2004), Swinhoe's Rail (1 in 2004), Saunders's Gull (532 in 2004), Relict Gull (3,367 in 2004) and Imperial Eagle (1 in 2003).

Highest count totals of the four Near Threatened species were: Falcated Duck (18,381 in 2004), Ferruginous Duck (792 in 2004), Black-tailed Godwit (372 in 2004) and White-tailed Eagle (1 in 2004). The records for Siberian Crane (3,184 in 2004) and Swan Goose (98,080 in 2004) are very close to the upper limit of the population estimate of 3,200 and 60,000–100,000 respectively (Wetlands International 2006) and indicate that the population size may need to be revised upwards (see Section 3.6).

Major threats to the wetlands included reclamation, pollution, over-fishing, human disturbance and hunting of waterbirds. The census was coordinated by Wetlands International – China Office.

**Figure 25: AWC site coverage and numerical distribution of waterbirds in Mainland China, 2002–2004**



**Table 40: Wetland sites surveyed during the AWC in Mainland China, 2002–2004**

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Anhui	Anqingyanjiang Nature Reserve (NR): Baidang Hu	I, S				17,007
Anhui	Anqingyanjiang NR: Bo Hu					13,755
Anhui	Anqingyanjiang NR: Caizi Hu				18,868	19,001
Anhui	Anqingyanjiang NR: Dagan Hu					6,974
Anhui	Anqingyanjiang NR: Fengsha Hu					13,688
Anhui	Anqingyanjiang NR: Huang Hu					4,838
Anhui	Anqingyanjiang NR: Long Gan Hu (Long Hu)					8,766
Anhui	Anqingyanjiang NR: Pogang Hu					1,487
Anhui	Anqingyanjiang NR: Qili He					99
Anhui	Anqingyanjiang NR: Wuchang Hu				7,056	52,451
Anhui	Sheng Jin Hu NR	I, C, S		30,744	3,383	33,775
Fujian	Ganwen Farm, Zhini Town		HIL		481	
Fujian	Gongkou Gang, Dongshan Bay	pl	8		38	
Fujian	Houkeng Reservoir, Heshan Town		8		31	
Fujian	Huaqiao Farm, Jiangjing Town		8CDI		2,739	
Fujian	Hutou Mudflat, Baishi Town		38AI		43	
Fujian	Jinshetou Bay, Jiaocheng District		8		1,214	
Fujian	Leichun Xi (River), Banzhong Town		8A		88	
Fujian	Qingyutou Mudflat, Diantou Town		8		197	
Fujian	Quanzhou Bay	I	8I		3,884	
Fujian	Shaxi Town Wetland		8CDI		88	
Fujian	Tangdong Mudflat		8I			720
Fujian	Wanwu Town Harbour Mudflat		38AI		41	
Fujian	Wenshi River, Pinghai Town		8		41	
Fujian	Xiamen Coast		8D			5,790
Fujian	Xiamen Coast: Aotou Mudflat		8		542	
Fujian	Xiamen Coast: Fenglin Mangrove		8		258	
Fujian	Xintang Mangrove, Funing Bay	pl	8		10	
Fujian	Zhangjiang Rivermouth		468ABCG		972	
Guangdong	Zhanjiang NR (includes 17 sub-sites)	R			3,849	
Guizhou	Caohai NR	I, C		2,113	2,727	12,470
Hubei	Chang Hu					1,446
Hubei	Changjiangudao Baijijun NR					294
Hubei	Chen Hu NR	I		500	12,064	15,985

Province	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Hubei	Diaocha Hu					1,536
Hubei	Hong Hu NR	I			6,176	1,355
Hubei	Liangzi Hu				5,460	388
Hubei	Long Gan Hu	I		23		
Hubei	Tian Er Zhou Milu NR	I				413
Hubei	Wang Hu and Supo Hu					8,664
Hubei	Zhangdu Hu Lakes					17,431
Hunan	Beiming Hu					3,008
Hunan	Changjiang River Bank					3,182
Hunan	Datong Hu					1,129
Hunan	Dong Hu					486
Hunan	East Dongting Lake NR	R, I	8AFHI		82,730	81,386
Hunan	Fangtai Hu					160
Hunan	Helong Hu – Baini Hu					1,768
Hunan	Heng Ling Hu – He Ye Hu				13,118	446
Hunan	Hongxingyuan					535
Hunan	Kongjia Hu					196
Hunan	Longchi Hu					94
Hunan	Maoli Hu					679
Hunan	South Dongting Lake NR	R			768	32,728
Hunan	Taibai Hu					1,350
Hunan	West Dongting Lake NR	R			1,448	5,678
Hunan	Yujiqiao					481
Jiangsu	Baoying Hu					2
Jiangsu	Chuhe River Mouth					184
Jiangsu	Dazong Lake					222
Jiangsu	Gaoyou and Shabo Lakes	I				723
Jiangsu	Hongze Hu	I				972
Jiangsu	Qilihe River Mouth					1,003
Jiangsu	Shagou Town, Xinghua City					570
Jiangsu	Shang Hu					11,220
Jiangsu	Yancheng NR: Core Area only	R, I, C,		463		
Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	S, M				131,867
Jiangsu	Yangzhong (Baoqiao Town and Leigong Island)					900
Jiangxi	Poyang Lake (whole lake and adjacent lakes)	R, I, C			206,666	272,218
Jiangxi	Poyang Lake NR (part of Poyang Lake)		8AFHI	245,184		
Jiangxi	Sai Cheng Hu			2,000	16,452	
Liaoning	Shuangtai Hekou NR	R, I, C, S	48BI			1,384
Shandong	Yellow River Delta NR	I, C, S		2,626		
Shanghai	Baoshan Shidongkou – Liuhe					1,924
Shanghai	Chongming Island NR	R, I, S			37,721	3,783
Shanghai	Donghai Nongchang – Binghai Nongchang		KL			371
Shanghai	Fengxin – Tuolin – Xinghuo Nongchang (Hangzhou Bay)					1,143
Shanghai	Hensha Island					430
Shanghai	Jinshan, Chaojin – Fengxin					143
Shanghai	Liaoyuan Nongchang – Wusi Nongchang – Luchaogang (Wusi coast)					346
Shanghai	Luchaogang – Donghai Nongchang (Yangtse Estuary near Nannhui)					701
Tianjin	Tianjin Haibin Yuchang (Fish Farm)		9BIL			4,162
Xinjiang	Qiala Reservoir		4678DFHIK		52	
Xinjiang	Wulabo Reservoir		67FHIK		385	69
Yunnan	Bitahai Lake NR	R		23	34	35
Yunnan	Dashanbao NR	R, I, C		1,062	1,639	1,630
Yunnan	Huize County	I		2,297	5,711	3,990
Yunnan	Lashihai Lake NR	R, I	6CL	1,313	2,268	21,707
Yunnan	Ludian County			54	376	275
Yunnan	Lugu Hu	I		67	175	226
Yunnan	Napahai NR	R, I		1,188	1,628	3,290
Yunnan	Qiaojia County			462	675	328
Yunnan	Shuduhu					60
Yunnan	Xundian County			234	582	931
Yunnan	Yongshan County			453	509	544

**Notes:**

Status<sup>1</sup>: R – Ramsar site, pR – part of a Ramsar site, I – Wetland IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), M – MAB Biosphere Reserve, A – Anatidae site of the Migratory Waterbird Network in the East Asian – Australasian Flyway, C – Crane site of the Migratory Waterbird Network in the North East Asian Flyway, S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway.

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.



**Table 41: Waterbird species counts reported during the AWC in Mainland China, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Red-throated Diver	<i>Gavia stellata</i>			12	1
unidentified divers	Gaviidae spp.			21	
Little Grebe	<i>Tachybaptus ruficollis</i>		30	1,055	7,428
Great Crested Grebe	<i>Podiceps cristatus</i>			64	2,097
Horned Grebe	<i>Podiceps auritus</i>				4
unidentified grebes	Podicipedidae spp.			2	
Great Cormorant	<i>Phalacrocorax carbo</i>		300	2,190	4,996
Pelagic Cormorant	<i>Phalacrocorax pelagicus</i>			13	
Grey Heron	<i>Ardea cinerea</i>		317	4,613	12,395
Eastern White Egret	<i>Ardea modesta</i>			2,019	2,998
Intermediate Egret	<i>Ardea intermedia</i>		1,000	7	90
Purple Heron	<i>Ardea purpurea</i>			1	11
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>			11	2
Chinese Pond Heron	<i>Ardeola bacchus</i>			214	16
Little Egret	<i>Egretta garzetta</i>		500	3,085	1,271
Chinese Egret	<i>Egretta eulophotes</i>	VU		13	
Eastern Reef Heron	<i>Egretta sacra</i>			1	
unidentified egrets	<i>Egretta/Bubulcus</i> spp.			33	177
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>			39	10,611
Eurasian Bittern	<i>Botaurus stellaris</i>			8	20
Yellow Bittern	<i>Ixobrychus sinensis</i>			1	
Black Stork	<i>Ciconia nigra</i>		44	12	108
Oriental Stork	<i>Ciconia boyciana</i>	EN	1,424	1,944	2,453
unidentified storks	Ciconiidae spp.			24	
Eurasian Spoonbill	<i>Platalea leucorodia</i>		6,842	8,290	7,578
Black-faced Spoonbill	<i>Platalea minor</i>	EN		1	2
unidentified spoonbills	<i>Platalea</i> spp.				10
Whooper Swan	<i>Cygnus cygnus</i>		77	33	17
Tundra (Whistling) Swan	<i>Cygnus columbianus</i>		2,017	24,600	50,168
unidentified swans	<i>Cygnus</i> spp.		13,700		
Swan Goose	<i>Anser cygnoides</i>	EN	45,560	55,153	98,080
Bean Goose	<i>Anser fabalis</i>		12,300	25,747	80,868
Greater White-fronted Goose	<i>Anser albifrons</i>		37,585	52,909	50,117
Lesser White-fronted Goose	<i>Anser erythropus</i>	VU		16,551	16,947
Greylag Goose	<i>Anser anser</i>			80	4,102
Bar-headed Goose	<i>Anser indicus</i>		1,759	3,955	5,330
unidentified grey geese	<i>Anser</i> spp.		41,166	2,473	5,214
Red-breasted Goose	<i>Branta ruficollis</i>	VU			1
Ruddy Shelduck	<i>Tadorna ferruginea</i>		3,442	8,345	17,383
Common Shelduck	<i>Tadorna tadorna</i>			257	563
Cotton Pygmy Goose	<i>Nettapus coromandelianus</i>			2	
Mandarin Duck	<i>Aix galericulata</i>			12	752
Eurasian Wigeon	<i>Anas penelope</i>		18	2,004	6,009
Falcated Duck	<i>Anas falcata</i>	NT	100	4,593	18,381
Gadwall	<i>Anas strepera</i>			67	2,698
Baikal Teal	<i>Anas formosa</i>	VU			28
Common Teal	<i>Anas crecca</i>		30	10,506	38,013
Mallard	<i>Anas platyrhynchos</i>		258	2,009	11,604
Spot-billed Duck	<i>Anas poecilorhyncha</i>		227	11,703	28,667
Northern Pintail	<i>Anas acuta</i>			1,627	6,924
Garganey	<i>Anas querquedula</i>			11	15
Northern Shoveler	<i>Anas clypeata</i>			854	3,815
Red-crested Pochard	<i>Netta rufina</i>				720
Common Pochard	<i>Aythya ferina</i>			146	2,827
Baer's Pochard	<i>Aythya baeri</i>	VU	19	6	630
Ferruginous Duck	<i>Aythya nyroca</i>	NT			792
Tufted Duck	<i>Aythya fuligula</i>			175	3,817
Greater Scaup	<i>Aythya marila</i>		4	10	
Common Goldeneye	<i>Bucephala clangula</i>			3	48
Smew	<i>Mergellus albellus</i>			94	1,901
Red-breasted Merganser	<i>Mergus serrator</i>			2	6
Scaly-sided Merganser	<i>Mergus squamatus</i>	EN			31
Goosander	<i>Mergus merganser</i>			129	2,729
unidentified ducks	Anatinae spp.		57,590	31,000	29,564
Siberian Crane	<i>Grus leucogeranus</i>	CR	3,101	2,856	3,184
White-naped Crane	<i>Grus vipio</i>	VU	1,276	111	3,463
Common Crane	<i>Grus grus</i>		1,358	1,867	3,121
Hooded Crane	<i>Grus monacha</i>	VU	674	806	933
Black-necked Crane	<i>Grus nigricollis</i>	VU	3,261	3,488	3,562
Red-crowned Crane	<i>Grus japonensis</i>	EN	371		612

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Swinhoe's Rail	<i>Coturnicops exquisitus</i>	VU			1
Slaty-breasted Rail	<i>Gallirallus striatus</i>			6	
Water Rail	<i>Rallus aquaticus</i>				1
Brown Crake	<i>Amaurornis akool</i>			3	26
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>			12	4
Common Moorhen	<i>Gallinula chloropus</i>			504	788
Common Coot	<i>Fulica atra</i>			1,939	10,863
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>				26
Black-winged Stilt	<i>Himantopus himantopus</i>			15	9
Pied Avocet	<i>Recurvirostra avosetta</i>			12,466	12,023
Northern Lapwing	<i>Vanellus vanellus</i>		2,000	3,888	8,480
Grey-headed Lapwing	<i>Vanellus cinereus</i>		10	9	5
Pacific Golden Plover	<i>Pluvialis fulva</i>			1	
Grey Plover	<i>Pluvialis squatarola</i>			4,770	1,597
Long-billed Plover	<i>Charadrius placidus</i>			12	4
Little Ringed Plover	<i>Charadrius dubius</i>			546	36
Kentish Plover	<i>Charadrius alexandrinus</i>			9,871	40,657
Lesser Sandplover	<i>Charadrius mongolus</i>				49
Greater Sandplover	<i>Charadrius leschenaultii</i>			172	
Pintail Snipe	<i>Gallinago stenura</i>			1	23
Swinhoe's Snipe	<i>Gallinago megala</i>				1
Common Snipe	<i>Gallinago gallinago</i>			148	331
unidentified snipe	<i>Gallinago</i> spp.				6
Black-tailed Godwit	<i>Limosa limosa</i>			137	372
Bar-tailed Godwit	<i>Limosa lapponica</i>			39	
Eurasian Curlew	<i>Numenius arquata</i>			630	2,592
Spotted Redshank	<i>Tringa erythropus</i>			12,361	15,760
Common Redshank	<i>Tringa totanus</i>			119	988
Marsh Sandpiper	<i>Tringa stagnatilis</i>			28	5
Common Greenshank	<i>Tringa nebularia</i>			518	896
Green Sandpiper	<i>Tringa ochropus</i>			44	113
Wood Sandpiper	<i>Tringa glareola</i>			12	2
Terek Sandpiper	<i>Xenus cinereus</i>			3	2
Common Sandpiper	<i>Actitis hypoleucos</i>			95	261
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>			1	
Ruddy Turnstone	<i>Arenaria interpres</i>			5	53
Red Knot	<i>Calidris canutus</i>				1
Great Knot	<i>Calidris tenuirostris</i>			300	19
Sanderling	<i>Calidris alba</i>				1,547
Red-necked Stint	<i>Calidris ruficollis</i>				120
Temminck's Stint	<i>Calidris temminckii</i>			10	8
Curlew Sandpiper	<i>Calidris ferruginea</i>				5
Dunlin	<i>Calidris alpina</i>			52,508	49,700
Ruff	<i>Philomachus pugnax</i>			1	
unidentified shorebirds	<i>Charadrii</i> spp.		45,220	30,436	72,213
Black-tailed Gull	<i>Larus crassirostris</i>			4,602	247
Common (Mew) Gull	<i>Larus canus</i>			36	1,295
Herring Gull	<i>Larus argentatus</i>		1,233	8,970	6,372
Slaty-backed Gull	<i>Larus schistisagus</i>			3	865
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaeetus</i>		1	3	16
Common Black-headed Gull	<i>Larus ridibundus</i>			9,709	49,291
Saunders's Gull	<i>Larus saundersi</i>	VU	8	38	532
Relict Gull	<i>Larus relictus</i>	VU			3,367
unidentified gulls	<i>Laridae</i> spp.		370	9	4,857
Caspian Tern	<i>Sterna caspia</i>			11	11
Common Tern	<i>Sterna hirundo</i>			210	
Whiskered Tern	<i>Chlidonias hybridus</i>			30	
unidentified waterbirds			5,610		
<b>Total Waterbirds</b>			<b>290,802</b>	<b>443,088</b>	<b>842,344</b>
Osprey	<i>Pandion haliaetus</i>			3	
Black-shouldered Kite	<i>Elanus caeruleus</i>			3	
Black Kite	<i>Milvus migrans</i>			1	
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT			1
Hen Harrier	<i>Circus cyaneus</i>		3		4
Imperial Eagle	<i>Aquila heliaca</i>	VU	1		
White-throated Kingfisher	<i>Halcyon smyrnensis</i>			10	
Black-capped Kingfisher	<i>Halcyon pileata</i>			8	
Common Kingfisher	<i>Alcedo atthis</i>			24	35
Pied Kingfisher	<i>Ceryle rudis</i>			1	8
White Wagtail	<i>Motacilla alba</i>			36	
Yellow Wagtail	<i>Motacilla flava</i>			12	
Water Pipit	<i>Anthus spinoletta</i>			1	

**Note:** GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.4.2.2 Hong Kong

Three sites were surveyed in all three years, with 52,068, 54,447 and 40,116 waterbirds recorded in 2002, 2003 and 2004 respectively (Figure 26 and Table 42). The Deep Bay area recorded more than 20,000 waterbirds in all three years and retains its international importance; the site also recorded more than 1% of the biogeographic population of 10 waterbird species. Details of the census results were published in Carey (2002) and Yu (2003a, 2004a).

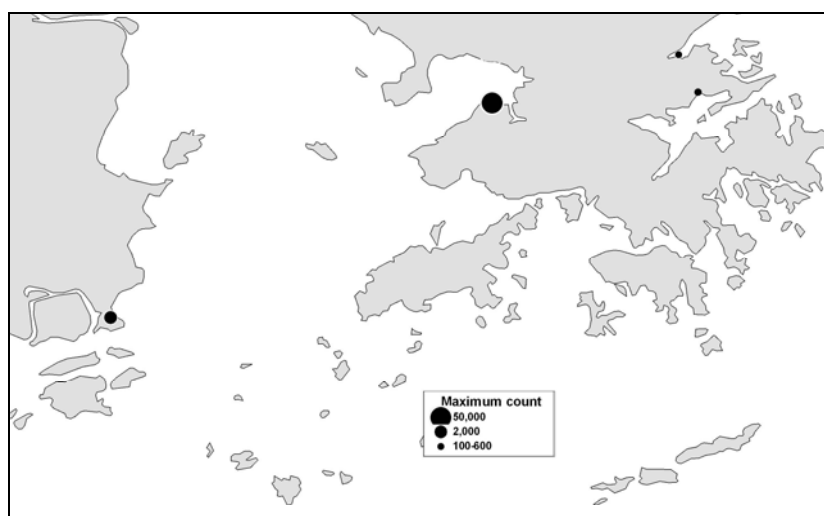
A total of 66 waterbird, six raptor and four kingfisher species were recorded (Table 43). The most numerous species recorded were Common Black-headed Gull (13,009 in 2002), Great Cormorant (9,011 in 2004), Northern Pintail (4,381 in 2003), Eurasian Wigeon (4,080 in 2003), Common Teal (3842 in 2003), Pied Avocet (3,500 in 2004), Spotted Redshank (2,500 in 2002) and Dunlin (2,430 in 2004).

Six globally threatened species were recorded: Endangered: Oriental Stork (1 in 2004) and Black-faced Spoonbill (240 in 2004); Vulnerable: Dalmatian Pelican (15 in 2002), Saunders's Gull (34 in 2003), Greater Spotted Eagle (2 in 2002) and Imperial Eagle (3 in 2002). Near Threatened species recorded were Falcated Duck (5 in 2003) and Black-tailed Godwit (390 in 2004).

Sedimentation and water pollution are the major threats to the quality of the intertidal mudflats in Deep Bay. Encroachment by mangrove trees has also decreased the open area of mudflat. The abandonment of fish farms and changes in fish-farming practices have reduced their ecological value to waterbirds. Waterbirds are disturbed by the activities of illegal cross-border fishermen, who also occasionally trap the birds for additional income.

The census was coordinated by the Hong Kong Bird Watching Society.

**Figure 26: AWC site coverage and numerical distribution of waterbirds in Hong Kong and Macao, 2002–2004**



**Table 42: Wetland sites surveyed during the AWC in Hong Kong, 2002–2004**

Site Name	Status <sup>1</sup>	Threats	2002	2003	2004
Deep Bay: Combined	R, I, A, S	Sedimentation	51,500	54,014	39,440
Starling Inlet (Yim Tso Ha)			588	500	543
Shuen Wan			166	172	133

**Note:**

Status<sup>1</sup>: R – Ramsar site, I – Wetland IBA identified by BirdLife International (2005), A – Anatidae site of the Migratory Waterbird Network in the East Asian Flyway, S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway.

Table 43: Waterbird species counts reported during the AWC in Hong Kong, 2002–2004

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		148	162	187
Great Crested Grebe	<i>Podiceps cristatus</i>		62	1	135
Dalmatian Pelican	<i>Pelecanus crispus</i>	VU	15	14	13
Great Cormorant	<i>Phalacrocorax carbo</i>		6,424	8,047	9,011
Grey Heron	<i>Ardea cinerea</i>		1,403	1,039	824
Eastern White Egret	<i>Ardea modesta</i>		1,381	1,647	826
Intermediate Egret	<i>Ardea intermedia</i>		6	11	10
Purple Heron	<i>Ardea purpurea</i>			7	3
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		28	45	69
Green-backed Heron	<i>Butorides striatus</i>		1	1	1
Chinese Pond Heron	<i>Ardeola bacchus</i>		228	324	204
Little Egret	<i>Egretta garzetta</i>		1,445	1,725	1,752
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		139	146	27
Oriental Stork	<i>Ciconia boyciana</i>	EN			1
Eurasian Spoonbill	<i>Platalea leucorodia</i>		4	2	2
Black-faced Spoonbill	<i>Platalea minor</i>	EN	183	230	240
Common Shelduck	<i>Tadorna tadorna</i>		268	192	188
Eurasian Wigeon	<i>Anas penelope</i>		3,797	4,080	400
Falcated Duck	<i>Anas falcata</i>	NT		5	
Common Teal	<i>Anas crecca</i>		3,164	3,842	1,331
Mallard	<i>Anas platyrhynchos</i>		1	1	2
Spot-billed Duck	<i>Anas poecilorhyncha</i>		83	24	15
Northern Pintail	<i>Anas acuta</i>		2,609	4,381	1,480
Garganey	<i>Anas querquedula</i>		28	16	7
Northern Shoveler	<i>Anas clypeata</i>		1,630	1,328	1,616
Tufted Duck	<i>Aythya fuligula</i>		103	439	519
Greater Scaup	<i>Aythya marila</i>			17	
unidentified ducks	Anatinae spp.		5,080	5,725	200
Slaty-breasted Rail	<i>Gallirallus striatus</i>		2	3	
Water Rail	<i>Rallus aquaticus</i>		1		
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		30	24	13
Common Moorhen	<i>Gallinula chloropus</i>		127	150	98
Common Coot	<i>Fulica atra</i>		54	42	260
Black-winged Stilt	<i>Himantopus himantopus</i>			5	
Pied Avocet	<i>Recurvirostra avosetta</i>		1,391	2,985	3,500
Pacific Golden Plover	<i>Pluvialis fulva</i>		94	171	
Grey Plover	<i>Pluvialis squatarola</i>		294	295	455
Little Ringed Plover	<i>Charadrius dubius</i>		250	199	37
Kentish Plover	<i>Charadrius alexandrinus</i>		6	31	2,238
Lesser Sandpiper	<i>Charadrius mongolus</i>			1	5
Pintail Snipe	<i>Gallinago stenura</i>		2	1	
Common Snipe	<i>Gallinago gallinago</i>		8	4	6
unidentified snipe	<i>Gallinago</i> spp.		4		
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>			1	
Black-tailed Godwit	<i>Limosa limosa</i>	NT	320	337	390
Bar-tailed Godwit	<i>Limosa lapponica</i>		2		1
Whimbrel	<i>Numenius phaeopus</i>		1		1
Eurasian Curlew	<i>Numenius arquata</i>		539	1,006	741
Spotted Redshank	<i>Tringa erythropus</i>		2,500	3	339
Common Redshank	<i>Tringa totanus</i>		69	35	
Marsh Sandpiper	<i>Tringa stagnatilis</i>		153	1,130	2
Common Greenshank	<i>Tringa nebularia</i>		376	59	157
Green Sandpiper	<i>Tringa ochropus</i>		47	49	33
Wood Sandpiper	<i>Tringa glareola</i>		21	53	13
Common Sandpiper	<i>Actitis hypoleucos</i>		71	91	64
Great Knot	<i>Calidris tenuirostris</i>		5	2	24
Red-necked Stint	<i>Calidris ruficollis</i>		15		2
Temminck's Stint	<i>Calidris temminckii</i>		35	24	4
Dunlin	<i>Calidris alpina</i>		50	11	2,430
unidentified shorebirds	Charadrii spp.		4,069	1,093	1,859
Black-tailed Gull	<i>Larus crassirostris</i>		2	6	1
Common (Mew) Gull	<i>Larus canus</i>				1
Heuglin's Gull	<i>Larus heuglini</i>		290	543	237
Slaty-backed Gull	<i>Larus schistisagus</i>			2	3
Yellow-legged Gull	<i>Larus cachinnans</i>			2	9
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>			1	
Common Black-headed Gull	<i>Larus ridibundus</i>		13,009	12,601	8,111
Saunders's Gull	<i>Larus saundersi</i>	VU		34	15
Caspian Tern	<i>Sterna caspia</i>		1	2	4
<b>Total Waterbirds</b>			<b>52,068</b>	<b>54,447</b>	<b>40,116</b>

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Osprey	<i>Pandion haliaetus</i>		11	11	18
Black Kite	<i>Milvus migrans</i>		85	107	141
White-bellied Fish-eagle	<i>Haliaeetus leucogaster</i>				4
Eastern Marsh Harrier	<i>Circus spilintus</i>		1	2	1
Common Buzzard	<i>Buteo buteo</i>				9
Greater Spotted Eagle	<i>Aquila clanga</i>	VU	2	1	3
Imperial Eagle	<i>Aquila heliaca</i>	VU	3	2	4
Common Kestrel	<i>Falco tinnunculus</i>		82	84	117
Peregrine Falcon	<i>Falco peregrinus</i>		2	1	6
White-throated Kingfisher	<i>Halcyon smyrnensis</i>		18	39	22
Black-capped Kingfisher	<i>Halcyon pileata</i>		8	14	15
Common Kingfisher	<i>Alcedo atthis</i>		51	53	47
Pied Kingfisher	<i>Ceryle rudis</i>		5	9	8

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

**3.4.2.3 Macao**

Macao began participating in the AWC in 2002 and one site, Taipa-Coloane Mudflat (Figure 26), was surveyed in all three years, with 1,948, 1,130 and 1,357 waterbirds recorded in 2002, 2003 and 2004, respectively. The site is also an IBA. The data were contributed by individual counters.

Thirty waterbird species were recorded (Table 44), including the Endangered Black-faced Spoonbill, with a highest count of 50 individuals (3% of the global population) in 2004, which qualifies the Taipa-Coloane Mudflat as an internationally important wetland. The most numerous species recorded was Little Egret, with a highest count of 1,168 individuals in 2002.

The Macao Government declared two wetland nature reserves, namely the Lotus Flower Bridge wetland (40 ha) and Taipa-Coloane wetland (15 ha), in 2001. However, there is no active management of these reserves and both are heavily disturbed by development in the adjacent areas, especially by the casino industry. The Lotus Flower Bridge wetlands are constantly disturbed by reclamation works and fishermen, whilst a highway has been proposed between the Lotus Flower Bridge wetland and Taipa-Coloane wetland. These actions are expected to have a severe cumulative negative impact on the long-term use of these sites by waterbirds.

**Table 44: Waterbird species counts reported during the AWC in Macao, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		2	4	6
Great Cormorant	<i>Phalacrocorax carbo</i>		2		2
Grey Heron	<i>Ardea cinerea</i>		147	133	149
Eastern White Egret	<i>Ardea modesta</i>		84	71	98
Intermediate Egret	<i>Ardea intermedia</i>		115	8	5
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>			3	5
Green-backed Heron	<i>Butorides striatus</i>		2		
Chinese Pond Heron	<i>Ardeola bacchus</i>		27	46	48
Little Egret	<i>Egretta garzetta</i>		1,168	639	642
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		68	23	28
Yellow Bittern	<i>Ixobrychus sinensis</i>		3		1
Eurasian Spoonbill	<i>Platalea leucorodia</i>		2	2	1
Black-faced Spoonbill	<i>Platalea minor</i>	EN	39	46	50
Common Teal	<i>Anas crecca</i>		78		121
Spot-billed Duck	<i>Anas poecilorhyncha</i>				1
Northern Pintail	<i>Anas acuta</i>		2		2
Northern Shoveler	<i>Anas clypeata</i>		4		
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		3		1
Common Moorhen	<i>Gallinula chloropus</i>		4	4	5
Common Coot	<i>Fulica atra</i>			3	1
Black-winged Stilt	<i>Himantopus himantopus</i>		2		
Pied Avocet	<i>Recurvirostra avosetta</i>		2		
Little Ringed Plover	<i>Charadrius dubius</i>		69	4	14
Kentish Plover	<i>Charadrius alexandrinus</i>		26	120	115
Eurasian Curlew	<i>Numenius arquata</i>			4	

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Common Greenshank	<i>Tringa nebularia</i>			15	13
Wood Sandpiper	<i>Tringa glareola</i>			1	
Common Sandpiper	<i>Actitis hypoleucos</i>		18	4	6
Red-necked Stint	<i>Calidris ruficollis</i>		15		
unidentified <i>Calidris</i> sandpipers	<i>Calidris</i> spp.		3		
Black-tailed Gull	<i>Larus crassirostris</i>		63		16
unidentified gulls	Laridae spp.				27
<b>Total Waterbirds</b>			<b>1,948</b>	<b>1,130</b>	<b>1,357</b>

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

**3.4.2.4 Taiwan**

Forty-two sites were surveyed, 18 of which were IBAs, during 2002–2004 (Figure 27 and Table 45). Waterbird totals recorded were 87,370 (33 sites), 58,967 (23 sites) and 81,348 (33 sites) in AWC 2002, 2003 and 2004, respectively.

There were no records of any sites holding more than 20,000 waterbirds; the only record close to this figure was at Au-ko, with 17,558 individuals recorded in 2002. A total of 27 sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

Totals of 112 waterbird and one albatross species were recorded (Table 46). The most numerous species recorded were Dunlin (16,788 in 2002), Common Teal (14,838 in 2004), Kentish Plover (12,526 in 2002), Common Black-headed Gull (11,156 in 2002), Great Cormorant (5,815 in 2004), Pacific Golden Plover (5,694 in 2004), Whiskered Tern (3,946 in 2004) and Eurasian Wigeon (3,107 in 2002).

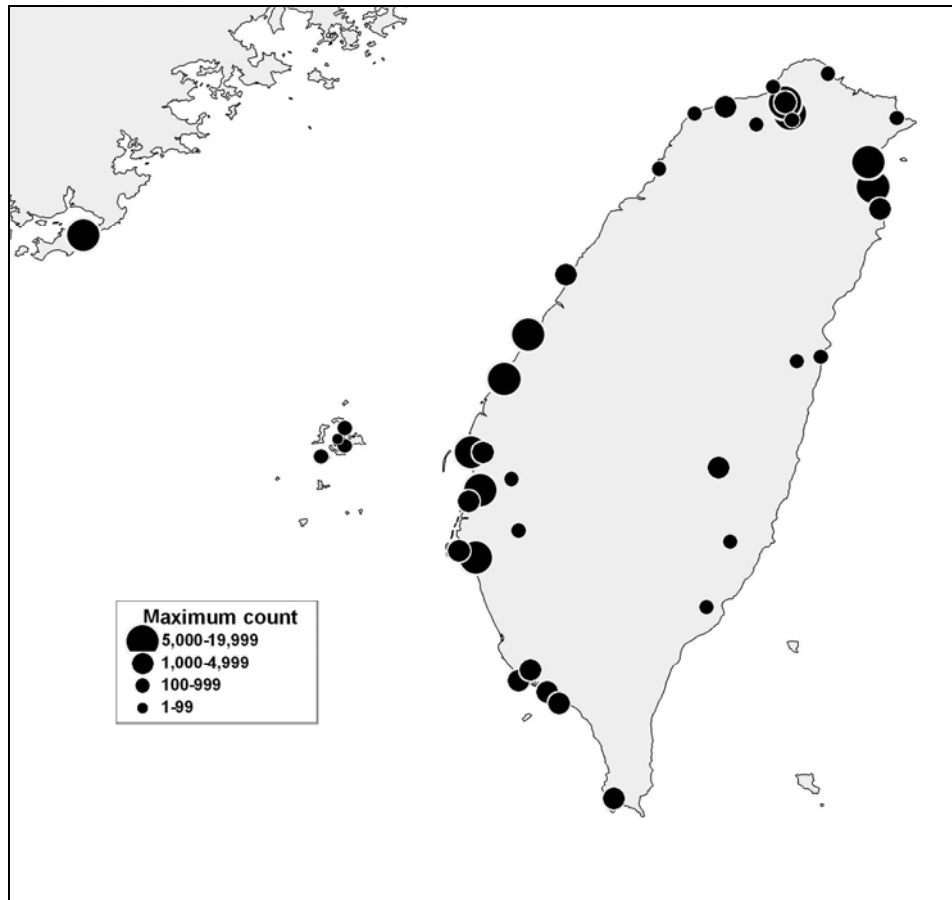
Globally threatened species recorded were: Endangered: Oriental Stork (1 in 2002 and 2003), Black-faced Spoonbill (594 in 2002), Scaly-sided Merganser (1 in 2004), Red-crowned Crane (2 in 2004, one bird was recorded at different sites during the census period); Vulnerable: Dalmatian Pelican (2 in 2004), Chinese Egret (1 in 2004), Lesser White-fronted Goose (1 in 2003), Baikal Teal (3 in 2002), Saunders's Gull (746 in 2004) and Laysan Albatross (1 in 2004).

Near Threatened species recorded were Black-headed Ibis (1 in 2003 and 2004), Falcatied Duck (24 in 2002), Asian Dowitcher (1 in 2002) and Black-tailed Godwit (6 in 2003 and 2004).

According to the AWC reports and Woei-hong Fang (pers. comm., Sept. 2006), the major threat to waterbirds and their habitats is reclamation of tidal flats and salt marshes, particularly on the west coast of Taiwan. In recent years, a series of windmill turbines for electricity generation have been built along the coastline. Some of the windmills have been constructed on the high-tide roost sites of shorebirds, and the impact of the birds on the suitability and safety of these sites has become a serious concern. Disease is also a threat to wetland birds: in the northern winter of 2002–2003, an outbreak of avian botulism in Tseng-wen estuary killed more than 70 Endangered Black-faced Spoonbill. Appropriate wetland management should be undertaken to minimise any recurrence of this type of crisis.

The census was coordinated by the Wild Bird Federation Taiwan.

**Figure 27: AWC site coverage and numerical distribution of waterbirds in Taiwan, 2002–2004**



**Table 45: Wetland sites surveyed during the AWC in Taiwan, 2002–2004**

County	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Changhua	Han-Pao	I	G	9,631	1,688	947
Changhua	Hsi-Kang (Ta Cheng)	I		6,526		547
Chiayi	Ao-Ku	I		17,558	16,485	5,502
Chiayi	Pei Kang Hsi (Yun-Chia-Chiao)		6	2,981		
Chiayi	Pu-Tai	I	G	4,290	2,558	5,694
Chinmen	Chin-Men Island	I		5,400	6,602	1,784
Hsinchu	Ku-Liao (Kang Nan)		A	890	660	911
Hwalien	Hwa-Lien-Chi	I	2K	339	8	347
Hwalien	Li-Yu-Tan				414	
Ilan	Chu-An	I	6G	3,938	4,135	10,948
Ilan	Lan-Yang-Hsi (River)	I		276	4,193	10,571
Ilan	Li-Tse	I		3,216	25	1,973
Ilan	Wu-Wei-Hsi (Kang)		1	1,373	1,736	343
Kaohsiung	Feng-Shan Reservoir	I		78		3,272
Kaohsiung	Kao-Ping-Hsi (River)	I	A			3,882
Penghu	Cheng-Kung Reservoir					137
Penghu	Chi-Tou					121
Penghu	Chung-Kuang				35	
Penghu	Sin-Jen Reservoir			286	365	279
Pingtung	Lin-Pien-Chi (Hsi)			1,271		2,472
Pingtung	Lung-Luan-Tan		1	1,943	329	
Pingtung	Tung Kung					1,944
Taichung	Ta-Chia River (Kao Mei)	I	G	2,018		
Tainan	Hu-Lu-Pei	I				446
Tainan	Pei-Men	I	G	2,904		
Tainan	Szu-Tsao	I	1	3,262	5,397	6,636
Tainan	Tseng-Wen Hsi (River) / Chi Ku	I	GL	557	641	4,612
Taipei	Chin-Shan		I	154		31
Taipei	Chun-Cheng-Chiao		L			626
Taipei	Chung-Kuo-Hai-Chuan (She-Tzu)			1,808	131	2,572

County	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Taipei	Err Chung		L	1,988	5,061	6,531
Taipei	Guandu Marsh	I	L	1,894	1,471	2,271
Taipei	Hua-Chiang-Chiao (Bridge)		2L	5,850	6,450	3,306
Taipei	Hua-Chun-Chiao		L	670		
Taipei	Kung-Liao		6	158		158
Taipei	Wa-Tsu-Wei	I	LG	386	388	791
Taitung	Chih-Shang (Ta Po Chi)			295	15	95
Taitung	Pei-Nan-Hsi (River)					105
Taoyuan	Kuan Ing			893		
Taoyuan	Ta-Yuan		68	1,361	180	479
Yunlin	Pao-Chung			930		
Yunlin	Shui-Lin		6	2,246		1,016

**Notes:**

Status<sup>1</sup>: I – IBA identified by BirdLife International (2005).

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/recreation.

**Table 46: Waterbird species counts reported during the AWC in Taiwan, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Little Grebe	<i>Tachybaptus ruficollis</i>		372	174	450
Great Crested Grebe	<i>Podiceps cristatus</i>		11	72	
Black-necked Grebe	<i>Podiceps nigricollis</i>		1		2
unidentified grebes	Podicipedidae spp.		1		
Dalmatian Pelican	<i>Pelecanus crispus</i>	VU			2
Great Cormorant	<i>Phalacrocorax carbo</i>		2,224	4,015	5,815
Grey Heron	<i>Ardea cinerea</i>		1,783	2,002	2,610
Eastern White Egret	<i>Ardea modesta</i>		1,255	495	1,865
Intermediate Egret	<i>Ardea intermedia</i>		188	67	487
Purple Heron	<i>Ardea purpurea</i>		4	8	6
Cattle Egret	<i>Ardea (Bubulcus) ibis</i>		528	118	870
Green-backed Heron	<i>Butorides striatus</i>			3	2
Chinese Pond Heron	<i>Ardeola bacchus</i>		4	1	15
Pied Heron	<i>Egretta picata</i>				1
Little Egret	<i>Egretta garzetta</i>		2,800	1,052	2,548
Chinese Egret	<i>Egretta eulophotes</i>	VU			1
Eastern Reef Heron	<i>Egretta sacra</i>		2	2	6
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		1,447	1,151	1,955
Malayan Night-heron	<i>Gorsachius melanolophus</i>				1
Eurasian Bittern	<i>Botaurus stellaris</i>		1	1	1
Yellow Bittern	<i>Ixobrychus sinensis</i>		13	5	30
Cinnamon Bittern	<i>Ixobrychus cinnamomeus</i>		5	4	8
Black Stork	<i>Ciconia nigra</i>		1	2	3
Oriental Stork	<i>Ciconia boyciana</i>	EN	1	1	
Black-headed Ibis	<i>Threskiornis melanocephalus</i>	NT		1	1
Eurasian Spoonbill	<i>Platalea leucorodia</i>		3	1	1
Black-faced Spoonbill	<i>Platalea minor</i>	EN	594	379	505
Bean Goose	<i>Anser fabalis</i>				2
Greater White-fronted Goose	<i>Anser albifrons</i>				7
Lesser White-fronted Goose	<i>Anser erythropus</i>	VU			1
Ruddy Shelduck	<i>Tadorna ferruginea</i>			1	1
Common Shelduck	<i>Tadorna tadorna</i>		5	2	3
Eurasian Wigeon	<i>Anas penelope</i>		3,107	838	1,089
Falcated Duck	<i>Anas falcata</i>	NT	24	3	14
Gadwall	<i>Anas strepera</i>		48	35	53
Baikal Teal	<i>Anas formosa</i>	VU	3		2
Common Teal	<i>Anas crecca</i>		12,261	14,691	14,838
Mallard	<i>Anas platyrhynchos</i>		115	11	74
Spot-billed Duck	<i>Anas poecilorhyncha</i>		1,575	552	1,212
Northern Pintail	<i>Anas acuta</i>		1,018	716	810
Garganey	<i>Anas querquedula</i>		42	3	41
Northern Shoveler	<i>Anas clypeata</i>		1,182	1,274	1,555
Common Pochard	<i>Aythya ferina</i>		1	20	11
Tufted Duck	<i>Aythya fuligula</i>		2,288	1,048	620
Greater Scaup	<i>Aythya marila</i>		12	1	20
Common Goldeneye	<i>Bucephala clangula</i>		1		
Red-breasted Merganser	<i>Mergus serrator</i>		3	1	2



English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Scaly-sided Merganser	<i>Mergus squamatus</i>	EN			1
Red-crowned Crane	<i>Grus japonensis</i>	EN			2
Slaty-breasted Rail	<i>Gallirallus striatus</i>		8	4	5
Water Rail	<i>Rallus aquaticus</i>		2		1
White-breasted Waterhen	<i>Amaurornis phoenicurus</i>		58	56	83
Ruddy-breasted Crake	<i>Porzana fusca</i>		16	5	33
Common Moorhen	<i>Gallinula chloropus</i>		643	505	1,075
Common Coot	<i>Fulica atra</i>		152	84	150
Pheasant-tailed Jacana	<i>Hydrophasianus chirurgus</i>				7
Greater Painted Snipe	<i>Rostratula benghalensis</i>		24	15	5
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>		3	4	1
Black-winged Stilt	<i>Himantopus himantopus</i>		260	534	2,064
Pied Avocet	<i>Recurvirostra avosetta</i>		3	190	107
Northern Lapwing	<i>Vanellus vanellus</i>		1,101	106	245
Grey-headed Lapwing	<i>Vanellus cinereus</i>			1	2
Pacific Golden Plover	<i>Pluvialis fulva</i>		2,124	2,931	5,694
Grey Plover	<i>Pluvialis squatarola</i>		1,361	173	352
Great Ringed Plover	<i>Charadrius hiaticula</i>		1		2
Long-billed Plover	<i>Charadrius placidus</i>				2
Little Ringed Plover	<i>Charadrius dubius</i>		895	524	2,342
Kentish Plover	<i>Charadrius alexandrinus</i>		12,526	4,447	11,465
Lesser Sandplover	<i>Charadrius mongolus</i>		30	930	443
Greater Sandplover	<i>Charadrius leschenaultii</i>		17	5	285
Eurasian Woodcock	<i>Scolopax rusticola</i>		2		
Swinhoe's Snipe	<i>Gallinago megala</i>		3		
Common Snipe	<i>Gallinago gallinago</i>		211	69	263
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>		4	6	7
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT	1		
Black-tailed Godwit	<i>Limosa limosa</i>	NT	4	6	6
Bar-tailed Godwit	<i>Limosa lapponica</i>		1	5	2
Whimbrel	<i>Numenius phaeopus</i>		53	20	91
Eurasian Curlew	<i>Numenius arquata</i>		261	550	265
Far Eastern Curlew	<i>Numenius madagascariensis</i>		2		
Spotted Redshank	<i>Tringa erythropus</i>		4	3	30
Common Redshank	<i>Tringa totanus</i>		203	57	219
Marsh Sandpiper	<i>Tringa stagnatilis</i>		240	30	954
Common Greenshank	<i>Tringa nebularia</i>		918	619	1,311
Green Sandpiper	<i>Tringa ochropus</i>		42	12	30
Wood Sandpiper	<i>Tringa glareola</i>		319	510	590
Terek Sandpiper	<i>Xenus cinereus</i>		1		1
Common Sandpiper	<i>Actitis hypoleucos</i>		150	69	165
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		1		10
Ruddy Turnstone	<i>Arenaria interpres</i>		873	235	57
Red Knot	<i>Calidris canutus</i>		62		
Great Knot	<i>Calidris tenuirostris</i>		59		130
Sanderling	<i>Calidris alba</i>		101	4	7
Red-necked Stint	<i>Calidris ruficollis</i>		701	560	1,477
Temminck's Stint	<i>Calidris temminckii</i>		3	6	4
Long-toed Stint	<i>Calidris subminuta</i>		403	86	424
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>				10
Curlew Sandpiper	<i>Calidris ferruginea</i>		2		256
Dunlin	<i>Calidris alpina</i>		16,788	14,271	5,494
Ruff	<i>Philomachus pugnax</i>		6	1	42
Grey Phalarope	<i>Phalaropus fulicarius</i>			3	
Black-tailed Gull	<i>Larus crassirostris</i>		2	51	84
Common (Mew) Gull	<i>Larus canus</i>				1
Herring Gull	<i>Larus argentatus</i>		142	62	63
Great Black-headed (Pallas's) Gull	<i>Larus ichthyaetus</i>				1
Common Black-headed Gull	<i>Larus ridibundus</i>		11,156	1,849	2,388
Saunders's Gull	<i>Larus saundersi</i>	VU	746	64	80
Gull-billed Tern	<i>Gelochelidon nilotica</i>		5	6	3
Caspian Tern	<i>Sterna caspia</i>		218	508	984
(Greater) Crested Tern	<i>Sterna bergii</i>				2
Common Tern	<i>Sterna hirundo</i>				18
Little Tern	<i>Sterna albifrons</i>		50	2	27
Whiskered Tern	<i>Chlidonias hybridus</i>		1,486	39	3,946
<b>Total Waterbirds</b>			<b>87,370</b>	<b>58,967</b>	<b>81,348</b>
Laysan Albatross	<i>Phoebastria immutabilis</i>	VU			1

**Note:**

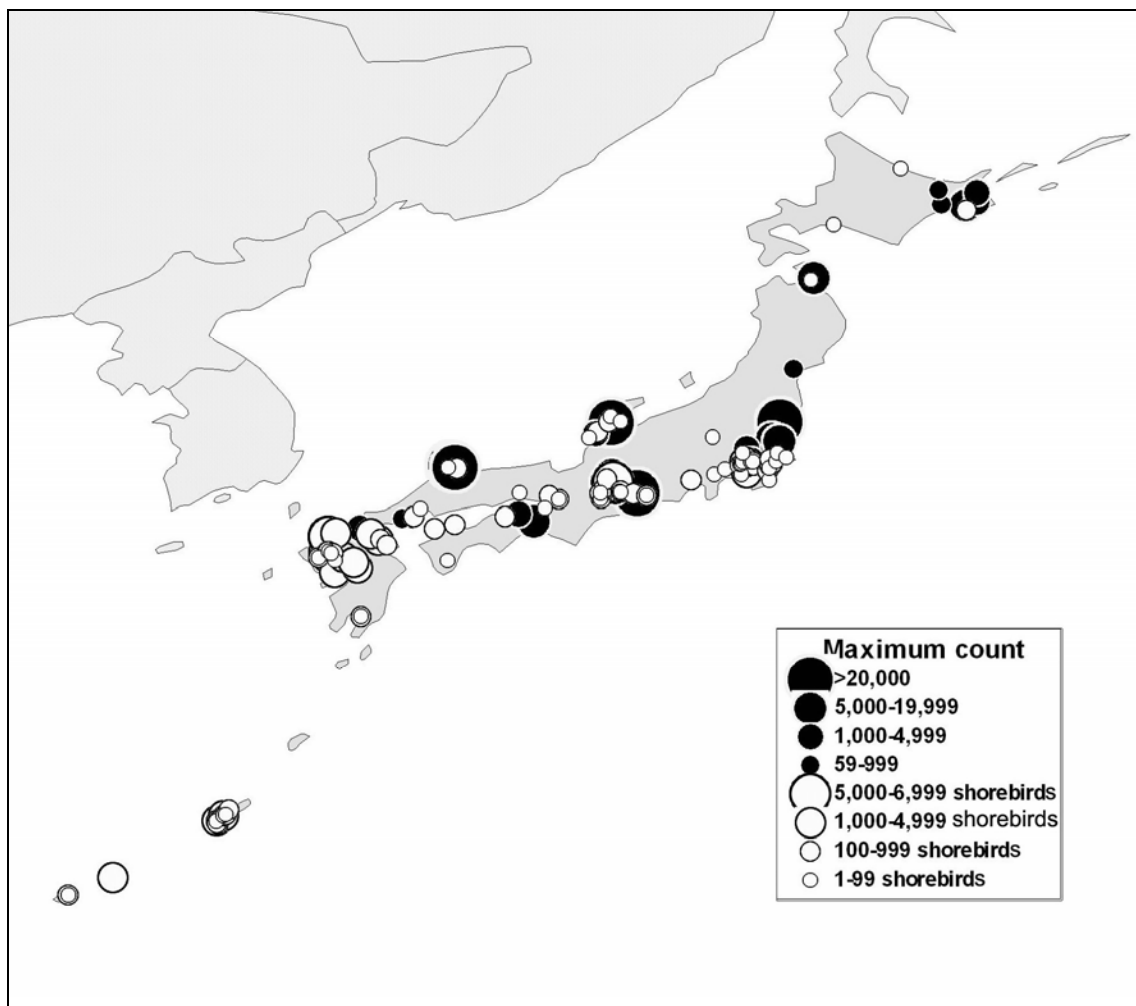
GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.4.3 Japan

Data from 28 sites in Japan (26, 21 and 20 in 2002, 2003 and 2004 respectively) were contributed by individual observers during 2002–2004 (see Figure 28 and Table 47a).

The Japanese Government has conducted an annual Anatidae count since 1970; the census is carried out 10 days before and after January 15. Later, annual crane and shorebird counts were also carried out as part of a research programme of the Ministry of the Environment Japan. With the agreement of the Ministry, a summary of the data from the annual Anatidae, crane and shorebird counts made during 2002–2004 (Nature Conservation Bureau of Ministry of the Environment Japan 2002, 2003, 2004; Wildlife Division of Ministry of the Environment Japan and WWF – Japan 2002, 2003, 2004) was received from the Wild Bird Society of Japan and WWF–Japan, and these data are also presented in this section.

**Figure 28: AWC site coverage and numerical distribution of waterbirds in Japan, 2002–2004**



The Anatidae count was carried out at 9,005 sites in 2002, 8,975 sites in 2003 and 9,482 sites in 2004. The crane count was conducted in three main areas, Izumi (highest count of 9,432 Hooded Cranes in 2004 and 3,069 White-naped Cranes in 2003), Yashiro (16 Hooded Cranes in 2002) and Eastern Hokkaido (908 Red-crowned Cranes in 2003). The shorebird count (see Tables 47a and 47b) was conducted at 70, 76 and 76 sites in 2002, 2003 and 2004 respectively. Totals for the annual counts of Anatidae, cranes and shorebirds are given in Table 48a.

Data for waterbird species other than Anatidae, crane and shorebirds at the 28 sites counted by individual observers are given in Table 48b. Waterbird totals recorded (annual Anatidae, crane and shorebird counts in addition to other waterbird species recorded at 28 AWC sites) were 2,037,095, 2,063,511 and 2,118,657 individuals in 2002, 2003 and 2004 respectively.

Of the 28 AWC sites, 10 are Ramsar sites, 16 are IBAs and seven are EAAF Migratory Waterbird Network sites. Sites that recorded more than 20,000 waterbirds were Toyokawa River Mouth (74,377 in 2002), Kasumigaura (64,741 in 2002), Kahokugata Lake (39,207 in 2003), Shinji Lake (48,107 in 2002) and Nakaumi (79,982 in 2004). A total of 18 sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

Of the 94 additional shorebird count sites, two were Ramsar sites, 21 were IBAs and five were EAAF Migratory Waterbird Network sites. Nine of the additional sites recorded more than 1% of the biogeographic population of at least one species of waterbird.

Totals of 123 waterbird and two raptor species were recorded. The most numerous species (>50,000 individuals) recorded were Mallard (highest count of 452,785 in 2003), Greater Scaup (267,590 in 2004), Spot-billed Duck (204,004 in 2002), Common Teal (195,125 in 2004), Eurasian Wigeon (188,048 in 2002), Northern Pintail (187,986 in 2002), Common Pochard (179,633 in 2002), Tufted Duck (121,288 in 2004) and Greater White-fronted Goose (96,426 in 2003).

The highest count totals of 13 globally threatened species were as follows: Endangered: Japanese Night-heron (7 in 2002), Black-faced Spoonbill (38 in 2002), Swan Goose (1 in 2002), Scaly-sided Merganser (1 in 2004), Red-crowned Crane (908 in 2003), Spoon-billed Sandpiper (1 in 2002); Vulnerable Lesser White-fronted Goose (6 in 2004), Baikal Teal (3,273 in 2002), Baer's Pochard (12 in 2003), Hooded Crane (9,443 in 2004), White-naped Crane (3,069 in 2003), Saunders's Gull (49 in 2002) and Steller's Sea-eagle (27 in 2002). Highest count totals of three Near Threatened species were: Falcated Duck (9,809 in 2004), Black-tailed Godwit (3 in 2004) and White-tailed Eagle (3 in 2002).

Information provided for 28 wetland sites revealed that human disturbance from fishing and tourism resulted in the most significant threats to the waterbirds and wetlands. In a few wetlands, reclamation has also been reported.

**Table 47a: Wetland sites surveyed during the AWC in Japan, 2002–2004**

Prefecture	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Aichi	Fujimae Tidal Flat	R, I, S	1	6,112	2,244*	4,466
Aichi	Kiso River Mouth		FGIKL	8,456	5,873	10,965
Aichi	Shio-Kawa Higata	I	25DG	8,892	3534*	
Aichi	Toyokawa River Mouth		28CD	74,377		
Aichi	Uno Pond		1	1,423	1,201	1,006
Aomori	Ogawara Lake	pl	8CD	8,017	7,150	9,735
Fukuoka	East Region of Ariake Sea	I	1	7,781		
Fukuoka	East Region of Hakata Bay	I	J	15,349	11,621	15,171
Fukuoka	Imazu		1	2,967	3,659	6,999
Gifu	Nagara River	R	2KL	7,352	4,350	13,212
Hokkaido	Akkeshi Lake	R, I, A, C	G	5,171	3,871	
Hokkaido	Furen Lake	R, I	267DHL	358	334	1,497
Hokkaido	Kiritappu Marsh	R, I, C	9GIL	107	326	134
Hokkaido	Kushiro Marsh and Surrounding Rivers	R, I, A, C	26GL	360		
Hokkaido	Kussharo Lake		8GL	762		
Hokkaido	Notsuke Bay	R, I	HL		2,187	1,030
Ibaragi	Kitaura		GHL	7,669	7,628	7,155
Ibaraki	Hinuma		89GL	2,691	7,103	5,881
Ibaraki	Kasumigaura	I	89DFGL	64,741	54,869	39,000
Ibaraki	Sugao Marshes		28GL	2,090	2,111	1,590
Ishikawa	Kahokugata Lake	I	568G	32,309	39,207	442*
Ishikawa	Katano Kamoike	R, I, A	2L	2,981	1,856	1,210
Miyagi	Gamou Lagoon		GIL	664		
Osaka	Nanko Yacho-En (Bird Sanctuary)	I, S	1	100*	974	298
Osaka	Yodogawa River		89CGIL	11,871	8,802	8,627
Shimane	Shinji Lake	R, I	GHL	48,107	39,444	41,867
Shimane and Tottori	Nakaumi	R, I	GH			
Yamaguchi	Yashiro	C	IL	54,583	10,360	79,982
				18	13	59

**Notes:**

Status<sup>1</sup>: R – Ramsar site, I – IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), A – Anatidae site of the Migratory Waterbird Network in the East Asian Flyway, C – Crane site of the Migratory Waterbird Network in the East Asian Flyway, S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway.

Threats<sup>2</sup>: 1 – None identified, 2 – Sedimentation, 3 – Excessive overgrowth of vegetation, 4 – Cutting/clearance of vegetation, 5 – Eutrophication, 6 – Agriculture along drying margins, 7 – Excessive cattle grazing, 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste, B – Oil pollution, C – Pesticides, D – Fertilisers, E – Mining, F – Hunting/trapping/poaching of birds, G – Small-scale fishing, H – Large-scale fishing, I – Partial reclamation, J – Complete reclamation, K – Dam/barrage construction, L – Tourism/ recreation.

\* – Count includes only shorebird numbers.

**Table 47b: Additional wetland sites surveyed for shorebirds during the AWC in Japan, 2002–2004**

Prefecture	Site Name	Status <sup>1</sup>	2002	2003	2004
Aichi	Ikawazu	I	740	574	812
Aichi	Jinno Shinden		125	26	
Aichi	Shio Kawa Tideland	I	8892		
Aichi	Tatsuta-Mura		366	104	96
Aichi	Yahagi-Gawa Kakou	I	181	183	157
Aichi	Yahagihuru-Kawa Kakou			747	
Aomori	Takase-Gawa Kakou		5		
Chiba	Banzu	pl	1516	3059	1245
Chiba	Hori-Kawa, Magame-Gawa		1	43	88
Chiba	Ichinomiya-Gawa Kakou		174	216	249
Chiba	Iioka Kaigan		163	236	23
Chiba	Kido-Gawa, Kuriyama-Gawa		205	190	156
Chiba	Kuriyama-Gawa, Shin-Kawa			48	40
Chiba	Magame-Gawa, Sakuda-Gawa		497	160	
Chiba	Makuhari C-Hama		177	37	
Chiba	Messe Chuushajou			44	48
Chiba	Nabaki-Gawa, Hori-Kawa		2	15	27
Chiba	Sakuda-Gawa, Kido-Gawa		392	369	75
Chiba	Sanbanse		2009	1990	2985
Chiba	Yatsu Tidal Mudflat	R, I, S	1439	1885	1280
Chiba	Yourou-Gawa Kakou			350	
Ehime	Daimyoujin-Gawa, Takasu Kaigan, Shin-Kawa		113	113	67
Ehime	Kamo-Gawa Kakou	I	272	292	362
Ehime	Shigenobu-Gawa Kakou		507	303	393
Fukuoka	Sone-Tideland	I	796	1539	761
Fukuoka	Wajiro Higata		2955	2997	2123
Gunma	Nisikaminomiya-Machi				2
Hiroshima	Yahata-Gawa Kakou		3	58	76
Hokkaido	Komuke Lake	pl		5	
Hokkaido	Mukawa Kakou	I			2
Hyogo	Hamakoushien		70	235	79
Hyogo	Nakajima Futou				2
Ibaraki	Hasaki Shinkou		79	31	24
Ibaraki	Hazaki-Chou Yatabe		19	21	1
Ibaraki	Kamisu-Chou Takahama		46	17	26
Ishikawa	Daishouji-Gawa Karyuu Suiden			13	
Ishikawa	Komaiko Kaigan	I	253		127
Ishikawa	Ouchi-Gata		79		18
Ishikawa	Takamatsu, Kahoku Kaigan			479	469
Kagoshima	Fukiagehama Kaigan		589	331	195
Kanagawa	Ebina-Shi Katsuse		14	17	15
Kanagawa	Sakawa-Gawa Chuuryuui		24	10	
Kouchi	Oogata-Machi				1
Kumamoto	Arao Kaigan		1313	720	1658
Kumamoto	Kuma-Gawa Kakou	I, S	1008	1443	1961
Kumamoto	Oono-Gawa, Suna-Gawa Kakou		2640	2795	2395
Kumamoto	Shira-Kawa Kakou	I	1397	2611	311
Kyoto	Oguraike Kantakuden		39	30	29
Mie	Anou-Gawa Kakou, Shitomo-Gawa Kakou	I	365	217	63
Mie	Atago-Gawa, Kushida-Gawa		633	487	305
Mie	Kumozu-Gawa Kakou, Gonushi Kaigan	pl	313	498	373
Mie	Suzuka-Gawa Kakou, Suzuka-Hasen Kakou		81	12	148
Mie	Toyotsuura, Machiyaura		429	548	445
Nagasaki	Isahaya Bay	I	8	15	
Okinawa	Awase Higata	I	1265	1542	1995
Okinawa	Gushi Higata		109	236	97
Okinawa	Hiyagon Shicchi		297	976	644
Okinawa	Komesu Kaigan		290	62	108
Okinawa	Manko	R, I, S	1266	655	920
Okinawa	Mukue-Gawa		224	90	24
Okinawa	Okukubi-Gawa Kakou		307	293	386
Okinawa	Onaga		344	378	
Okinawa	Shioya Higata		78	30	
Okinawa	Shiraho, Miyara-Wan		895	934	647
Okinawa	Teruma Higata		402	110	
Okinawa	Yonaha-Wan			594	1410
Okinawa	Yone Sankaku-Ike	pl	99	41	2
Ooita	Morie-Wan		67	469	24
Ooita	Nakatsu Kaigan	I	1966	2275	1301
Ooita	Usa Kaigan		953	1556	1111

Prefecture	Site Name	Status <sup>1</sup>	2002	2003	2004
Ooita	Takada, Matama Kaigan		285	189	128
Osaka	Osato-Gawa Kakou		88	53	25
Saga	Daijugarami		5592	6916	5287
Saga	Heiwagarami			52	
Saga	Kase-Gawa Kakou			849	
Saga	Kashima Shingomori	S	658	535	892
Saga	Oonoshima			187	8
Saga	Rokkaku-Gawa Kakou		60	117	57
Saitama	Azuma-Chou, Taisei-Chou		21	5	24
Saitama	Ookubo Noukouchi		12	2	
Shimane	Iinashi-Gawa Kakou		255	302	344
Shimane	Sada-Gawa			41	
Shizuoka	Fuji-Gawa Kakou		221	191	237
Tochigi	Inba-Numa		56		
Tochigi	Tochigi-Ken Nanbu Suiden-Chitai		41	32	45
Tokushima	Yoshino River Estuary	I, S	1046	1192	987
Tokyo	Kasai Kaihinkouen		600	1341	1039
Tokyo	Tama-Gawa Kakou	pl	163	118	140
Tokyo	Tama-Gawa Karyuiki		52	36	77
Tokyo	Toukyou-Kou Chobokujou			53	
Tokyo	Toukyou-Kou Yatyouen Shuuhun			12	9
Tokyo	Tyuuou-Bouhatei Uchi-Sotogawa Umetatechi		1	28	4
Toyama	Toyama Shinkou				37
Yamaguchi	Iwaguni-Shi Ozu Hasuta		101	254	197

**Note:**

Status<sup>1</sup>: R – Ramsar site, I – IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), A – Anatidae site of the Migratory Waterbird Network in the East Asian Flyway.

**Table 48a: Anatidae, crane and shorebird species recorded during the AWC period in Japan, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
<b>Anatidae count</b>					
Lesser Whistling Duck	<i>Dendrocygna javanica</i>				5
Mute Swan	<i>Cygnus olor</i>		226	160	138
Whooper Swan	<i>Cygnus Cygnus</i>		32,017	32,303	32,820
Tundra (Whistling) Swan	<i>Cygnus columbianus</i>		34,506	39,143	45,311
unidentified swans	<i>Cygnus spp.</i>		323	158	27
Swan Goose	<i>Anser cygnoides</i>	EN	1		
Bean Goose	<i>Anser fabalis</i>		11,454	13,649	11,519
Greater White-fronted Goose	<i>Anser albifrons</i>		56,740	96,426	68,363
Lesser White-fronted Goose	<i>Anser erythropus</i>	VU	5	4	6
Greylag Goose	<i>Anser anser</i>		1		3
Lesser Snow Goose	<i>Anser caerulescens</i>		16	7	11
Canada Goose	<i>Branta Canadensis</i>		31	28	10
Brent Goose	<i>Branta bernicla</i>		715	667	753
unidentified geese	<i>Anser spp.</i>		738	74	244
Ruddy Shelduck	<i>Tadorna ferruginea</i>		1	4	1
Common Shelduck	<i>Tadorna tadorna</i>		718	791	621
Mandarin Duck	<i>Aix galericulata</i>		25,926	28,210	23,913
Eurasian Wigeon	<i>Anas Penelope</i>		188,048	177,626	168,964
American Wigeon	<i>Anas Americana</i>		63	92	52
Falcated Duck	<i>Anas falcate</i>	NT	8,166	9,165	9,809
Gadwall	<i>Anas strepera</i>		17,448	18,029	17,719
Baikal Teal	<i>Anas formosa</i>	VU	3,273	2,968	2,841
Common Teal	<i>Anas crecca</i>		175,765	183,900	195,125
Mallard	<i>Anas platyrhynchos</i>		438,707	452,785	433,777
Spot-billed Duck	<i>Anas poecilorhyncha</i>		204,004	202,375	202,055
Northern Pintail	<i>Anas acuta</i>		187,986	182,385	178,599
Garganey	<i>Anas querquedula</i>		1	6	6
Northern Shoveler	<i>Anas clypeata</i>		16,470	15,007	16,627
Red-crested Pochard	<i>Netta rufina</i>		2		1
Canvasback	<i>Aythya valisineria</i>		10	16	2
Common Pochard	<i>Aythya ferina</i>		179,633	164,826	168,507
Baer's Pochard	<i>Aythya baeri</i>	VU	4	12	6
Tufted Duck	<i>Aythya fuligula</i>		92,698	78,398	121,288
Greater Scaup	<i>Aythya marila</i>		184,949	204,194	267,590
Harlequin Duck	<i>Histrionicus histrionicus</i>		2,413	2,329	1,635
Common Scoter	<i>Melanitta nigra</i>		16,028	8,706	8,705

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Velvet Scoter	<i>Melanitta fusca</i>		725	304	90
Long-tailed Duck	<i>Clangula hyemalis</i>		1,302	927	378
Common Goldeneye	<i>Bucephala clangula</i>		3,904	3,563	2,616
Smew	<i>Mergellus albellus</i>		2,378	2,235	1,834
Red-breasted Merganser	<i>Mergus serrator</i>		4,523	3,382	2,927
Scaly-sided Merganser	<i>Mergus squamatus</i>	EN			1
Goosander	<i>Mergus merganser</i>		5,626	4,539	4,198
unidentified ducks	Anatinae spp.		60,517	49,265	58,606
<b>Crane count</b>					
White-naped Crane	<i>Grus vipio</i>	VU	2,737	3,069	2,397
Hooded Crane	<i>Grus monacha</i>	VU	8,506	8,950	9,443
Red-crowned Crane	<i>Grus japonensis</i>	EN	808	908	822
<b>Shorebird count</b>					
Greater Painted Snipe	<i>Rostratula benghalensis</i>		2	2	4
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>		153	163	106
Black-winged Stilt	<i>Himantopus himantopus</i>		174	80	124
Pied Avocet	<i>Recurvirostra avosetta</i>		1	6	2
Northern Lapwing	<i>Vanellus vanellus</i>		1,035	985	663
Grey-headed Lapwing	<i>Vanellus cinereus</i>		306	302	202
Pacific Golden Plover	<i>Pluvialis fulva</i>		1,761	2,530	2,121
Grey Plover	<i>Pluvialis squatarola</i>		2,790	3,504	2,691
Great Ringed Plover	<i>Charadrius hiaticula</i>		16	12	13
Long-billed Plover	<i>Charadrius placidus</i>		111	84	103
Little Ringed Plover	<i>Charadrius dubius</i>		382	152	291
Kentish Plover	<i>Charadrius alexandrinus</i>		5,594	6,376	5,659
Lesser Sandplover	<i>Charadrius mongolus</i>		602	664	1,078
Greater Sandplover	<i>Charadrius leschenaultii</i>		24	203	610
Eurasian Woodcock	<i>Scolopax rusticola</i>		1	3	
Latham's Snipe	<i>Gallinago hardwickii</i>			1	
Pintail Snipe	<i>Gallinago stenura</i>			1	
Swinhoe's Snipe	<i>Gallinago megala</i>			1	
Common Snipe	<i>Gallinago gallinago</i>		499	511	364
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>		17	16	26
Black-tailed Godwit	<i>Limosa limosa</i>	NT	2	1	3
Bar-tailed Godwit	<i>Limosa lapponica</i>		7	7	12
Whimbrel	<i>Numenius phaeopus</i>		64	42	28
Eurasian Curlew	<i>Numenius arquata</i>		548	651	483
Far Eastern Curlew	<i>Numenius madagascariensis</i>		6	8	5
Spotted Redshank	<i>Tringa erythropus</i>		3	3	7
Common Redshank	<i>Tringa totanus</i>		104	67	59
Marsh Sandpiper	<i>Tringa stagnatilis</i>		39	26	9
Common Greenshank	<i>Tringa nebularia</i>		286	322	233
Green Sandpiper	<i>Tringa ochropus</i>		64	48	36
Wood Sandpiper	<i>Tringa glareola</i>		91	33	30
Terek Sandpiper	<i>Xenus cinereus</i>		16		70
Common Sandpiper	<i>Actitis hypoleucos</i>		284	269	207
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		158	148	116
Ruddy Turnstone	<i>Arenaria interpres</i>		264	380	297
Red Knot	<i>Calidris canutus</i>		4		2
Great Knot	<i>Calidris tenuirostris</i>				7
Sanderling	<i>Calidris alba</i>		1,927	2,041	1,686
Red-necked Stint	<i>Calidris ruficollis</i>		248	172	287
Little Stint	<i>Calidris minuta</i>		2	8	3
Temminck's Stint	<i>Calidris temminckii</i>		28	28	24
Long-toed Stint	<i>Calidris subminuta</i>		173	58	193
Pectoral Sandpiper	<i>Calidris melanotos</i>				1
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>			1	2
Dunlin	<i>Calidris alpina</i>		28,955	37,922	26,254
Spoon-billed Sandpiper	<i>Eurynorhynchus pygmaeus</i>	EN	1		
Ruff	<i>Philomachus pugnax</i>		10	11	8
unidentified shorebirds	Charadrii spp.		358		1

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

**Table 48b: Other waterbird species recorded during the AWC in Japan, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Black-throated Diver	<i>Gavia arctica</i>			1	
Little Grebe	<i>Tachybaptus ruficollis</i>		744	395	467
Red-necked Grebe	<i>Podiceps grisegena</i>		1		
Great Crested Grebe	<i>Podiceps cristatus</i>		486	712	384
Horned Grebe	<i>Podiceps auritus</i>		28	31	4
Black-necked Grebe	<i>Podiceps nigricollis</i>		604	214	200
unidentified grebes	Podicipedidae spp.		1		
Great Cormorant	<i>Phalacrocorax carbo</i>		5,590	2,694	3,158
Japanese Cormorant	<i>Phalacrocorax capillatus</i>		21	19	21
Pelagic Cormorant	<i>Phalacrocorax pelagicus</i>			2	2
unidentified cormorants	Phalacrocoracidae spp.		3	8	6
Grey Heron	<i>Ardea cinerea</i>		623	225	143
Eastern White Egret	<i>Ardea modesta</i>		178	85	135
Intermediate Egret	<i>Ardea intermedia</i>		3	1	2
Little Egret	<i>Egretta garzetta</i>		207	128	199
Eastern Reef Heron	<i>Egretta sacra</i>		1		2
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		1		
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		18	9	72
Japanese Night-heron	<i>Gorsachius goisagi</i>	EN	7		
Eurasian Bittern	<i>Botaurus stellaris</i>			1	
Eurasian Spoonbill	<i>Platalea leucorodia</i>		12		1
Black-faced Spoonbill	<i>Platalea minor</i>	EN	38	26	25
Common Crane	<i>Grus grus</i>			1	
Water Rail	<i>Rallus aquaticus</i>		1	2	4
Common Moorhen	<i>Gallinula chloropus</i>		69	44	72
Common Coot	<i>Fulica atra</i>		3,249	2,748	2,646
Black-tailed Gull	<i>Larus crassirostris</i>		106	255	134
Common (Mew) Gull	<i>Larus canus</i>		497	213	91
Glaucous-winged Gull	<i>Larus glaucescens</i>		2	17	1
Glaucous Gull	<i>Larus hyperboreus</i>		30	358	14
Herring Gull	<i>Larus argentatus</i>		831	493	348
Slaty-backed Gull	<i>Larus schistisagus</i>		49	499	46
Common Black-headed Gull	<i>Larus ridibundus</i>		4,406	2,514	3,961
Saunders's Gull	<i>Larus saundersi</i>	VU	49	39	29
unidentified gulls	Laridae spp.		9	342	
Whiskered Tern	<i>Chlidonias hybridus</i>		7	5	1
<b>Total Waterbirds</b>			<b>2,037,095</b>	<b>2,063,511</b>	<b>2,118,657</b>
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT	3		
Steller's Sea-eagle	<i>Haliaeetus pelagicus</i>	VU	27		

**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.4.4 Republic of Korea

A total of 121 sites were surveyed in the 3-year period (Figure 29 and Table 49). Waterbird totals recorded were 893,933 (118 sites), 954,860 (113 sites) and 1,086,270 (115 sites) in 2002, 2003 and 2004, respectively. The survey results have been published by the Ministry of Environment (Ministry of Environment of the Republic of Korea 2002, 2003, 2004).

The site coverage included two Ramsar sites, one MAB Biosphere Reserve, 28 IBAs and four EAAF Migratory Waterbird Network sites.

The internationally important sites that recorded more than 20,000 waterbirds were the Geum River Reservoir (340,839 in 2003), Dongrim Reservoir (250,386 in 2004), Gocheonam Reservoir (87,357 in 2004), Siwha Reservoir (67,115 in 2004), Youngsan Reservoir Estuary (50,134 in 2004), Mangyung River Estuary (42,468 in 2004), Ganwol Reservoir (36,289 in 2004), Dongjin River Estuary (34,118 in 2002), Sapkyo Lake (25,678 in 2002), Geum River Estuary (25,094 in 2002), Hyungyungmyun, Muangun (20,965 in 2004) and Han River Estuary (20,395). In 2003, Nakdong Estuary and Lower Nakdong River recorded close to 20,000 waterbirds, with 19,165 and 18,036 waterbirds recorded respectively. A total of 54 sites recorded more than 1% of the biogeographic population of at least one waterbird species.

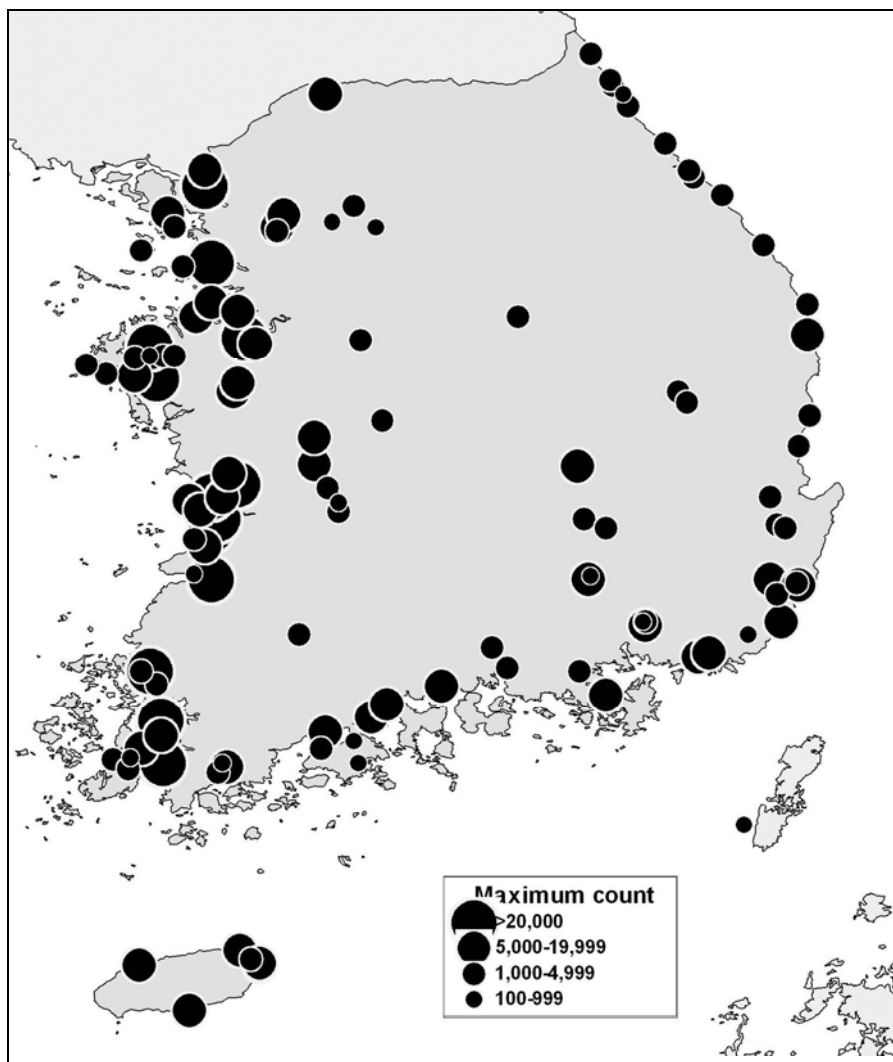
Totals of 94 waterbird, two seabird, 18 raptor and one kingfisher species were recorded (Table 50). The most numerous species were Baikal Teal (455,168 in 2004), Mallard (255,421 in 2002), Spot-billed Duck (67,806 in 2004), Greater White-fronted Goose (54,481 in 2004), Bean Goose (34,856 in 2004), Common Shelduck (30,986 in 2004), Herring Gull (29,863 in 2003), Common Pochard (26,000 in 2003), Black-tailed Gull (25,814 in 2003), Northern Pintail (22,814 in 2002), Common Black-headed Gull (22,267 in 2003) and Dunlin (15,613 in 2003).

The highest count totals of 14 globally threatened species were as follows: Endangered: Oriental Stork (10 in 2002), Black-faced Spoonbill (25 in 2002 and 2003), Swan Goose (36 in 2004), Scaly-sided Merganser (2 in 2002) and Red-crowned Crane (582 in 2004); Vulnerable: Chinese Egret (4 in 2002), Lesser White-fronted Goose (2 in 2004), Baikal Teal (455,168 in 2004), White-naped Crane (626 in 2004), Hooded Crane (216 in 2004), Saunders's Gull (1,853 in 2004), Relict Gull (2 in 2003), Steller's Sea-eagle (3 in 2002 and 2003) and Imperial Eagle (1 in 2002). Near Threatened species recorded were Falcated Duck (2,254 in 2003), Cinereus Vulture (475 in 2003) and White-tailed Eagle (30 in 2004).

While information on the conservation status of wetlands covered by the AWC were not received, several recent papers and publications have outlined a number of threats to wetlands supporting internationally important concentrations of waterbirds in the Republic of Korea, especially large-scale reclamation of intertidal wetlands and a lack of management (for biodiversity) of freshwater wetland areas. For a summary of threats and waterbird species of most concern see Moores (2002).

The census was coordinated by the National Institute for Environmental Research.

**Figure 29: AWC site coverage and numerical distribution of waterbirds in the Republic of Korea, 2002–2004**





**Table 49: Wetland sites surveyed during the AWC in the Republic of Korea, 2002–2004**

Province	Site Name	Status <sup>1</sup>	2002	2003	2004
Busan	Hoidong (Hwedong) Reservoir		761		
Busan	Nakdong Estuary	I	11,357	19,165	14,924
Busan	Lower Nakdong River		13,422	18,036	17,217
Chungbuk	Baegkok Reservoir		38	1,122	58
Chungbuk	Chopyung Reservoir		1,646	69	1
Chungbuk	Chungju Reservoir		1,246	2,780	2,678
Chungnam	Bongseon Reservoir		3,960	5,389	3,531
Chungnam	Bunam Reservoir		14,225	13,248	17,910
Chungnam	Daea Reservoir		153	653	633
Chungnam	Daechung Reservoir		3,661	3,295	2,265
Chungnam	Daeho Lake		13,707	20,975	9,611
Chungnam	Dongsang Reservoir		1,093	68	49
Chungnam	Gangsu (Kangsu) Reservoir		1,482	751	1,081
Chungnam	Ganwol (Kanwol) Reservoir		32,595	23,924	36,289
Chungnam	Geum (Kum) River Estuary	I	25,094	22,544	14,061
Chungnam	Geum (Kum) River Reservoir		159,895	340,839	108,371
Chungnam	Geunheungmyun Coast, Taeangun		2,836	1,915	4,983
Chungnam	Gyungcheon Reservoir		741	1,149	1,382
Chungnam	Jamhong Reservoir		1,862	3,595	2,194
Chungnam	Janghang Coast		4,067	7,748	6,183
Chungnam	Nammyun Coast, Taeangun		1,295	1,910	4,344
Chungnam	Nonsan Reservoir		5,611		
Chungnam	Pungjeon Reservoir		758	235	648
Chungnam	Sekmun (Seokmun) Reclaimed Area		5,971	3,276	11,132
Chungnam	Seongam Reservoir		1,805	141	2,411
Chungnam	Tapjeong Reservoir			5,774	5,265
Chungnam	Yedang Reservoir		12,375	4,393	4,363
Chungnam	Yubu Island	I	18,676	11,971	8,373
Gangwon	Bukhan River		2,313	2,022	2,843
Gangwon	Cheolwon Basin	I, C	2,482	2,137	11,615
Gangwon	Cheongcho Lake		1,500	1,058	2,007
Gangwon	Gangneung – Jumunjin Coast		234	4,301	3,677
Gangwon	Gangseong – Daejin (Taejin) Coast		672	535	2,282
Gangwon	Gyungpo (Kyongpo) Lagoon	I	2,580	4,141	2,022
Gangwon	Hwajinpo Lake	I	1,205		868
Gangwon	Jumunjin – Yangyang Coast		1,567	549	1,032
Gangwon	Samcheok – Gangneung Coast		1,810	1,332	989
Gangwon	Sokcho – Gangseong Coast		1,211	2,029	1,756
Gangwon	Songji Lake	I	485		1,063
Gangwon	Yangyang – Sokcho Coast		219	540	1,140
Gangwon	Youngrang Lake		263	1	131
Gyeongbuk	Andong Reservoir		2,554	735	871
Gyeongbuk	Bomun Reservoir		2,539	493	1,257
Gyeongbuk	Deokdong Reservoir		2,351	433	610
Gyeongbuk	Geumho (Taegu) River		1,214	2,248	3,870
Gyeongbuk	Haepyeong, Gumi City	I	6,538	6,372	6,905
Gyeongbuk	Hwawon Flood Plain		1,058	3,380	1,881
Gyeongbuk	Imha Reservoir		1,160	159	203
Gyeongbuk	Pohang – Yeongdeok (Yongdeok) Coast		1,079	2,781	2,489
Gyeongbuk	Pyunghae (Pyonghae) – Uljin Coast		8,801	2,897	4,406
Gyeongbuk	Uljin – Wondeok Coast		2,503	2,825	2,823
Gyeongbuk	Wondeok – Samcheok Coast		1,936	463	2,703
Gyeongbuk	Yeongdeok (Yongdeok) – Pyunghae Coast		1,483	3,194	1,504
Chungnam	Sapkyo Lake	I	25,678	10,705	10,782
Gyeonggi	Asan Bay		3,460	3,388	7,589
Gyeonggi	Asan Lake		2,146	2,367	8,302
Gyeonggi	Daebu Island	I	4,986	2,269	2,941
Gyeonggi	Han River (Haengju Bridge – Paland Dam)	I	9,450	18,328	4,245
Gyeonggi	Han River Estuary	I, C	20,395	4,630	7,768
Gyeonggi	Imjin River Estuary		11,759	3,853	758
Gyeonggi	Jungrang (Jungrangcheon) Stream		4,357	8,120	3,905
Gyeonggi	Namhan River		263	637	388
Gyeonggi	Namyang Bay		3,573	10,413	17,274
Gyeonggi	Namyang Reservoir	I	5,323	1,339	4,347
Gyeonggi	Paldang Dam		913	412	643
Gyeonggi	Siwha (Shihwa) Reservoir	I	36,448	26,631	67,115
Gyeonggi	Tan Stream (Tancheon)		3,160	2,428	3,110
Gyeongnam	Angae Reservoir		3,377	587	780
Gyeongnam	Busan – Ulsan Coast		2,796	9,698	4,258
Gyeongnam	Dangdong Bay			5,729	2,658

Province	Site Name	Status <sup>1</sup>	2002	2003	2004
Gyeongnam	Donghaemyun, Goseonggun		3,513		
Gyeongnam	Dongpan Reservoir		3,602	3,063	3,661
Gyeongnam	Hoiya (Hweya) Reservoir		1,163	633	1,630
Gyeongnam	Hyongsan River		1,262	1,584	2,344
Gyeongnam	Jinyang Reservoir		2,572	1,457	2,456
Gyeongnam	Junam Reservoirs (Sangnam, Ch'unsan, Dongp'an)	I	5,784	3,713	4,166
Gyeongnam	Mokpo (Makpo) Marsh		627	799	701
Gyeongnam	Oryundae Reservoir			402	512
Gyeongnam	Sacheon Bay		3,244	4,252	1,617
Gyeongnam	Sajipo Marsh		646	252	548
Gyeongnam	Sangnam Reservoir		412	82	283
Gyeongnam	Taehwa River		8,489	2,680	2,794
Gyeongnam	Upo Marsh	R, I	5,465	2,134	5,338
Incheon	Gangwha Island: South Coastal Mudflats		4,615	2,293	5,399
Incheon	Youngjong Island	I	2,820	2,399	1,239
Incheon	Youngjong Island: Unbukdong		1,890	2,951	3,847
Jeju	Hadori	I, pM	3,429	1,801	1,914
Jeju	Hamduck – Hadori Coast	pM	7,467	2,246	1,706
Jeju	Jeju City – Daejeong Coast	pM	8,489	17,632	8,421
Jeju	Seoguiipo – Anduck Coast	pM	8,079	3,907	2,574
Jeju	Seongsan – Namwon Coast	pM	4,668	6,337	2,963
Jeju	Seongsanpo Lake	I, pM	3,744	4,526	5,399
Jeonbuk	Cheongho Reservoir		9,127	1,954	2
Jeonbuk	Dongjin (Tongjin) River Estuary	I, S	34,118	33,931	19,988
Jeonbuk	Dongrim (Dongnim) Reservoir	I	151,004	2,005	250,386
Jeonbuk	Gomso Bay		247	207	165
Jeonbuk	Joryu (Joryugi) Reservoir		282	3,204	1,477
Jeonbuk	Mangyung River Estuary	I	35,834	30,548	42,468
Jeonbuk	Okgu Reservoir		1,654	7,120	
Jeonnam	Boseong and Deukryang Bay		520	5,239	1,630
Jeonnam	Dangduri Reclaimed Area		2,098	2,208	1,426
Jeonnam	Dunjeon Reservoir		682	1,172	1,134
Jeonnam	Gangjin Bay	I	369	1,663	6,607
Jeonnam	Geumho Reservoir	I	775	2,720	7,395
Jeonnam	Gocheonam Reservoir	I	823	7,243	87,357
Jeonnam	Gunnae Reclaimed Area		309	2,511	1,898
Jeonnam	Gwangyang (Kwangyang) and Galsa Bay		6,642	3,207	5,435
Jeonnam	Hyungyungmyun and Haejeomyun, Muangun		2,697	855	3,248
Jeonnam	Hyungyungmyun, Muangun		4,961	6,429	20,965
Jeonnam	Jeomam Reservoir		626	670	650
Jeonnam	Mandeok Reclaimed Area		68	611	17
Jeonnam	Muan Reservoir	I	3,605	3,865	4,838
Jeonnam	Podumyun Reclaimed Area		779	320	422
Jeonnam	Rangcho Reservoir		354	394	413
Jeonnam	Sanae Reclaimed Reservoir		1,327	1,304	1,804
Jeonnam	Suncheon Bay	R, I, C	4,521	11,572	7,196
Jeonnam	Yeuja (Yeoja) Bay		9,108	14,660	9,035
Jeonnam	Youngsan Reservoir (Estuary)		2,859	48,873	50,134
Jeonnam	Yungam (Yongam) Reservoir	I	3,891	11,049	7,871
Ulsan	Ulsan Bay		1,732	1,658	513
Ulsan	Ulsan – Guryongpo Coast		3,494	13,279	6,289

**Note:**

Status<sup>1</sup>: R – Ramsar site, pR – part of a Ramsar site, I – Wetland IBA identified by BirdLife International (2005), pl – part of an IBA identified by BirdLife International (2005), A – Anatidae site of the Migratory Waterbird Network in the East Asian Flyway, C – Crane site of the Migratory Waterbird Network in the East Asian Flyway, S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway, pM – part of a MAB Biosphere Reserve.

**Table 50: Waterbird species counts reported during the AWC in the Republic of Korea, 2002–2004**

English Name <sup>1</sup>	Scientific Name	GTS <sup>2</sup>	2002	2003	2004
Red-throated Diver	<i>Gavia stellata</i>		18	9	49
Black-throated Diver	<i>Gavia arctica</i>		484	96	48
Pacific Diver	<i>Gavia pacifica</i>		27	19	13
White-billed Diver	<i>Gavia adamsii</i>				1
Little Grebe	<i>Tachybaptus ruficollis</i>		810	740	848
Red-necked Grebe	<i>Podiceps grisegena</i>		6	55	40
Great Crested Grebe	<i>Podiceps cristatus</i>		2,147	1,251	2,249
Horned Grebe	<i>Podiceps auritus</i>		38	40	218
Black-necked Grebe	<i>Podiceps nigricollis</i>		881	834	2,358
Great Cormorant	<i>Phalacrocorax carbo</i>		1,008	947	593

English Name <sup>1</sup>	Scientific Name	GTS <sup>2</sup>	2002	2003	2004
Japanese Cormorant	<i>Phalacrocorax capillatus</i>		831	682	776
Pelagic Cormorant	<i>Phalacrocorax pelagicus</i>		111	66	531
unidentified cormorants	Phalacrocoracidae spp.		2	245	10
Grey Heron	<i>Ardea cinerea</i>		1,094	1,055	1,565
Eastern White Egret*	<i>Ardea modesta</i>		604	244	934
Little Egret	<i>Egretta garzetta</i>		334	276	403
Chinese Egret	<i>Egretta eulophotes</i>	VU	4		
Eastern Reef Heron	<i>Egretta sacra</i>		8	11	26
unidentified egrets	<i>Egretta/Bubulcus</i> spp.		24	1	6
Black-crowned Night-heron	<i>Nycticorax nycticorax</i>		6	17	164
unidentified night-heron	<i>Nycticorax</i> sp.				1
Eurasian Bittern	<i>Botaurus stellaris</i>		1	5	3
Black Stork	<i>Ciconia nigra</i>				2
Oriental Stork	<i>Ciconia boyciana</i>	EN	10	1	9
Eurasian Spoonbill	<i>Platalea leucorodia</i>		26	34	146
Black-faced Spoonbill	<i>Platalea minor</i>	EN	25	25	23
Mute Swan	<i>Cygnus olor</i>		29		
Whooper Swan	<i>Cygnus cygnus</i>		2,942	4,133	4,867
Tundra (Whistling) Swan	<i>Cygnus columbianus</i>		214	220	56
Swan Goose	<i>Anser cygnoides</i>	EN	11	16	36
Bean Goose	<i>Anser fabalis</i>		31,866	30,828	34,856
Greater White-fronted Goose	<i>Anser albifrons</i>		30,428	33,583	54,481
Lesser White-fronted Goose	<i>Anser erythropus</i>	VU			2
Lesser Snow Goose	<i>Chen (Anser) caerulescens</i>		2	5	2
unidentified grey geese	<i>Anser</i> spp.		500	1	
Brent Goose	<i>Branta bernicla</i>			26	87
Ruddy Shelduck	<i>Tadorna ferruginea</i>		1,635	1,720	1,498
Common Shelduck	<i>Tadorna tadorna</i>		19,565	23,051	30,986
Mandarin Duck	<i>Aix galericulata</i>		1,754	2,288	1,103
Eurasian Wigeon	<i>Anas penelope</i>		5,560	6,071	6,813
Falcated Duck	<i>Anas falcata</i>	NT	1,965	2,254	1,786
Gadwall	<i>Anas strepera</i>		2,757	4,887	5,019
Baikal Teal	<i>Anas formosa</i>	VU	287,206	303,169	455,168
Common Teal	<i>Anas crecca</i>		18,636	13,860	18,076
Mallard	<i>Anas platyrhynchos</i>		255,421	254,554	240,771
Spot-billed Duck	<i>Anas poecilorhyncha</i>		62,051	58,028	67,806
Northern Pintail	<i>Anas acuta</i>		22,814	19,997	18,348
Northern Shoveler	<i>Anas clypeata</i>		2,214	3,838	2,935
Common Pochard	<i>Aythya ferina</i>		25,591	26,000	25,014
Tufted Duck	<i>Aythya fuligula</i>		2,639	5,939	7,677
Greater Scaup	<i>Aythya marila</i>		8,013	12,876	4,699
Harlequin Duck	<i>Histrionicus histrionicus</i>		6	11	63
Common Scoter	<i>Melanitta nigra</i>		30	196	123
Velvet Scoter	<i>Melanitta fusca</i>		1,060	140	242
Long-tailed Duck	<i>Clangula hyemalis</i>				6
Common Goldeneye	<i>Bucephala clangula</i>		4,323	4,061	3,519
Smew	<i>Mergellus albellus</i>		1,071	534	631
Red-breasted Merganser	<i>Mergus serrator</i>		1,587	1,834	709
Scaly-sided Merganser	<i>Mergus squamatus</i>	EN	2		1
Goosander	<i>Mergus merganser</i>		5,755	8,023	5,718
unidentified ducks	Anatinae spp.		3,744	1,050	828
White-naped Crane	<i>Grus vipio</i>	VU	437	507	626
Common Crane	<i>Grus grus</i>			2	1
Hooded Crane	<i>Grus monacha</i>	VU	122	136	216
Red-crowned Crane	<i>Grus japonensis</i>	EN	545	388	582
hybrid crane	<i>Grus grus x Grus monacha</i>		1		
Common Moorhen	<i>Gallinula chloropus</i>		7	33	36
Common Coot	<i>Fulica atra</i>		3,179	5,784	5,341
Greater Painted Snipe	<i>Rostratula benghalensis</i>			1	
Eurasian Oystercatcher	<i>Haematopus ostralegus</i>		3,556	5,504	2,272
Black-winged Stilt	<i>Himantopus himantopus</i>				5
Pied Avocet	<i>Recurvirostra avocetta</i>			2	
Northern Lapwing	<i>Vanellus vanellus</i>		113	84	159
Pacific Golden Plover	<i>Pluvialis fulva</i>				1
Grey Plover	<i>Pluvialis squatarola</i>		1,569	1,702	2,319
Long-billed Plover	<i>Charadrius placidus</i>		29	15	16
Kentish Plover	<i>Charadrius alexandrinus</i>		156	203	489
Common Snipe	<i>Gallinago gallinago</i>			10	3
Bar-tailed Godwit	<i>Limosa lapponica</i>		2	8	
Eurasian Curlew	<i>Numenius arquata</i>		2,077	5,034	2,170
unidentified curlews	<i>Numenius</i> spp.		10	338	1
Common Greenshank	<i>Tringa nebularia</i>			2	1

English Name <sup>1</sup>	Scientific Name	GTS <sup>2</sup>	2002	2003	2004
Green Sandpiper	<i>Tringa ochropus</i>		1	4	18
Terek Sandpiper	<i>Xenus cinereus</i>		68		15
Common Sandpiper	<i>Actitis hypoleucos</i>		11	83	35
Ruddy Turnstone	<i>Arenaria interpres</i>			1	
Sanderling	<i>Calidris alba</i>		1	255	408
Dunlin	<i>Calidris alpina</i>		5,619	15,613	5,847
unidentified <i>Calidris</i> sandpipers	<i>Calidris</i> spp.		386	556	
unidentified shorebirds	Charadrii spp.		40	1,202	265
Black-tailed Gull	<i>Larus crassirostris</i>		21,146	25,814	15,769
Common (Mew) Gull	<i>Larus canus</i>		3,578	5,328	6,893
Glaucous-winged Gull	<i>Larus glaucescens</i>		14	18	23
Glaucous Gull	<i>Larus hyperboreus</i>		23	52	57
Iceland Gull	<i>Larus glaucoides</i>			1	2
Herring Gull	<i>Larus argentatus</i>		27,436	29,863	21,198
Heuglin's Gull	<i>Larus heuglini</i>		135	32	25
Slaty-backed Gull	<i>Larus schistisagus</i>		4,467	1,522	2,431
Yellow-legged Gull	<i>Larus cachinnans</i>		165		284
Common Black-headed Gull	<i>Larus ridibundus</i>		8,374	22,267	11,722
Saunders's Gull	<i>Larus saundersi</i>	VU	505	1,393	1,853
Relict Gull	<i>Larus relictus</i>	VU		2	
Black-legged Kittiwake	<i>Larus tridactyla</i>		71	105	45
unidentified gulls	Laridae spp.		200	1,150	200
<b>Total Waterbirds</b>			<b>893,933</b>	<b>954,860</b>	<b>1,086,270</b>
Rhinoceros Auklet	<i>Cerorhinca monocerata</i>		26		
Ancient Murrelet	<i>Synthliboramphus antiquus</i>		287	36	2
Osprey	<i>Pandion haliaetus</i>		12	17	19
Black Kite	<i>Milvus migrans</i>		13	32	18
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT	12	19	30
Steller's Sea-eagle	<i>Haliaeetus pelagicus</i>	VU	3	3	
Cinereous Vulture	<i>Aegypius monachus</i>	NT	149	475	456
Hen Harrier	<i>Circus cyaneus</i>		29	39	22
Eastern Marsh Harrier	<i>Circus spilintus</i>			3	
Japanese Sparrowhawk	<i>Accipiter gularis</i>		2	1	1
Eurasian Sparrowhawk	<i>Accipiter nisus</i>		2	9	8
Northern Goshawk	<i>Accipiter gentilis</i>		3	5	9
Common Buzzard	<i>Buteo buteo</i>		70	61	90
Upland Buzzard	<i>Buteo hemilasius</i>		2	4	1
Rough-legged Hawk	<i>Buteo lagopus</i>		2	5	
Imperial Eagle	<i>Aquila heliaca</i>	VU	1		
Golden Eagle	<i>Aquila chrysaetos</i>		4	6	2
Common Kestrel	<i>Falco tinnunculus</i>		82	84	117
Merlin	<i>Falco columbarius</i>		2	3	4
Peregrine Falcon	<i>Falco peregrinus</i>		4	11	12
unidentified raptors			1		2
Common Kingfisher	<i>Alcedo atthis</i>			5	3
White Wagtail	<i>Motacilla alba</i>			164	259
Grey Wagtail	<i>Motacilla cinerea</i>			3	3
Yellow Wagtail	<i>Motacilla flava</i>			1	
Japanese Wagtail	<i>Motacilla grandis</i>			47	43
unidentified wagtails	<i>Motacilla</i> spp.				1
Oliver-backed Pipit	<i>Anthus hodgsoni</i>			30	23
Buff-bellied Pipit	<i>Anthus rubescens</i>			815	647
unidentified pipits	<i>Anthus</i> spp.		20		

**Notes:**

English Name<sup>1</sup> – Nial Moores (pers. comm., January 2007) suggests that almost all Great Egret recorded in Republic of Korea in the non-breeding period are *Ardea alba* and not Eastern White Egret *Ardea modesta*.

GTS<sup>2</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.4.5 Mongolia

The Khar Us Nuur National Park, Khovd Province in western Mongolia, was surveyed in 2003, and this is the first report provided since 2001 (Figure 24); the site is also a Ramsar site and an IBA. A total of 848 individuals of four waterbird species were recorded (192 Whooper Swans, 612 Common Goldeneyes, 3 Smew and 42 Goosanders). In addition, three Near Threatened White-tailed Sea Eagles were recorded.

Major threats to the National Park are sedimentation, cutting /clearance of vegetation, cattle grazing, fertiliser pollution, large-scale fishing, partial reclamation and dam construction. The count was taken from Batbayar (2003).

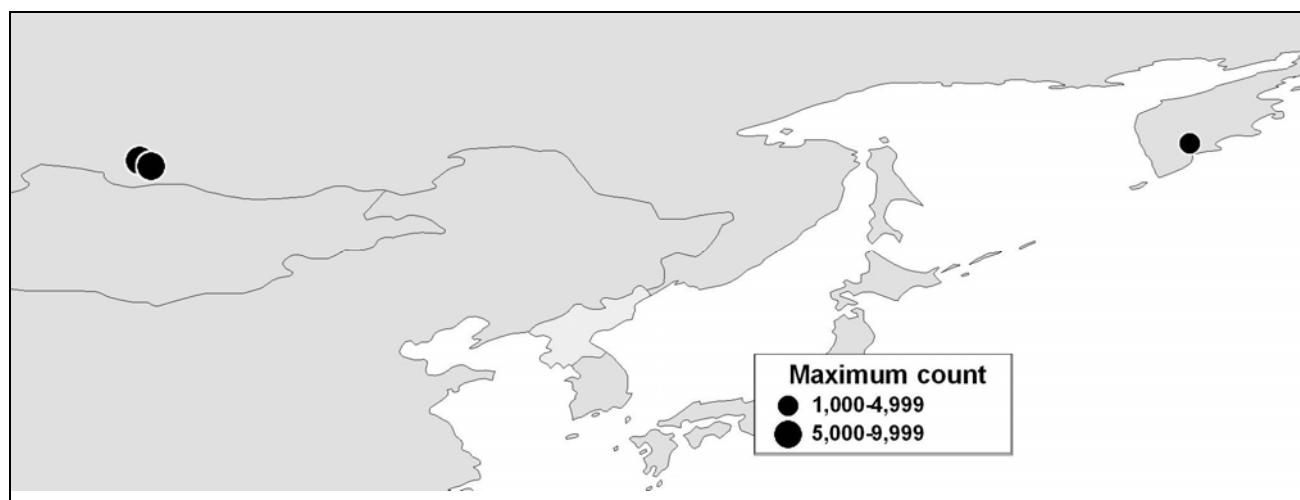
### 3.4.6 Eastern Russia

Three sites were reported with 5,556 waterbirds (2 sites), 7,354 (1 site) and 12,891 (2 sites) surveyed in 2002, 2003 and 2004 respectively (Figure 30 and Table 51). Two sites, Source of the Angara River and Avacha Bay (Petropavlovsk–Kamchatsky), are IBAs.

Eleven waterbird and two raptor species were recorded. The most numerous species was Common Goldeneye, with a highest count of 12,400 in 2004 (Table 52). The two raptor species were the Vulnerable Steller’s Sea-eagle (30 in 2002) and the Near Threatened White-tailed Eagle (7 in 2004).

Some minor pollution issues were reported. The data were contributed by individual counters.

**Figure 30: AWC site coverage and numerical distribution of waterbirds in eastern Russia, 2002–2004**



**Table 51: Wetland sites surveyed during the AWC in eastern Russia, 2002–2004**

Region	Site Name	Status <sup>1</sup>	Threats <sup>2</sup>	2002	2003	2004
Irkutsk	Source of Angara River	I	9			5,458
Irkutsk	Upper Stream of Angara River in Irkutsk		89A	2,500	7,354	7,440
Kamtchatka	Avacha Bay (Petropavlovsk–Kamchatsky)	I		3,086		

**Notes:**

Status<sup>1</sup>: I – Wetland IBA identified by BirdLife International (2005).

Threats<sup>2</sup>: 8 – Domestic sewage, 9 – Solid waste, A – Industrial waste.

**Table 52: Waterbird species counts reported during the AWC in eastern Russia, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Pelagic Cormorant	<i>Phalacrocorax pelagicus</i>		12		
Whooper Swan	<i>Cygnus cygnus</i>		10		
Mallard	<i>Anas platyrhynchos</i>			140	227
Harlequin Duck	<i>Histrionicus histrionicus</i>		6		
Long-tailed Duck	<i>Clangula hyemalis</i>		3,300		22
Common Goldeneye	<i>Bucephala clangula</i>		2,200	7200	12,400
Smew	<i>Mergellus albellus</i>				4
Red-breasted Merganser	<i>Mergus serrator</i>				25
Goosander	<i>Mergus merganser</i>		3	14	213
Glaucous Gull	<i>Larus hyperboreus</i>		5		
Slaty-backed Gull	<i>Larus schistisagus</i>		20		
<b>Total Waterbirds</b>			<b>5,556</b>	<b>7,354</b>	<b>12,891</b>
White-tailed Eagle	<i>Haliaeetus albicilla</i>	NT			7
Steller's Sea-eagle	<i>Haliaeetus pelagicus</i>	VU	30		

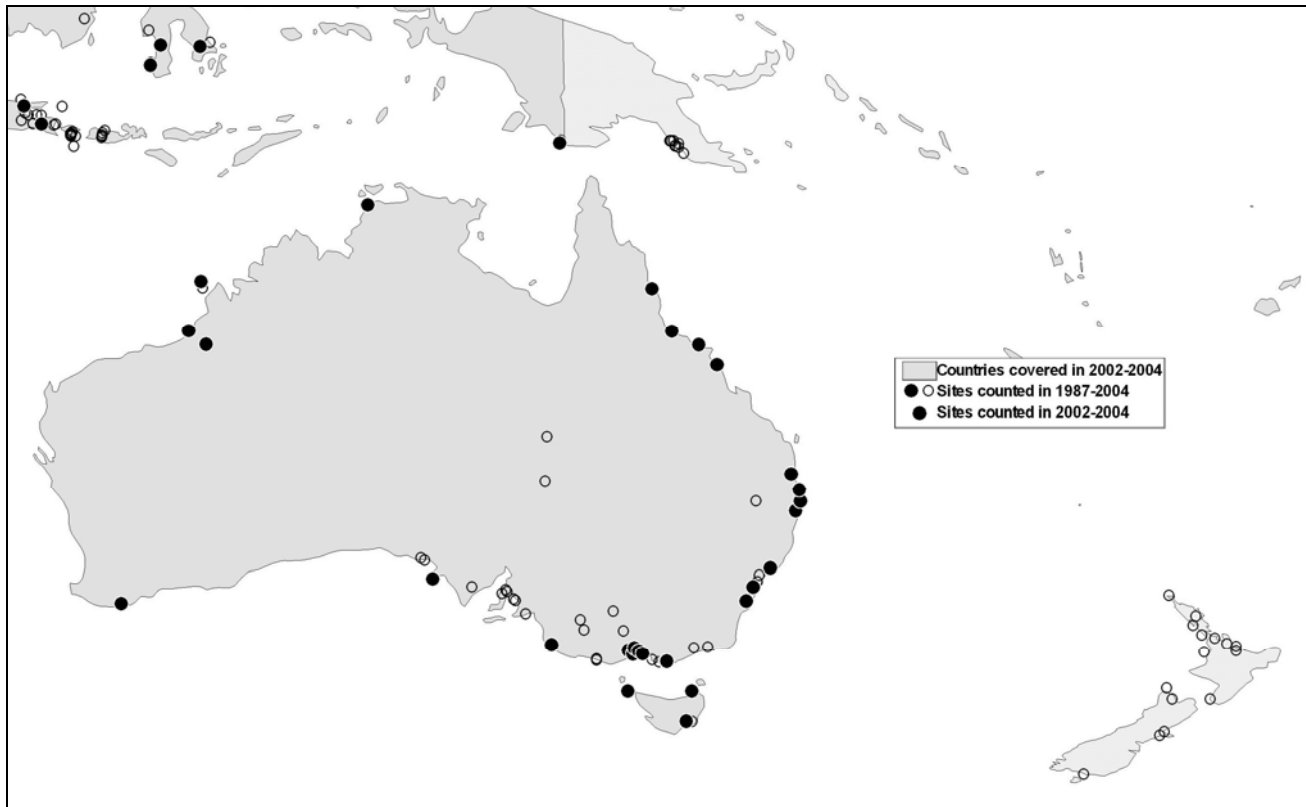
**Note:**

GTS<sup>1</sup> – Globally threatened and near threatened species as identified by BirdLife International (2006): VU – Vulnerable and NT – Near Threatened.

### 3.5 Australasia

For the Australasian region information was received only from Australia, with no counts received from New Zealand or Papua New Guinea during this period (Figure 31).

**Figure 31: Site coverage of the AWC in Australasia, 1990–2004**



#### 3.5.1 Australia

Only shorebird counts carried out by the Australasian Wader Studies Group were submitted and included in the AWC report. Thirty-one sites were surveyed in AWC 2002–2004 (Figure 32 and Table 53). Total numbers of shorebirds recorded were 348,585 (29 sites), 364,816 (29 sites) and 273,181 (26 sites) in AWC 2002, 2003 and 2004, respectively. The data were published in *The Stilt* 44, 46 and 48 (Skewes 2003, 2004, 2005).

Seven Ramsar sites were surveyed, namely Eighty Mile Beach, East Derwent (Pittwater), Hunter Estuary, Moreton Bay, Corner Inlet, Eastern Port Phillip and Westernport Bay. The latter five sites are also Migratory Waterbird Network sites on the East Asian – Australasian Flyway for shorebirds.

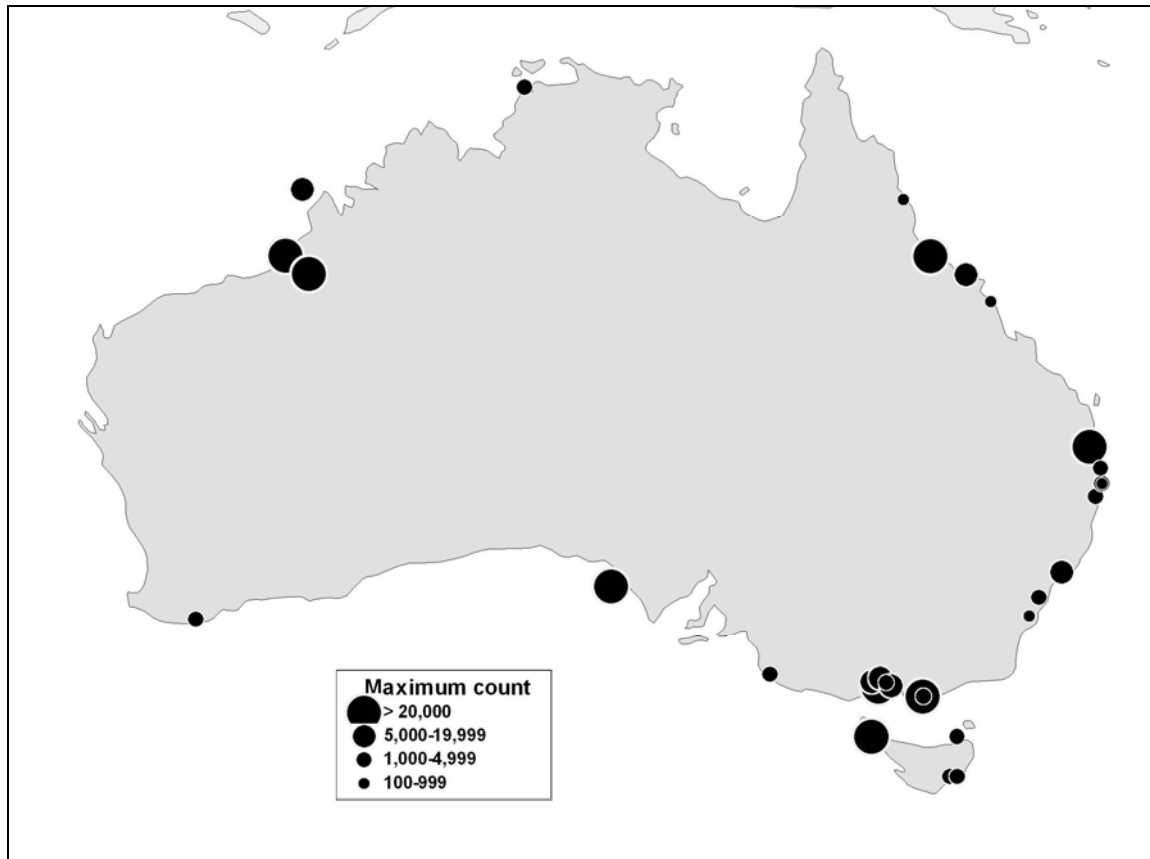
Sites that recorded more than 20,000 shorebirds were Eighty Mile Beach (142,643 in 2002), Broome (49,880 in 2003), Townsville (32,703 in 2003), Western Eyre Peninsula (32,627 in 2003), Corner Inlet East (31,432 in 2004), Moreton Bay (22,617 in 2004), Bellarine Peninsula (22,205 in 2003) and Tasmania – North West Coast (22,403 in 2004). A total of 20 sites recorded more than 1% of the biogeographic population of at least one waterbird species.

Forty-seven shorebird species were recorded (Table 54). The most numerous species were Red-necked Stint (102,074 in 2003), Great Knot (68,413 in 2002), Bar-tailed Godwit (56,773 in 2004), Greater Sandplover (38,289 in 2002), Curlew Sandpiper (16,824 in 2002), Oriental Plover (16,746 in 2003), Sharp-tailed Sandpiper (16,224 in 2003), Grey-tailed Tattler (16,121 in 2002), Banded Stilt (12,667 in 2002), Red Knot (11,214 in 2002) and Red-capped Plover (10,367 in 2003).

Near Threatened species recorded were Bush Thick-knee (9 in 2003), Beach Thick-knee (17 in 2003), Hooded Plover (92 in 2002), Asian Dowitcher (3 in 2002) and Black-tailed Godwit (3,299 in 2004).

Information on threats to the wetlands and waterbirds was not provided.

**Figure 32: AWC site coverage and numerical distribution of shorebirds in Australia, 2002–2004**



**Table 53: Wetland sites surveyed during the AWC in Australia, 2002–2004**

State	Site Name	Status	2002	2003	2004
New South Wales	Botany Bay		872	986	1,192
New South Wales	Clarence Estuary		2,471	1,961	788
New South Wales	Hastings		230		
New South Wales	Hunter Estuary	R, S	5,314	8,301	3,497
New South Wales	Parramatta Estuary		1,005	546	683
New South Wales	Richmond Estuary		573	742	567
New South Wales	Shoalhaven Estuary		490	816	881
New South Wales	Tweed Estuary		744	2,313	46
Northern Territory	Darwin			1,086	4,140
Queensland	Bowen		850	17,354	37
Queensland	Cairns		771	375	683
Queensland	Mackay		943		
Queensland	Moreton Bay	R, S	21,670	11,673	22,671
Queensland	Townsville		5,919	32,703	5,112
South Australia	South East Coast – South Australia		2,744	2,169	2,722
South Australia	Western Eyre Peninsula			32,627	
Tasmania	Cape Portland		2,164	1,379	650
Tasmania	East Derwent (Pittwater)	pR	3,628	2,582	4,055
Tasmania	Marion Bay		1,155	606	361
Tasmania	Tasmania – North West Coast		18,891	13,404	20,403
Victoria	Altona		3,733	11,595	5,885
Victoria	Bellarine Peninsula		18,343	23,205	22,165
Victoria	Corner Inlet East	R, S	25,679	26,273	31,432
Victoria	Corner Inlet West		3,821	3,672	602
Victoria	Eastern Port Phillip	R, S	2,049	210	283



State	Site Name	Status	2002	2003	2004
Victoria	Werribee		15,350	19,752	13,678
Victoria	Westernport Bay	R, S, pM	14,386	7,123	13,725
Western Australia	Eighty Mile Beach	R	142,643	80,502	70,274
Western Australia	Albany		4,879	1,270	
Western Australia	Broome		39,731	49,880	46,649
Western Australia	Swan River		7,537	9,711	

**Note:**

Status: R – Ramsar site, pR – part of a Ramsar site, S – Shorebird site of the Migratory Waterbird Network in the East Asian – Australasian Flyway, pM – part of a MAB Biosphere Reserve.

**Table 54: Shorebird species counts reported during the AWC in Australia, 2002–2004**

English Name	Scientific Name	GTS <sup>1</sup>	2002	2003	2004
Australian Pied Oystercatcher	<i>Haematopus longirostris</i>		4,416	5,046	4,068
Sooty Oystercatcher	<i>Haematopus fuliginosus</i>		724	1,760	785
Black-winged Stilt	<i>Himantopus himantopus</i>		4,155	6,702	1,474
Banded Stilt	<i>Cladorhynchus leucocephalus</i>		12,667	10,190	5,799
Red-necked Avocet	<i>Recurvirostra novaehollandiae</i>		4,517	6,185	987
Bush Thick-knee	<i>Burhinus grallarius</i>	NT	3	9	
Beach Thick-knee	<i>Burhinus giganteus (Esacus magnirostris)</i>	NT	2	17	2
Australian Pratincole	<i>Stiltia isabella</i>			12	
Oriental Pratincole	<i>Glareola maldivarum</i>			38	40
Banded Lapwing	<i>Vanellus tricolor</i>		66	184	
Masked Lapwing	<i>Vanellus miles</i>		2,425	3,274	2,436
Red-kneed Dotterel	<i>Erythrogonys cinctus</i>		99	99	10
Pacific Golden Plover	<i>Pluvialis fulva</i>		1,347	1,836	1,705
Grey Plover	<i>Pluvialis squatarola</i>		941	1,791	1,163
Great Ringed Plover	<i>Charadrius hiaticula</i>			2	
Red-capped Plover	<i>Charadrius ruficapillus</i>		3,019	10,367	4,174
Double-banded Plover	<i>Charadrius bicinctus</i>		81	64	127
Lesser Sandplover	<i>Charadrius mongolus</i>		713	1,855	1,929
Greater Sandplover	<i>Charadrius leschenaultii</i>		38,289	10,972	14,543
Oriental Plover	<i>Charadrius veredus</i>		8,447	16,746	335
Hooded Plover	<i>Charadrius rubricollis</i>	NT	92	71	45
Black-fronted Dotterel	<i>Euseyornis melanops</i>		123	292	61
Latham's Snipe	<i>Gallinago hardwickii</i>		199	158	87
Asian Dowitcher	<i>Limnodromus semipalmatus</i>	NT	3		1
Black-tailed Godwit	<i>Limosa limosa</i>	NT	1,075	2,620	3,299
Bar-tailed Godwit	<i>Limosa lapponica</i>		41,763	40,141	56,773
Little Curlew	<i>Numenius minutus</i>		359	129	1,170
Whimbrel	<i>Numenius phaeopus</i>		1,855	2,415	918
Far Eastern Curlew	<i>Numenius madagascariensis</i>		6,018	6,349	4,276
Common Redshank	<i>Tringa totanus</i>			1	
Marsh Sandpiper	<i>Tringa stagnatilis</i>		574	1,155	329
Common Greenshank	<i>Tringa nebularia</i>		2,225	2,711	1,906
Wood Sandpiper	<i>Tringa glareola</i>				8
Terek Sandpiper	<i>Xenus cinereus</i>		6,799	5,489	4,852
Common Sandpiper	<i>Actitis hypoleucos</i>		26	93	38
Grey-tailed Tattler	<i>Heteroscelus brevipes</i>		16,121	5,076	8,368
Wandering Tattler	<i>Heteroscelus incanus</i>		2		
Ruddy Turnstone	<i>Arenaria interpres</i>		2,937	4,324	2,291
Great Knot	<i>Calidris tenuirostris</i>		68,413	64,347	37,476
Red Knot	<i>Calidris canutus</i>		11,214	4,866	4,694
Sanderling	<i>Calidris alba</i>		878	1,118	218
Red-necked Stint	<i>Calidris ruficollis</i>		80,081	102,074	87,175
Long-toed Stint	<i>Calidris subminuta</i>		1		
Pectoral Sandpiper	<i>Calidris melanotos</i>				1
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>		8,113	16,224	6,512
Curlew Sandpiper	<i>Calidris ferruginea</i>		16,824	14,651	13,001
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		3	33	105
unidentified shorebirds	Charadrii spp.		976	13,330	
<b>Total Shorebirds</b>			<b>348,585</b>	<b>364,816</b>	<b>273,181</b>

**Note:**

GTS<sup>1</sup> – Globally threatened species as identified by BirdLife International (2006): CR – Critically Endangered; EN – Endangered; VU – Vulnerable; NT – Near Threatened.

### 3.6 Status and Distribution of Selected Species

The regional coverage of the AWC offers an opportunity to review the distribution and status of species across their range in Asia on a regular basis. Most species with a noteworthy count (besides those species considered as vagrant in the AWC region, or for which very few reports were received) are covered in this section. Internationally important sites were identified according to the 1% criterion provided in *Waterbird Population Estimates – Fourth Edition* (Wetlands International 2006). The 1% criterion provided in Bamford *et al.* (2006) was applied for some shorebird species in the East Asian – Australasian flyway region. For globally threatened species (CR, EN and VU), a full list of sites is provided. Maps of species distribution are provided in section 3.6.30.

The most widespread species include Little Egret (recorded at 1,337 sites), Grey Heron (1,079), Little Grebe (994 sites), Cattle Egret (987), Little Cormorant (961), Eastern Great Egret (954), Indian Pond-heron (937), Common Sandpiper (926), Intermediate Egret (830), Red-wattled Lapwing (771 sites), Common Coot (735), Northern Pintail (722), Black-winged Stilt (717) and Common Teal (704).

Wetland-dependent species were not reported from all countries, therefore the information presented in the report does not give a comprehensive picture of the total status and distribution of these species during the AWC count.

#### 3.6.1 Divers – Gaviidae

##### Red-throated (Diver) Loon *Gavia stellata*

1% = 1,000 (East Asia). The species was reported on the coast of China and Republic of Korea. No site met the 1% criterion. This is largely coastal/offshore species and hence is undercounted.

##### Pacific Diver *Gavia pacifica*

1% = 1,000 (East Asia). The species was recorded only on the coast of Republic of Korea. No site met the 1% criterion. This is largely coastal/offshore species and hence is undercounted.

#### 3.6.2 Grebes – Podicipedidae

##### Little Grebe *Tachybaptus ruficollis*

1% = 10,000 (*capensis*, South Asia), 10,000 (*poggei*, East and Southeast Asia); Philippines and Indonesian populations unknown. This was one of the species most widely distributed across the AWC range, being recorded at 994 sites. This species is not particularly congregatory although it occurs in small aggregations, therefore it is unlikely that any one site could hold 1% of the population.

##### Great Crested Grebe *Podiceps cristatus*

1% = 250 (*cristatus*, South Asia), 375 (*cristatus*, East Asia). The species was widely recorded across South, East and Southeast Asia (south to Thailand). Six sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Dagan Hu	647	2004
India	Rajasthan	Vardha Dam	300	2004
India	Uttarakhand	Baur Reservoir	405	2004
India	Uttarakhand	Tumeria Dam	340	2004
Republic of Korea	Chungnam	Ganwol Reservoir	1,045	2002
Republic of Korea	Gyeongbuk	Wondeok – Samcheok Coast	380	2004

##### Black-necked Grebe *Podiceps nigricollis*

1% = 1,000 (*nigricollis*, East Asia), 250 (*nigricollis*, South and Southwest Asia). The species was recorded at a small number of sites in South Asia, East Asia and Myanmar. Only one site, Gwangyang and Galsa Bay in Jeonnam Province, Republic of Korea, met the 1% criterion (1,808 individuals in 2004).

### 3.6.3 Pelicans – Pelecanidae

#### Great White Pelican *Pelecanus onocrotalus*

1% = 230 (South Asia). The species was recorded only in India and Pakistan; 21 sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Nellapattu Pelican Sanctuary	606	2003
India	Andhra Pradesh	Uppalapadu Water Tank	591	2004
India	Gujarat	Amipur Tank	2,700	2004
India	Gujarat	Chhari Dhandh	600	2002
India	Gujarat	Great Rann of Kachchh	2,295	2004
India	Gujarat	Hamirsar Tank	250	2002
India	Gujarat	Jamnagar District: Dwaraka Taluka wetlands	890	2003
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	528	2003
India	Gujarat	Jamnagar District: Khambhalia Taluka wetlands	356	2003
India	Gujarat	Kalubhar Dam	1,100	2004
India	Gujarat	Naika Dam	250	2004
India	Gujarat	Nava Talao	800	2003
India	Gujarat	Par	300	2004
India	Gujarat	Pipalava Bandharo (Kaj)	300	2003
India	Gujarat	Sudamda Pond	250	2002
India	Gujarat	Veri Dam	480	2004
Pakistan	Sindh	Haleji Lake	570	2002
Pakistan	Sindh	Hudero Lake	320	2003
Pakistan	Sindh	Jabho Lake	900	2002
Pakistan	Sindh	Nur-Ri Lake	350	2003
Pakistan	Sindh	Phoosna	860	2003

#### Spot-billed Pelican *Pelecanus philippensis* VU

1% = 135 (East India, Sri Lanka and Myanmar), 45 (Cambodia, Laos, Vietnam and Thailand), 1 (Sumatra).

The species is restricted to South and Southeast Asia. It was recorded at a total of 100 sites, 14 of which met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	870	2004
Cambodia	Battambang	Prek Toal	2,691	2003
India	Andhra Pradesh	Nellapattu Pelican Sanctuary	700	2002
India	Andhra Pradesh	Pulicat Lake Bird Sanctuary	1,658	2003
India	Andhra Pradesh	Uppalapadu Water Tank	320	2003
India	Assam	Kaziranga National Park	230	2003
India	Karnataka	Dadada Halli Tank	169	2004
India	Tamil Nadu	Karavetty Tank	375	2003
India	Tamil Nadu	Koonthankulam Bird Sanctuary	150	2003
India	Orissa	Chilika Lake	173	2003
Sri Lanka	WP	Beira Lake	158	2004
Sri Lanka	NCP	Pimburettawa Tank	350	2002
Sri Lanka	NP	Giant's Tank	147	2002
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawtaw Sinbo	59	2004
<b>Other sites where the species was recorded</b>				
Cambodia	Kampong Thom	Chinit River	2	2004
Cambodia	Kandal	Bassac Marshes	1	2002
India	Andhra Pradesh	Coringa Wildlife Sanctuary	40	2003
India	Andhra Pradesh	Naupada Swamps	9	2002
India	Assam	Bordoibam Bilmukh Bird Sanctuary	20	2003
India	Assam	Bordoloni	12	2003
India	Assam	Chenamari Beel	32	2003
India	Assam	Kani Beel	15	2004
India	Assam	Kuarbari-Dalani	125	2003
India	Assam	Misamari Beel	27	2003
India	Gujarat	Dholi Dhaja Dam	6	2004
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	1	2003
India	Gujarat	Naika Dam	4	2004
India	Gujarat	Nava Talao	15	2003
India	Karnataka	Bannur Heggere	2	2004
India	Karnataka	Byramangala Reservoir	8	2004
India	Karnataka	Gejjagalri Kere	2	2003
India	Karnataka	Hadinarli	2	2003
India	Karnataka	Karigala Tank	2	2004
India	Karnataka	Krishnaraja Sagar Reservoir	76	2004
India	Karnataka	Lingambudhi Tank	12	2004

## Results: Species Status and Distribution

Country	Region	Site Name	Peak Count	Year
India	Karnataka	Mandakalli Tank	75	2003
India	Karnataka	Nelligudda Tank	3	2004
India	Karnataka	Tippagondana Halli	3	2004
India	Kerala	Punchakari	1	2002
India	Orissa	Daha Dam	4	2002
India	Orissa	Dhulia Nali Dam – Manpur	13	2003
India	Orissa	Erra Tank	2	2003
India	Orissa	Harabhangi	28	2002
India	Orissa	Hirakud Reservoir	6	2002
India	Orissa	Kalingodola (on Bahuda River)	10	2003
India	Orissa	Krishna Sagara Donuru	28	2002
India	Orissa	Kuspangi Pato	1	2003
India	Orissa	Raga Tank	3	2002
India	Orissa	Raghunath Sagar	4	2003
India	Orissa	Tampara Backwaters	8	2002
India	Tamil Nadu	Andi Odai Tank	18	2004
India	Tamil Nadu	Suchindram Tank	4	2004
India	Tamil Nadu	Theroor Wetland Complex	20	2004
India	Tamil Nadu	Uppalam	1	2004
India	Uttar Pradesh	Nanakmata Reservoir	30	2002
India	Uttar Pradesh	National Chambal Sanctuary	88	2003
Myanmar	Kachin	Indaw R: Changgwa – Kahtangyaung	9	2004
Myanmar	Kachin	Indaw – Gyi Lake	20	2003
Myanmar	Mandalay	Ngalaik Reservoir (Nga Like Dam)	2	2002
Sri Lanka	CP	Minipe Canal	1	2003
Sri Lanka	EP	Akkaraipattu to Batticaloa	2	2003
Sri Lanka	EP	Akkaraipattu to Panama	134	2003
Sri Lanka	EP	Ampara	32	2003
Sri Lanka	EP	Lahugala to Arugam Bay	6	2004
Sri Lanka	EP	Maduru Oya NP	22	2002
Sri Lanka	EP	Ruhuna East National Park	73	2003
Sri Lanka	NCP	Anuradhapura Tanks	19	2003
Sri Lanka	NCP	Anuradhapura–Medawacchiya–Giant’s Tank Roadside	54	2003
Sri Lanka	NCP	Giritale Tank	30	2004
Sri Lanka	NCP	Kaudulla Tank	30	2002
Sri Lanka	NCP	Minneriya National Park	92	2004
Sri Lanka	NCP	Nacchaduwa Reservoir	59	2003
Sri Lanka	NCP	Parakrama Samudraya	30	2004
Sri Lanka	NP	Uppu Aru Lagoon	6	2002
Sri Lanka	NP	Vadamaradchi Lagoon	15	2002
Sri Lanka	NP	Vankalai Triangle	9	2004
Sri Lanka	NWP	Galgamuwa Area	4	2003
Sri Lanka	NWP	Kimbulwana Tank	3	2003
Sri Lanka	NWP	Tabbowa Tank	2	2002
Sri Lanka	SP	Bundala National Park	33	2004
Sri Lanka	SP	Debara Wewa	6	2002
Sri Lanka	SP	Hambantota Wetlands	41	2004
Sri Lanka	SP	Kalametiya – Lunama Sanctuary	1	2002
Sri Lanka	SP	Palatupana Saltern	25	2004
Sri Lanka	SP	Ruhuna National Park: Block I	8	2004
Sri Lanka	SP	Tangalla Mangrove	2	2004
Sri Lanka	SP	Tangalla Marshes	5	2004
Sri Lanka	SP	Tissa Wewa	10	2004
Sri Lanka	SP	Wirawila Tank	11	2004
Sri Lanka	SP	Yodakandiya Tank	15	2004
Sri Lanka	SABP	Chandrika Wewa	20	2002
Sri Lanka	SABP	Suriya Wewa	73	2003
Sri Lanka	UVAP	Belagan Wewa	5	2003
Sri Lanka	UVAP	Uda Walawe National Park	35	2004
Sri Lanka	UVAP	Ulhitiya and Ratkinda Reservoirs	42	2002
Sri Lanka	WP	Bellanwila–Pillewa–Attidiya Marshes	6	2003
Sri Lanka	WP	Kotte Marshes	1	2004
Sri Lanka	WP	Maharagama	3	2003
Sri Lanka	WP	Talangama Tank	1	2003
Thailand	Nakhon Sawan	Bung Boraphet	3	2004

**Dalmatian Pelican *Pelecanus crispus* VU**

1% = 75 (South and Southwest Asia), 1 (East Asia). The species was recorded at 50 sites in South Asia and China; seven sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Hong Kong	Deep Bay	15	2002
China	Taiwan Kaohsiung	Kao-Ping-Hsi (River)	1	2004
China	Taiwan Tainan	Tseng-Wen Chi (River)	1	2004
India	Gujarat	Amipur Tank	500	2004
Pakistan	Baluchistan	Aakra River Estuary (on Arabian Sea)	850	2002
Pakistan	Baluchistan	Dasht Hor	97	2002
Pakistan	Sindh	Phoosna	125	2003
<b>Other sites where the species was recorded</b>				
India	Gujarat	Aji-I	2	2002
India	Gujarat	Bajana Creek – Tandri	6	2003
India	Gujarat	Bhadar Dam	12	2002
India	Gujarat	Charakla Saltworks	27	2002
India	Gujarat	Devisar Tank	3	2002
India	Gujarat	Dholi Dhaja Dam	20	2002
India	Gujarat	Don Reservoir	1	2003
India	Gujarat	Gaurishanker Lake	15	2002
India	Gujarat	Great Rann of Kachchh	3	2004
India	Gujarat	Jafarabad Coast	2	2003
India	Gujarat	Jamnagar District: Dwaraka Taluka wetlands	44	2003
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	4	2003
India	Gujarat	Javar	2	2004
India	Gujarat	Kalubhar Dam	1	2004
India	Gujarat	Karli Dam	2	2004
India	Gujarat	Kukma Village Tank	1	2003
India	Gujarat	Kuvadwa	4	2004
India	Gujarat	Lakhota Lake	4	2003
India	Gujarat	Lunivav Dam	2	2004
India	Gujarat	Nakti Creek (New Kandla)	6	2003
India	Gujarat	Nani Kakrad	1	2004
India	Gujarat	Nava Talao	20	2003
India	Gujarat	New Port Salt pans, Bhavnagar	15	2003
India	Gujarat	Nyari-I	3	2003
India	Gujarat	Pipalava Bandharo (Kaj)	4	2003
India	Gujarat	Rudarmata Dam	2	2003
India	Gujarat	Sakariya and Bherai Pond	1	2004
India	Gujarat	Sattapar Dam	2	2002
India	Gujarat	Sokhda Talav	38	2002
India	Gujarat	Sudamda Pond	21	2002
India	Gujarat	Thol Lake Bird Sanctuary	3	2003
India	Gujarat	Veri Dam	12	2004
India	Gujarat	Victor (Bherai) Salt Pans and Coastal Area	2	2003
India	Orissa	Chilika Lake	6	2003
India	Orissa	Daha Dam	1	2002
India	Rajasthan	Jalmahal Lake	1	2003
India	Rajasthan	Kaylana	1	2003
India	Rajasthan	Vardha Dam	35	2004
Pakistan	Baluchistan	Akara (Kaur) Dam	2	2002
Pakistan	Baluchistan	Saiji Dam	45	2002
Pakistan	Sindh	Hub Dam	6	2003
Pakistan	Sindh	Hub River Mouth	4	2003
Pakistan	Sindh	Indus River Mouth	6	2003

**3.6.4 Cormorants – Phalacrocoracidae****Great Cormorant *Phalacrocorax carbo***

1% = 1,000 (*sinensis*, Central and South Asia), 1,000 (*sinensis*, East and Southeast Asia), 550 (*hanedae*, Japan). The species was widely recorded across its range with 14 sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Hunan	East Dongting Lake NR	2,200	2004
China	Jiangxi	Poyang Lake	1,353	2003
China	Hong Kong	Deep Bay	8,964	2004
China	Taiwan Chinmen	Chin-Men Island	3,580	2003
China	Taiwan Kaohsiung	Feng-Shan Reservoir	2,829	2004

Country	Region	Site Name	Peak Count	Year
China	Taiwan Kaohsiung	Kao-Ping-Hsi (River)	2,000	2004
India	Himachal Pradesh	Pong Dam Bird Sanctuary	6,233	2004
India	Orissa	Chilika Lake	1,123	2003
India	Orissa	Harabhangi	1,200	2002
Japan	Aichi	Kiso River Mouth	2,028	2002
Japan	Aichi	Uno Pond	716	2002
Japan	Ibaraki	Kasumigaura Nangan Sakuragawa-Mura	1,020	2004
Japan	Osaka	Yodogawa River	765	2003
Pakistan	Sindh	Hamal (Katchri) Lake	1,260	2003

### Indian Cormorant *Phalacrocorax fuscicollis*

1% = 300. The species is restricted to South and Southeast Asia; 12 sites met the 1% criterion. The peak count total of 287 sites across the three years was 31,707 individuals. It is suggested that the population estimates to be increased to 30,000–50,000 from 30,000.

Country	Region	Site Name	Peak Count	Year
Cambodia	Battambang	Prek Toal	11,188	2004
India	Andhra Pradesh	Sangameshwara	400	2002
India	Gujarat	Krushnakunj Lake	300	2004
India	Gujarat	Onchal Lake	5,000	2004
India	Tamil Nadu	Kaliveli Tank	562	2003
India	Uttar Pradesh	Nanakmata Reservoir	400	2002
India	West Bengal	Alipore Zoological Gardens	586	2002
Sri Lanka	CP	Minipe Canal	2,000	2004
Sri Lanka	EP	Akkaraipattu to Batticaloa	1,151	2003
Sri Lanka	EP	Akkaraipattu to Panama	1,375	2003
Sri Lanka	EP	Ampara	406	2003
Sri Lanka	NCP	Wasgomuwa National Park	900	2002

### Little Cormorant *Phalacrocorax niger*

1% = 2,500 (South Asia), 1,000 (Southeast Asia). The species is restricted to South and Southeast Asia. It is one of most widely distributed species, being recorded at 961 sites; 14 sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Cambodia	Battambang	Prek Toal	1,120	2002
Myanmar	Kachin	Indaw-Gyi Lake	1,000	2003
Thailand	Nakhon Sawan	Bung Boraphet	2,563	2004
Thailand	Pattalung	Thale Noi Non-hunting Area	1,088	2004
Thailand	Petchaburi	Pak Thale (Laem Phak Bia)	1,500	2004
Thailand	Petchaburi	Wat Khao Takhrao	1,950	2003
Thailand	Samut Prakan	Bangpoo Bang Pu	1,500	2003
India	Andhra Pradesh	Chikkadapally	4,000	2002
India	Andhra Pradesh	Manjira Wildlife Sanctuary	6,240	2002
India	Kerala	Kole Wetlands	3,000	2004
India	Orissa	Bhitarkanika Mangrove	4,252	2003
India	Orissa	Chilika Lake	9,237	2002
India	Orissa	Hirakud Reservoir	3,280	2002
India	Orissa	Sundar Dam	3,220	2002

## 3.6.5 Darters – Anhingidae

### Oriental Darter *Anhinga melanogaster* NT

1% = 40 (South Asia), 100 (Southeast Asia). The species is restricted to South and Southeast Asia; a total of 16 sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Cambodia	Battambang	Prek Toal	1,919	2003
India	Andhra Pradesh	Manjira Wildlife Sanctuary	55	2002
India	Gujarat	Jamnagar District: Khambhalia Taluka wetlands	48	2003
India	Kerala	Kole Wetlands	50	2004
India	Kerala	Vembanad: Kumarakom Tourist Complex	42	2004
India	Maharashtra	Kangaon – Nangaon	40	2004
India	Maharashtra	Visapur Tank	50	2004
India	Orissa	Bhitarkanika Mangrove	75	2003
India	Orissa	Chilika Lake	108	2003
India	Orissa	Hirakud Reservoir	40	2002

Country	Region	Site Name	Peak Count	Year
India	Tamil Nadu	Suchindram Tank	60	2004
India	Uttar Pradesh	Nanakmata Reservoir	55	2002
India	Uttar Pradesh	Sur Sarovar Bird Sanctuary	200	2003
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawtaw Sinbo	104	2002
Sri Lanka	NP	Kattaiadampam	60	2002
Sri Lanka	SP	Ruhuna National Park: Block I	55	2003

### 3.6.6 Herons, egrets & bitterns – Ardeidae

#### Grey Heron *Ardea cinerea*

1% = 1,000 (*cinerea*, South Asia), 10,000 (*jouyi*, East and Southeast Asia), 15 (*jouyi*, Sumatra). This is the second most widely distributed species across its range, recorded at 1,079 sites; two sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Manjira Wildlife Sanctuary	2,200	2002
India	Andhra Pradesh	Somasila Tank	1,000	2002

#### Eastern Great Egret *Ardea modesta*

1% = 1,000 (Central and South Asia), 1,000 (East and Southeast Asia). Indonesian population unknown. One of the most widely distributed species, recorded at 954 sites; eight sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Tangua Haor Complex	1,208	2003
China	Anhui	Anqingyanjiang NR: Caizi Hu	1,240	2004
China	Hong Kong	Deep Bay	1,421	2003
India	Orissa	Bhitarkanika Mangrove	3,277	2003
India	Orissa	Chilika Lake	2,464	2004
India	Uttar Pradesh	Sur Sarovar Bird Sanctuary	1,000	2003
Philippines	Luzon	Manila Bay: Puerto Rivas, Balanga	2,070	2004
Thailand	Buriram	Sanambin Non-Hunting Area	2,470	2004

#### Intermediate Egret *Ardea (Mesophoyx) intermedia*

1% = 1,000 (*intermedia*, South Asia), 1,000 (*intermedia*, East and Southeast Asia). East Indonesian (*plumifera*) population unknown. One of the most widely distributed species across its range, recorded at 830 sites; eight sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Tangua Haor Complex	7,800	2003
China	Anhui	Sheng Jin Hu	1,000	2002
India	Andhra Pradesh	Kolleru Wetland: Penumaka Lanka	3,000	2003
India	Maharashtra	Nandur Madhemeshwar Wildlife Sanctuary	1,474	2002
India	Orissa	Bhitarkanika Mangrove	3,156	2003
India	Orissa	Chilika Lake	1,818	2004
Philippines	Luzon	Manila Bay: Puerto Rivas, Balanga	1,190	2004
Thailand	Buriram	Sanambin Non-Hunting Area	2,668	2004

#### White-bellied Heron *Ardea insignis* EN

1% = 6. The species is restricted to South and Southeast Asia. Only one individual was recorded, at Nam Sam Chaung (Near Ayeyarwady), Kachin Province, Myanmar, in 2002.

#### Great-billed Heron *Ardea sumatrana*

1% = 1,000 (Southeast Asia). This species was reported at only a few sites in the Philippines, Malaysia and Indonesia. For this largely solitary species it is unlikely that any site can be expected to hold 1% of the population.

#### Goliath Heron *Ardea goliath*

1% = 1 (South Asia). The South Asian population is estimated at only 20 individuals. Sumit Sen (pers. comm., January 2007) suggest that the population may be larger – in excess of 100. The chosen habitat of the species is the mangrove forests of the Sundarbans and this area is not surveyed for the AWC. The species was reported from two sites in the states of Assam and Orissa, in India.

Country	Region	Site Name	Peak Count	Year
India	Assam	Kuarbari-Dalani	2	2003
India	Orissa	Chilika Lake	4	2004

### Purple Heron *Ardea purpurea*

1% = 250 (*manilensis*, South Asia), 1,000 (*manilensis*, East and Southeast Asia). The species was recorded across its range; one site, Chilika Lake in India, met the 1% criterion (2,332 individuals in 2002).

### Cattle Egret *Ardea (Bubulcus) ibis*

1% = 10,000 (*coromanda*, East and Southeast Asia), South Asia (*coromanda*) population unknown. One of the most widely distributed species across its range, recorded at 987 sites; two sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Mittakodur Tank	20,000	2002
India	Orissa	Chilika Lake	21,718	2002

### Striated Heron *Butorides striata*

1% = 250 (*chloriceps*, India), 1,000 (*javanica*, Sri Lanka to Thailand). Other populations unknown. The species was recorded across South and Southeast Asia and the south of East Asia. One site, Curtorim Lake, Goa State, India, met the 1% criterion (300 individuals in 2003).

### Indian Pond-heron *Ardeola grayii*

1% = 10,000 (*grayii*, South Asia). Myanmar, Andaman and Nicobar Islands (*grayii*) and Maldives (*phillipsi*) – unknown. This species is restricted to South and Southeast Asia and is the most common pond-heron species, recorded at 937 sites. One site, Chilika Lake, Orissa State, India, met the 1% criterion (18,047 individuals in 2002).

### Chinese Pond-heron *Ardeola bacchus*

1% unknown. The species is restricted to East and Southeast Asia. It was recorded at a total of 117 sites.

### Javan Pond-heron *Ardeola speciosa*

1% = 1,000 (*continentalis*, Central Thailand and South Indochina), West and Central Indonesia and Southern Philippines (*speciosa*) unknown. The species was recorded at a small number of sites in Southeast Asia; no site met the 1% criterion.

### Little Egret *Egretta garzetta*

1% = 1,500 (*garzetta*, South Asia), 10,000 (*garzetta*, East and Southeast Asia). Java and New Guinea (*nigripes*) – unknown. This is the most widely distributed species, recorded at 1,337 sites across its range, 11 of which met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Anantaram Tank	2,000	2002
India	Andhra Pradesh	Chinatumbulum Tank	1,700	2002
India	Andhra Pradesh	Kolleru Wetland: Penumaka Lanka	3,000	2003
India	Andhra Pradesh	Manjira Wildlife Sanctuary	7,000	2002
India	Andhra Pradesh	Mittakodur Tank	5,000	2002
India	Andhra Pradesh	Sangameshwara	7,000	2002
India	Gujarat	Korda Sandher	1,545	2004
India	Kerala	Kole Wetlands	3,000	2004
India	Maharashtra	Kangaon–Nangaon	2,000	2004
India	Orissa	Chilika Lake	7,550	2002
India	Uttar Pradesh	Sur Sarovar Bird Sanctuary	2,000	2003

### Chinese Egret *Egretta eulophotes* VU

1% = 30. A coastal species restricted to East and Southeast Asia, it is recorded at 29 sites, with seven sites in Malaysia and the Philippines meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Malaysia	Sarawak	K. Samarahan – K. Sadong (Asajaya–Pendang)	419	2004
Malaysia	Sarawak	Bako – Buntal Bay and Surrounding Areas	30	2003
Philippines	Mindanao	Mampang Tugbungan Area	57	2002
Philippines	Visayas	Bantayan Island Wildness Area	76	2002
Philippines	Visayas	Calituban and Tahong Island	33	2003
Philippines	Visayas	Cordova Wetland	380	2004
Philippines	Visayas	Mahaba Island	44	2004



Country	Region	Site Name	Peak Count	Year
<b>Other sites where the species was recorded</b>				
Brunei		Brunei Bay Mudflats	3	2002
China	Fujian	Zhangjiang Rivermouth Mangrove	3	2003
China	Guangdong	Zhanjiang Nature Reserve	10	2003
China	Taiwan Pingtung	Lin-Pien-Hsi	1	2004
Indonesia	Jambi	Sungai Cemara Beach	2	2002
Republic of Korea	Gyeonggi	Daebu Island	4	2002
Malaysia	Johor	Parit Jawa	1	2004
Malaysia	Sabah	Kinabatangan: Kg. Mumiang/Tg. Bidas	4	2004
Malaysia	Sabah	Kinabatangan: Terusan Kinabatangan	5	2004
Malaysia	Sarawak	Sejangkat Power Station	1	2003
Malaysia	Selangor	Kapar Power Station Ash Ponds	1	2002
Philippines	Luzon	Buguey Lagoon	1	2004
Philippines	Luzon	Novelita Salt Fishpond	2	2004
Philippines	Luzon	Tanza Coastal Wetland	17	2004
Philippines	Visayas	Brgy. Baras Campoyong Mudflat	23	2004
Philippines	Visayas	Magellan Bay Wetland	1	2002
Philippines	Visayas	Olango Island Wildlife Sanctuary	11	2004
Philippines	Visayas	Panglao Island	9	2003
Philippines	Visayas	San Jose, Hamtic, Sibalom, San Romogio	1	2002
Philippines	Visayas	Tiwi, Laste, Lanas	14	2002
Singapore		Sungei Seletar Reservoir	1	2004
Vietnam	Quang Ninh	Ha Coi Town	1	2002

### Black-crowned Night-Heron *Nycticorax nycticorax*

1% = 1,250 (*nycticorax*, South Asia), 10,000 (*nycticorax*, East and Southeast Asia). The species was recorded across its range, with three sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Jiangsu	Shang Hu	10,000	2004
India	Orissa	Bhitaranika Mangrove	1,255	2003
India	Orissa	Ekamrakanan Tank	1,740	2002

### Japanese Night-Heron *Gorsachius goisagi* EN

1% = 6. The species is restricted to East and Southeast Asia. It was recorded only at Kiso River Mouth, Aichi County in Japan (7 individuals in 2002); this site also meets the 1% criterion.

## 3.6.7 Storks – Ciconiidae

### Milky Stork *Mycteria cinerea* VU

1% = 50 (Indonesia), 1 (Malaysia), 1 (Cambodia). The species is restricted to Southeast Asia. It is recorded at 11 sites in Cambodia, Malaysia and Indonesia, with four sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	2	2004
Cambodia	Battambang	Prek Toal	3	2003
Indonesia	Sumatra South	Banyuasin Delta	121	2002
Malaysia	Perak	Matang Forest	8	2004
<b>Other sites where the species was recorded</b>				
Indonesia	Jakarta	Muara Angke	1	2002
Indonesia	Jakarta	Pulau Rambut	6	2002
Indonesia	Jambi	Berbak National Park	2	2002
Indonesia	Jambi	Sungai Cemara Beach	2	2002
Indonesia	Java East	Rawa Pulo	1	2003
Indonesia	Lampung	Rawa Pacing	1	2002
Indonesia	Sulawesi S.E.	Rawa Aopa National Park	30	2003

### Painted Stork *Mycteria leucocephala* NT

1% = 250 (South Asia), 100 (Southeast Asia). The species is restricted to South and Southeast Asia and was recorded at 317 sites; 17 sites met the 1% criteria.

Country	Region	Site Name	Peak Count	Year
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	403	2004
Cambodia	Battambang	Prek Toal	1,505	2004
India	Andhra Pradesh	Coringa Wildlife Sanctuary	2,200	2003
India	Andhra Pradesh	Jamukula–Dinni	449	2002

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Kandukuru	252	2003
India	Andhra Pradesh	Pulicat Lake Bird Sanctuary	1,706	2003
India	Andhra Pradesh	Telineela Puram	454	2002
India	Andhra Pradesh	Uppalapadu Water Tank	1,045	2004
India	Andhra Pradesh	Velamavari Palwem	350	2002
India	Gujarat	Jamnagar District: Dwaraka Taluka wetlands	378	2003
India	Gujarat	Nani Kakrad	350	2004
India	Gujarat	New Port Saltpans, Bhavnagar	250	2002
India	Maharashtra	Kangaon–Nangaon	270	2004
India	Maharashtra	Pedgaon (Bhima River)	540	2004
India	Maharashtra	Shimpore – Khed	1,400	2004
India	Orissa	Hirakud Reservoir	1,068	2002
India	Tamil Nadu	Karavetty Tank	310	2003

### Asian Openbill *Anastomus oscitans*

1% = 3,000. The species is restricted to South and Southeast Asia. It is the most abundant stork species in Asia, recorded at 508 sites, with six sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Coringa Wildlife Sanctuary	6,800	2003
India	Andhra Pradesh	Godavari River	5,000	2002
India	Andhra Pradesh	Kondakarla Lake	5,000	2002
India	Andhra Pradesh	Nellapattu Pelican Sanctuary	6,000	2002
India	Orissa	Chilika Lake	32,750	2002
Thailand	Nakhon Sawan	Bung Boraphet	52,613	2004

### Black Stork *Ciconia nigra*

1% = 100 (South Asia and Myanmar), 5 (East and Southeast Asia). Ten sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Bo Hu	15	2004
China	Anhui	Anqingyanjiang NR: Qili He	18	2004
China	Anhui	Sheng Jin Hu	17	2004
China	Hubei	Changjiangudao Baijitan NR	6	2004
China	Hubei	Long Gan Hu	23	2002
China	Hubei	Tian Er Zhou Milu NR	6	2004
China	Hunan	Kongjia Hu	12	2004
China	Hunan	West Dongting Lake NR	10	2003
China	Jiangxi	Poyang Lake	29	2004
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawtaw Sinbo	233	2002

### Woolly-necked Stork *Ciconia episcopus*

1% = 250 (*episcopus*, India to Indochina and Philippines), 100 (*neglecta*, Indonesia). The species does not normally congregate in large flocks, therefore no site met the 1% criterion.

### Storm's Stork *Ciconia stormi* EN

1% = 4. The species is restricted to Brunei, Indonesia and Malaysia. It was recorded at only four sites in Indonesia and Malaysia with three sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Indonesia	Jambi	Berbak National Park	5	2002
Malaysia	Sabah	Kinabatangan: Lower Floodplain	8	2002
Malaysia	Sabah	Kinabatangan: Terusan Kinabatangan	7	2004
<b>Other sites where the species was recorded</b>				
Malaysia	Sabah	Kinabatangan: Kg Mumiang/Tg Bidadas	2	2004

### Eurasian White Stork *Ciconia ciconia*

1% = 45 (*asiatica*, South and Central Asia). The species was recorded at a small number of sites in India and Pakistan. One site, Bhavnagar New Port Saltpans, Gujarat State, India, met the 1% criterion (56 individuals in 2002).

### Oriental (White) Stork *Ciconia boyciana* EN

1% = 30. The species is restricted to East Asia. It was recorded at 18 sites, four of which met the 1% criterion. The majority of the birds were reported at Poyang Lake in China.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Caizi Hu	142	2004
China	Hubei	Chen Hu	500	2002
China	Hunan	East Dongting Lake NR	66	2003
China	Jiangxi	Poyang Lake	2,221	2004
<b>Other sites where the species was recorded</b>				
China	Anhui	Anqingyanjiang NR: Huang Hu	6	2004
China	Anhui	Anqingyanjiang NR: Wuchang Hu	14	2004
China	Hunan	Heng Ling Hu – He Ye Hu	4	2003
China	Hunan	South Dongting Lake NR	1	2004
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	20	2004
China	Liaoning	Shuangtai Hekou NR	6	2004
China	Hong Kong	Deep Bay	1	2004
China	Taiwan Chinmen	Chin-Men Island	1	2002
China	Taiwan Ilan	Chu-An	1	2003
Republic of Korea	Chungnam	Bunam Reservoir	5	2004
Republic of Korea	Chungnam	Ganwol Reservoir	6	2002
Republic of Korea	Gyeongnam	Sajipo Marsh	1	2004
Republic of Korea	Jeonnam	Geumho Reservoir	3	2004
Republic of Korea	Jeonnam	Yungam Reservoir	1	2003

### Black-necked Stork *Ephippiorhynchus asiaticus* NT

1% = 10 (*asiaticus*, South and Southeast Asia). The species was recorded at a small number of sites in its range, with three sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Maharashtra	Pipriya Lake, Pench Tiger Project	20	2003
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawlaw Sinbo	15	2002
Pakistan	Punjab	Head Qadirabad	34	2003

### Lesser Adjutant *Leptoptilos javanicus* VU

1% = 50. The species is restricted to South and Southeast Asia. It was recorded at 96 sites, with two sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Cambodia	Battambang	Prek Toal	197	2004
Malaysia	Perak	Matang Forest and Northern Kuala Gula	57	2003
<b>Other sites where the species was recorded</b>				
Bangladesh	Barisal	Dighai Char	1	2003
Bangladesh	Barisal	Kukri-Mukri Char	1	2003
Bangladesh	Khulna	Sundarbans: Kachikhali	3	2002
Bangladesh	Khulna	Sundarbans: Katka	11	2002
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	6	2004
Cambodia	Kampong Thom	Chinit River	4	2004
India	Assam	Bauwwa Beel	2	2004
India	Assam	Bordoibam Bilmukh Bird Sanctuary	17	2003
India	Assam	Bordoloni	17	2003
India	Assam	Chenamari Beel	23	2003
India	Assam	Deepor Beel	34	2004
India	Assam	Dhamar	2	2004
India	Assam	Dhir Beel	3	2003
India	Assam	Jengdia Beel	3	2004
India	Assam	Kamranga Beel	4	2002
India	Assam	Kani Beel	5	2004
India	Assam	Kaziranga National Park	10	2004
India	Assam	Khamranga Beel	2	2003
India	Assam	Kuarbari-Dalani	33	2003
India	Assam	Kokilamukh	18	2004
India	Assam	Misamari Beel	33	2003
India	Assam	Nameri Wildlife Sanctuary	1	2004
India	Assam	Panidihing and Fokolai	4	2003
India	Assam	Sipi Beel	2	2004
India	Assam	Urpod Beel	2	2004
India	Bihar	Vikramshila Ganga Dolphin Sanctuary	1	2004
India	Goa	Carambolim Tank	1	2004
India	Goa	Ciba-Geigy-Corlim	8	2003
India	Goa	Curtorim Mangroves	2	2003
India	Goa	Mandovi Estuary	1	2003
India	Orissa	Bhitarkanika Mangrove	8	2003
India	Orissa	Harabhangi	10	2002
India	Orissa	Hirakud Reservoir	2	2002

Country	Region	Site Name	Peak Count	Year
India	Orissa	Kuspangi Pato	2	2003
India	Orissa	Ongaito Tank	3	2002
India	Orissa	Raghunath Sagar	2	2003
India	Orissa	Sundar Dam	4	2003
India	Uttar Pradesh	Baadi Taal	3	2004
India	Uttar Pradesh	Chaltuwa Wetland	4	2003
India	Uttar Pradesh	Sur Sarovar Bird Sanctuary	4	2003
India	Uttarakhand	Nanakmata Reservoir	2	2002
India	West Bengal	Baghar Beel	1	2003
India	West Bengal	Bara Sagar Dighi	5	2003
India	West Bengal	Chander More	1	2003
India	West Bengal	Farakka Barrage (Ganges River)	4	2002
India	West Bengal	Fulbari	2	2004
India	West Bengal	Gajaldoba Teesta Barrage	1	2003
India	West Bengal	Mechi River	4	2002
India	West Bengal	Narar Thali Bil	1	2002
India	West Bengal	Naya Bandh Bill	4	2003
India	West Bengal	Naya Chara (Kharubhaj) Beel	3	2003
India	West Bengal	Raiganj (Kulik) Bird Sanctuary	1	2003
India	West Bengal	Rasik Bill	11	2002
India	West Bengal	Siliguri Barrage, Fulbar	2	2003
Indonesia	Jambi	Sungai Cemara Beach	10	2002
Indonesia	Java East	Rawa Pulo	29	2003
Indonesia	Lampung	Rawa Pacing	10	2003
Indonesia	Sumatra South	Banyuasin Delta	37	2002
Indonesia	Sumatra South	Tanjung Atap	3	2004
Indonesia	Sumatra West	Lunang Silaut	7	2002
Malaysia	Johor	Parit Jawa	26	2003
Malaysia	Johor	Sungai Balang	3	2004
Malaysia	Johor	Tanjung Piai	4	2003
Malaysia	Pahang	Pekan Pahang	7	2004
Malaysia	Sabah	Kinabatangan: Kg. Mumiang/Tg. Bidadas	1	2004
Malaysia	Sabah	Kinabatangan: Lower Floodplain	12	2002
Malaysia	Sabah	Kinabatangan: Terusan Kinabatangan	16	2002
Malaysia	Selangor	Kapar Power Station Ash Ponds	3	2004
Malaysia	Selangor	Kuala Selangor Nature Park	4	2002
Malaysia	Selangor	Pulau Tengah	6	2004
Myanmar	Ayeyarwady	Bobakone Swamp	2	2003
Myanmar	Ayeyarwady	Gayetgyi Island	1	2003
Myanmar	Ayeyarwady	Meinmahla Kyun Wildlife Sanctuary	6	2003
Myanmar	Kachin	Byee Lake	11	2004
Myanmar	Kachin	Indaw R: Changgwa –Kahtangyaung	7	2004
Myanmar	Kachin	Indaw R: Shwetaung–Chaungwa	11	2004
Myanmar	Kachin	Indaw – Gyi Lake	12	2003
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawtaw Sinbo	10	2002
Myanmar	Kachin	Nam Sam Chaung (Near Ayeyarwady)	11	2002
Nepal	CR: Narayani	Beeshazari Tal	12	2004
Nepal	CR: Narayani	Rapti River: at Sauraha	9	2004
Nepal	CR: Narayani	Rapti River: Gatgai to Bahmara	3	2002
Nepal	CR: Narayani	CNP: Narayani River: Sigraulti to Amaltari Ghat	1	2004
Nepal	CR: Narayani	CNP: Rapti River and Dungre River	7	2004
Nepal	CR: Narayani	Reu River: Baluwai Khola Till Hathisaar	23	2004
Nepal	ER: Koshi	Koshi River Barrage Wildlife Reserve	1	2002
Sri Lanka	CP	Minipe Canal	3	2003
Sri Lanka	EP	Ruhuna East National Park	2	2004
Sri Lanka	NCP	Kaudulla Tank	2	2004
Sri Lanka	NCP	Wasgomuwa National Park	2	2003
Sri Lanka	SABP	Suriya Wewa	1	2003
Sri Lanka	UVAP	Uda Walawe National Park	2	2002
Thailand	Phang Nga	Ko Pratong	10	2003
Vietnam	Dong Nai Province	Cat-Tien National Park	5	2002

### Greater Adjutant *Leptoptilos dubius* EN

1% = 7 (South Asia), 2 (Southeast Asia). The species is restricted to South and Southeast Asia. It was recorded at a total of 12 sites in India, Cambodia and Myanmar, with four sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Assam	Chenamari Beel	8	2003
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	2	2004
Cambodia	Battambang	Prek Toal	82	2004
Myanmar	Ayeyarwady	Meinmahla Kyun Wildlife Sanctuary	2	2003

Country	Region	Site Name	Peak Count	Year
<b>Other sites where the species was recorded</b>				
India	Assam	Deepor Beel	6	2004
India	Assam	Jengdia Beel	2	2004
India	Assam	Kaziranga National Park	2	2003
India	Assam	Kuarbari-Dalani	1	2004
India	Assam	Misamari Beel	3	2003
India	Assam	Panidihing and Fokolai	2	2003
Myanmar	Magway	Wetthigian Lake Wildlife Sanctuary	1	2003
Myanmar	Mandalay	Thitson Reservoir	1	2002

### 3.6.8 Ibises & spoonbills – Threskiornithidae

#### Black-headed Ibis *Threskiornis melanocephalus* NT

1% = 250 (South Asia), 100 (Southeast Asia), 1 (China). The species is restricted to South, East and Southeast Asia, with 14 sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Cambodia	Battambang	Prek Toal	114	2004
Myanmar	Yangon	Letkok Kon	200	2004
India	Andhra Pradesh	Chinatumbulum Tank	630	2002
India	Andhra Pradesh	Manjira Wildlife Sanctuary	300	2002
India	Andhra Pradesh	Nellapattu Pelican Sanctuary	260	2003
India	Andhra Pradesh	Uppalapadu Water Tank	500	2002
India	Gujarat	Krushnakunj Lake	550	2004
India	Kerala	Kole Wetlands	400	2004
India	Maharashtra	Nandur Madhameshwar Wildlife Sanctuary	300	2003
India	Orissa	Bhitarkanika Mangrove	450	2003
India	Orissa	Hirakud Reservoir	300	2003
Sri Lanka	CP	Minipe Canal	300	2004
Sri Lanka	NCP	Wasgomuwa National Park	550	2002
Sri Lanka	SP	Tangalla Mangrove	300	2004

#### Indian Black Ibis *Pseudibis papillosa*

1% = 100. The species is restricted to South Asia; 12 sites met the 1% criterion. The peak total count of 269 sites in South Asia across the three years recorded 7,885 birds. According to Sumit Sen (pers. comm., January 2007), the species is fairly widespread across large parts of India and is regularly seen in small flocks. Birds are often away from wetlands and are under-represented in the AWC. It is suggested, therefore, that the population estimate be increased to 10,000–25,000.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Chikkadapally	500	2002
India	Andhra Pradesh	Chinatumbulum Tank	327	2002
India	Andhra Pradesh	Coringa Wildlife Sanctuary	600	2003
India	Andhra Pradesh	Kolleru Wetland: Penumaka Lanka	200	2003
India	Andhra Pradesh	Manjira Wildlife Sanctuary	800	2002
India	Gujarat	Kabutni Dam	100	2004
India	Maharashtra	Hipparga Tank	315	2003
India	Maharashtra	Kangaon–Nangaon	590	2004
India	Maharashtra	Nandur Madhameshwar Wildlife Sanctuary	300	2004
India	Maharashtra	Pedgaon (Bhima River)	240	2004
India	Maharashtra	Shimpore – Khed	200	2004
India	Orissa	Rengali	120	2002

#### White-shouldered Ibis *Pseudibis davisoni* CR

1% = 2 (Vietnam, Laos and Cambodia), 1 (Borneo). The species is restricted to Indochina and Borneo, with only one record (2 individuals) at Ang Tropeing Thmor Reservoir, Bantey Meanchey Province, Cambodia, in 2004.

#### Glossy Ibis *Plegadis falcinellus*

1% = 250 (*falcinellus*, Central, South and Southeast Asia). Eighteen sites met the 1% criterion. The peak total count of 204 sites across the three years recorded 15,529 individuals; it is suggested that the population estimate be updated to 20,000–50,000.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Chikkadapally	300	2002
India	Andhra Pradesh	Manjira Wildlife Sanctuary	250	2002
India	Gujarat	Guneli	300	2004
India	Gujarat	Heranj	450	2004
India	Gujarat	Jesola	300	2004
India	Gujarat	Lambhvel Sewage Pond	725	2004
India	Gujarat	Nagarama Village Pond	341	2003
India	Gujarat	Nani Kakrad	1,300	2004
India	Gujarat	Narda Tank	700	2003
India	Gujarat	Narmada Main Canal	500	2002
India	Gujarat	Pariej	608	2003
India	Gujarat	Munva Hadaf Dam	300	2004
India	Gujarat	Ratneshvar Tank	300	2004
India	Gujarat	Timbi Tank	1,400	2002
India	Gujarat	Whadhvana	295	2003
India	Maharashtra	Hipparga Tank	255	2003
India	Maharashtra	Nandur Madhemeshwar Wildlife Santuary	1,027	2002
Myanmar	Mandalay	Minhla – Nyaung Yan Lake	300	2002

### Eurasian Spoonbill *Platalea leucorodia*

1% = 1,000 (*major*, Southwest and South Asia), 100 (*major*, East Asia). The South Asian population seems to be widely distributed. The East Asian population was recorded in a small number of sites, with the majority of the population reported at Poyang Lake, Jiangxi Province, China.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Caizi Hu	1,652	2003
China	Anhui	Sheng Jin Hu	973	2002
China	Hubei	Chen Hu	191	2004
China	Hubei	Wang Hu And Supo Hu	110	2004
China	Hunan	East Dongting Lake NR	440	2003
China	Jiangxi	Poyang Lake	5,949	2003
China	Jiangxi	Sai Cheng Hu	190	2003
India	Gujarat	Amipur Tank	1,450	2004

### Black-faced Spoonbill *Platalea minor* EN

1% = 15. The species is restricted to East and Southeast Asia. The species was reported at 25 sites, with nine sites meeting the 1% criterion. Comprehensive annual count results for the species have been compiled by T. Dahmer and M. Felley (unpublished data) and Yu (2003b, 2004b).

Country	Region	Site Name	Peak Count	Year
China	Hong Kong	Deep Bay	240	2004
China	Macao	Taipa-Coloane Mudflat	50	2004
China	Taiwan Chiayi	Pu-Tai	20	2004
China	Taiwan Tainan	Szu-Tsao	155	2002
China	Taiwan Tainan	Tseng-Wen Hsi (River)	427	2002
Vietnam	Nam Dinh (Nam Ha)	Xuan Thuy Ramsar Site	65	2003
Japan	Fukuoka	East Region of Hakata Bay	18	2002
Japan	Fukuoka	Imazu	25	2004
Republic of Korea	Jeju	Seongsanpo Lake	24	2002
<b>Other sites where the species was recorded</b>				
China	Shanghai	Chongming Island	2	2004
China	Taiwan Hsinchu	Ku-Liao (Kang Nan)	1	2004
China	Taiwan Ilan	Chu-An	6	2003
China	Taiwan Ilan	Lan-Yang-Hsi (River)	3	2003
China	Taiwan Penghu	Cheng-Kung Reservoir	1	2004
China	Taiwan Penghu	Sin-Jen Reservoir	1	2003
China	Taiwan Pingtung	Lung-Luan-Tan	1	2002
China	Taiwan Tainan	Pei-Men	2	2002
China	Taiwan Taipei	Guandu (Kuan-Tu) Marsh	1	2004
Republic of Korea	Gyeongnam	Junam Reservoirs	1	2002
Republic of Korea	Jeju	Hadori	7	2004
Republic of Korea	Jeonnam	Gunnae Reclaimed Area	2	2003
Republic of Korea	Jeonnam	Hyungyungmyun, Muangun	1	2004
Thailand	Petchaburi	Pak Thale (Laem Phak Bia)	2	2004
Thailand	Petchaburi	Wat Khao Takhrao	3	2003
Vietnam	Quang Ninh Province	Ha Nam Island	4	2002

### 3.6.9 Flamingos – Phoenicopteridae

#### Greater Flamingo *Phoenicopterus roseus*

1% = 2,400 (South and Southwest Asia). The species is reported mainly in Gujarat State, in India, with nine sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Gujarat	Charakla Saltworks	3,000	2002
India	Gujarat	Great Rann of Kachchh	10,700	2004
India	Gujarat	Jamnagar District: Dwaraka Taluka wetlands	8,711	2003
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	3,692	2003
India	Gujarat	New Port Salt pans, Bhavnagar	3,646	2003
India	Orissa	Chilika Lake	6,093	2003
Pakistan	Sindh	Nur-Ri Lake	4,750	2002
Sri Lanka	NP	Mannar Causeway	4,000	2002
Sri Lanka	NP	Vankalai Triangle	5,000	2003

#### Lesser Flamingo *Phoenicopterus minor* NT

1% = 3,900 (South Asia). The species is reported mainly in Gujarat State, in India, with 11 sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Gujarat	Charakla Saltworks	5,000	2002
India	Gujarat	Chhari Dhandh	5,000	2002
India	Gujarat	Chhaya Creek (Sewage)	4,450	2004
India	Gujarat	Great Rann of Kachchh	20,000	2004
India	Gujarat	Hathab (Via Koliyak) – Sea Shore	6,510	2004
India	Gujarat	Jamnagar District: Dwaraka Taluka wetlands	14,415	2003
India	Gujarat	Khirjog	7,000	2004
India	Gujarat	Kumbharwada Sewage Pond	6,500	2003
India	Gujarat	Mahi River Estuary: Sarod 'J' Point	20,000	2004
India	Gujarat	New Port Salt pans, Bhavnagar	5,570	2003
India	Maharashtra	Sewree Jetty	15,000	2003

### 3.6.10 Swans, geese & ducks – Anatidae

#### Fulvous Whistling Duck *Dendrocygna bicolor*

1% = 500 (South Asia and Myanmar). Eleven sites met the 1% criterion: Tangua Haor, Bangladesh, alone recorded 31,000 individuals in 2003. The peak count total of 54 sites across the three years recorded 51,908 individuals; the current population estimate of 50,000 may need updating to 75,000. Balachandran and Sathiyaselvam (submitted) recorded 14,500 individuals at Chilika Lake in January 2003, which further supports a population update for this species.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Chatidhara Beel	2,250	2004
Bangladesh	Sylhet	Tangua Haor Complex	31,300	2003
India	Jharkhand	Roka Lake	500	2003
India	Manipur	Ithai Wapokpi – Nongma Ikhong	1,250	2004
India	Orissa	Chilika Lake	1,911	2004
India	Orissa	Harabhangi	1,140	2002
India	Orissa	Hirakud Reservoir	2,661	2003
India	Orissa	Kamarkhunti Dam	500	2002
India	Orissa	Mukutmonipur	2,000	2002
India	West Bengal	Farakka Barrage (Ganges River)	5,000	2002
India	West Bengal	Satbeki Bill	552	2003

#### Wandering Whistling Duck *Dendrocygna arcuata*

1% = 10,000 (*arcuata*, East Indonesia and South Philippines). It was recorded at a total of 18 sites, mainly in the Philippines, with no site meeting the 1% criterion.

#### Lesser Whistling Duck *Dendrocygna javanica*

1% = 10,000. The species is restricted to South, East and Southeast Asia. This is the most common whistling duck species. A total of nine sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	15,000	2002
India	Kerala	Kole Wetlands	10,000	2003
India	Orissa	Chilika Lake	10,400	2002
India	Orissa	Harabhangi	20,330	2002
India	Orissa	Mukutmonipur	20,000	2002
India	Orissa	Pampalo	21,800	2003
India	Orissa	Rengali	11,920	2002
Thailand	Buriram	Huai Talat Non-Hunting Area	14,009	2003
Thailand	Nakhon Sawan	Bung Boraphet	86,204	2004

### Whooper Swan *Cygnus cygnus*

1% = 600 (East Asia). The species was recorded mainly in Republic of Korea and Japan, with five sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Japan	Aomori	Ogawara Lake	699	2004
Japan	Hokkaido	Kushiro: Akkeshi Lake	4,300	2002
Republic of Korea	Busan	Nakdong Estuary	1,635	2004
Republic of Korea	Gyeongnam	Dongpan Reservoir	1,034	2003
Republic of Korea	Jeonnam	Gangjin Bay	630	2004

### Tundra Swan (Whistling Swan) *Cygnus columbianus*

1% = 920 (*jankowskii*, East Asia). The major non-breeding population and all seven sites meeting the 1% criterion were in China. The total count of this species in 2004, at 95,535, exceeded the current population estimate of 92,000. It is suggested that the current population estimate be increased to 100,000.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Baidang Hu	4,400	2004
China	Anhui	Anqingyanjiang NR: Fengsha Hu	987	2004
China	Anhui	Anqingyanjiang NR: Wuchang Hu	3,980	2004
China	Anhui	Sheng Jin Hu	4,333	2004
China	Hubei	Wang Hu and Supo Hu	2,516	2004
China	Jiangxi	Poyang Lake	33,689	2004
China	Jiangxi	Sai Cheng Hu	7,113	2003

### Swan Goose *Anser cygnoides* EN

1% = 800. The species is restricted to East Asia; it was reported at a total of 22 sites in China and Republic of Korea, with six sites in China meeting the 1% criterion. The majority of the population was recorded on the Lower Yangtze floodplain in China. The total count for the species in 2004, of 98,116 individuals, may suggest that the current population estimate could be updated to 80,000–100,000. Although the high total count may have been caused by double counting in Poyang Lake and Anqingyanjiang NR, as the counts were conducted at different times (see section 2.6.2), the count at Poyang Lake alone (66,009 in 2004) exceeded the current population estimate.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Caizi Hu	6,947	2004
China	Anhui	Anqingyanjiang NR: Fengsha Hu	10,950	2004
China	Anhui	Anqingyanjiang NR: Wuchang Hu	4,500	2003
China	Anhui	Sheng Jin Hu NR	11,483	2004
China	Jiangxi	Poyang Lake	66,009	2004
China	Jiangxi	Sai Cheng Hu	6,180	2003
<b>Other sites where the species was recorded</b>				
China	Anhui	Anqingyanjiang NR: Baidang Hu	156	2004
China	Anhui	Anqingyanjiang NR: Dagan Hu	41	2004
China	Anhui	Anqingyanjiang NR: Long Gan Hu	120	2004
China	Hubei	Chen Hu NR	87	2004
China	Hubei	Wang Hu and Supo Hu	52	2004
China	Hunan	East Dongting Lake NR	51	2004
China	Hunan	Helong Hu–Baini Hu	76	2004
China	Hunan	West Dongting Lake NR	45	2004
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	563	2004
China	Shanghai	Chongming Island	102	2003
Republic of Korea	Busan	Nakdong Estuary	9	2003
Republic of Korea	Chungnam	Geum River Estuary	7	2004
Republic of Korea	Chungnam	Geum River Reservoir	11	2002
Republic of Korea	Gyeonggi	Siwha Reservoir	3	2004
Republic of Korea	Gyeongnam	Junam Reservoirs	7	2003
Republic of Korea	Jeonnam	Yungam Reservoir	25	2004



**Bean Goose *Anser fabalis***

1% = 800 (*middendorffi*, East Asia), 700 (*serrirostris*, East Asia). The figure of 800 was used as the 1% criterion for the identification of internationally important sites because of the difficulty in separating these two subspecies whose non-breeding grounds almost completely overlap. A total of 28 sites in China and Republic of Korea met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Bo Hu	2,100	2004
China	Anhui	Anqingyanjiang NR: Dagan Hu	1,669	2004
China	Anhui	Anqingyanjiang NR: Huang Hu	3,087	2004
China	Anhui	Anqingyanjiang NR: Wuchang Hu	26,175	2004
China	Anhui	Sheng Jin Hu NR	12,300	2002
China	Hubei	Chen Hu NR	9,892	2004
China	Hubei	Wang Hu and Supo Hu	962	2004
China	Hunan	East Dongting Lake NR	25,825	2004
China	Hunan	Heng Ling Hu–He Ye Hu	1,250	2003
China	Hunan	South Dongting Lake NR	869	2004
China	Hunan	West Dongting Lake NR	950	2003
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	1,110	2004
China	Jiangxi	Poyang Lake	5,200	2004
Republic of Korea	Busan	Nakdong Estuary	1,550	2004
Republic of Korea	Busan	Lower Nakdong River	1,506	2003
Republic of Korea	Chungnam	Bunam Reservoir	7,392	2004
Republic of Korea	Chungnam	Daeho Lake	2,376	2003
Republic of Korea	Chungnam	Ganwol Reservoir	11,200	2004
Republic of Korea	Chungnam	Geum River Reservoir	1,565	2003
Republic of Korea	Gyeonggi	Asan Lake	846	2004
Republic of Korea	Gyeonggi	Han River Estuary	4,315	2002
Republic of Korea	Gyeongnam	Dongpan Reservoir	951	2003
Republic of Korea	Gyeongnam	Upo Marsh	3,500	2002
Republic of Korea	Jeonbuk	Dongjin River Estuary	1,721	2004
Republic of Korea	Jeonbuk	Mangyung River Estuary	920	2002
Republic of Korea	Jeonnam	Gunnae Reclaimed Area	890	2003
Republic of Korea	Jeonnam	Youngsan Reservoir (Estuary)	800	2003
Republic of Korea	Jeonnam	Yungam Reservoir	1,086	2003

**Greater White-fronted Goose *Anser albifrons***

1% = 1,800 (*frontalis*, East Asia). Twenty sites met the 1% criterion. At 182,918 and 172,968, the total counts for the species in 2003 and 2004 respectively were higher than the current estimate of 150,000–200,000 individuals. Based on a recent review of the long-term changes in their breeding populations in north eastern Russia by Syroechkovskiy (2006), it appears that populations of geese migrating to Japan and Korea have increased accompanied by a decline in the population migrating to China. This new information may assist in redefining populations and their estimates in East Asia.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Sheng Jin Hu	4,218	2002
China	Hunan	East Dongting Lake NR	12,575	2004
China	Jiangxi	Poyang Lake	48,360	2003
Japan	Shimane	Shinji Lake	2,950	2004
Republic of Korea	Chungnam	Bunam Reservoir	2,499	2004
Republic of Korea	Chungnam	Daeho Lake	9,805	2003
Republic of Korea	Chungnam	Ganwol Reservoir	3,800	2004
Republic of Korea	Chungnam	Geum River Reservoir	6,965	2003
Republic of Korea	Chungnam	Sapkyo Lake	3,471	2004
Republic of Korea	Chungnam	Sekmun Reclaimed Area	2,980	2004
Republic of Korea	Gangwon	Cheolwon Basin	8,656	2004
Republic of Korea	Gyeongbuk	Haepyong, Gumi City	3,972	2002
Republic of Korea	Gyeonggi	Han River Estuary	3,800	2004
Republic of Korea	Gyeonggi	Imjin River Estuary	9,073	2002
Republic of Korea	Incheon	Gangwha Island: South Coast Mudflats	2,796	2004
Republic of Korea	Jeonbuk	Dongjin River Estuary	3,037	2002
Republic of Korea	Jeonbuk	Mangyung River Estuary	5,083	2004
Republic of Korea	Jeonnam	Gocheonam Reservoir	2,488	2004
Republic of Korea	Jeonnam	Youngsan Reservoir (Estuary)	2,114	2004
Republic of Korea	Jeonnam	Yungam Reservoir	4,746	2003

**Lesser White-fronted Goose *Anser erythropus* VU**

1% = 200 (East Asia). The whole eastern population appears to be centred on East Dongting Lake, Hunan Province, China, which is the only site meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Hunan	East Dongting Lake NR	16,923	2004
<b>Other sites where the species was recorded</b>				
China	Hunan	Heng Ling Hu–He Ye Hu	1	2003
China	Hunan	West Dongting Lake NR	5	2004
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	10	2004
China	Jiangxi	Poyang Lake	9	2004
China	Taiwan Ilan	Lan-Yang-Hsi (River)	1	2004
Japan	Shimane	Shinji Lake	4	2004
Republic of Korea	Gyeongnam	Junam Reservoirs	2	2004

### Greylag Goose *Anser anser*

1% = 250 (*rubrirostris*, South Asia), 750 (*rubrirostris*, East and Southeast Asia). Seventeen sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	2,892	2004
India	Assam	Chenamari Beel	600	2003
India	Assam	Misamari Beel	980	2003
India	Bihar	Vikramshila Ganga Dolphin Sanctuary	400	2004
India	Delhi/U.P	Yamuna River: Okhla Barrage Bird Sanctuary	300	2003
India	Gujarat	Lambhvel Sewage Pond	443	2003
India	Gujarat	Naika Dam	500	2002
India	Gujarat	Narda Tank	611	2003
India	Gujarat	Whadhvana	1,270	2003
India	Haryana	Bhindavas Lake Bird Sanctuary	680	2003
India	Rajasthan	Vardha Dam	250	2004
India	Uttar Pradesh	National Chambal Sanctuary	420	2002
India	Uttar Pradesh	Pili Dam	400	2002
India	Uttar Pradesh	Sur Sarovar Bird Sanctuary	250	2003
India	West Bengal	Ballavpur Wildlife Sanctuary	871	2003
India	West Bengal	Tilpara Barrage	495	2003
Pakistan	Punjab/NWFP	Chashma Barrage Reservoir	2,160	2003

### Bar-headed Goose *Anser indicus*

1% = 560. The species is restricted to South, East and Southeast Asia. Eighteen sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Guizhou	Caohai Reserve	1,427	2004
China	Yunnan	Huize County	1,692	2003
China	Yunnan	Lashihai Lake	1,071	2003
China	Yunnan	Napahai Reserve	1,509	2004
India	Andhra Pradesh	Manjira Wildlife Sanctuary	1,050	2002
India	Andhra Pradesh	Sangameshwara	700	2002
India	Assam	Misamari Beel	1,000	2003
India	Haryana	Basai Wetlands	1,100	2003
India	Himachal Pradesh	Pong Dam Bird Sanctuary	16,311	2004
India	Karnataka	Hadinarli	560	2003
India	Maharashtra	Chargaon Lake	795	2003
India	Orissa	Bhitarkanika Mangrove	695	2003
India	Orissa	Chilika Lake	980	2003
India	Tamil Nadu	Karavetty Tank	2,020	2003
India	Uttar Pradesh	National Chambal Sanctuary	793	2002
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawtaw Sinbo	3,443	2003
Pakistan	Punjab	Head Marala Barrage	2,520	2002
Pakistan	Punjab/NWFP	Chashma Barrage Reservoir	1,155	2003

### Lesser Snow Goose *Chen (Anser) caerulescens*

1% = 1 (*caerulescens* 'Lesser', East Asia). The species was reported at five sites in Republic of Korea. Although small numbers of Lesser Snow Goose were also reported from Japan during this period, no site locations were provided.

Country	Region	Site Name	Peak Count	Year
Republic of Korea	Chungnam	Ganwol Reservoir	1	2004
Republic of Korea	Gangwon	Cheolwon Basin	1	2004
Republic of Korea	Gyeonggi	Han River Estuary	3	2003
Republic of Korea	Gyeonggi	Imjin River Estuary	1	2003
Republic of Korea	Gyeongnam	Dongpan Reservoir	1	2003

**Brent Goose *Branta bernicla***

1% = 50 (*nigricans*, East Asia). Only one site, namely Gwangyang and Galsa Bay, Jeonnan Province, Republic of Korea met the 1% criterion. The main January location for the species on the Shandong coast, China was not adequately covered during 2002–2004. In 1992–1993, sites covered by the AWC such as the Changshan Islands reported about 1,200 birds (Miyabayashi and Mundkur 1999).

**Ruddy Shelduck *Tadorna ferruginea***

1% = 500 (South Asia), 750 (East and Southeast Asia). A total of 31 sites met the 1% criterion. The total peak count of 345 sites in South Asia across the three years recorded 62,606 individuals; it is suggested that the population estimate be updated to 50,000–100,000.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Barisal	Banger Char	3,000	2004
Bangladesh	Barisal	Doba Char	2,150	2003
Bangladesh	Barisal	Gazipur Char	6,000	2002
Bangladesh	Barisal	Urir Char	1,200	2003
Bangladesh	Rajshahi	Sirajganj (Jamuna River)	540	2002
Bangladesh	Sylhet	Pana Beel	1,350	2003
China	Guizhou	Caohai Reserve	9,750	2004
China	Jiangxi	Poyang Lake	917	2003
China	Yunnan	Huize County	2,731	2003
China	Yunnan	Lashihai Lake	1,127	2004
China	Yunnan	Napahai Reserve	1,516	2004
China	Yunnan	Xundian County	840	2004
India	Andhra Pradesh	Godavari River	1,745	2002
India	Assam	Chenamari Beel	540	2003
India	Assam	Kokilamukh	909	2004
India	Assam	Misamari Beel	1,300	2003
India	Gujarat	Machhan Nala Dam	1,000	2002
India	Himachal Pradesh	Pong Dam Bird Sanctuary	580	2002
India	Karnataka	Krishna River – Karnataka	700	2003
India	Orissa	Chilika Lake	9,838	2002
India	Orissa	Harabhangi	5,300	2002
India	Orissa	Hirakud Reservoir	2,420	2002
India	Uttar Pradesh	Katernia Ghat Sanctuary	500	2004
India	Uttar Pradesh	National Chambal Sanctuary	1,459	2002
India	Uttarakhand	Asan Barrage	1,600	2004
India	Uttarakhand	Dehra Dun	504	2003
Republic of Korea	Gyeonggi	Siwha Reservoir	912	2002
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawtaw Sinbo	3,884	2004
Myanmar	Sagaing	Chindwin R: Kalewa–Hkamti and to the North	2,974	2004
Nepal	Cr: Narayani	CNP: Narayani River: Sigraili to Amaltari Ghat	600	2004
Nepal	Cr: Narayani	CNP: Rapti River: Gaight/Kasara to Narayani Confl	545	2004

**Common Shelduck *Tadorna tadorna***

1% = 1,000 (South Asia), 1,300 (East Asia). The majority of the population was reported in Bangladesh and Republic of Korea, with 11 sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Barisal	Kalkiny Char	4,000	2002
Bangladesh	Barisal	Shahjalal Char	10,000	2004
Bangladesh	Barisal	Urir Char	5,500	2003
Republic of Korea	Busan	Nakdong Estuary	3,263	2004
Republic of Korea	Chungnam	Janghang Coast	2,151	2004
Republic of Korea	Chungnam	Yubu Island	3,272	2002
Republic of Korea	Gyeongnam	Sacheon Bay	1,467	2002
Republic of Korea	Jeonnam	Gwangyang and Galsa Bay	1,734	2004
Republic of Korea	Jeonnam	Hyungyungmyun, Muangun	10,014	2004
Republic of Korea	Jeonnam	Suncheon Bay	2,839	2003
Republic of Korea	Jeonnam	Yeuja Bay	6,195	2003

**White-winged Duck *Cairina scutulata* EN**

1% = 5 (India to Myanmar), 2 (Thailand, Cambodia, Laos and Vietnam), 2 (Sumatra). The species is restricted to South and Southeast Asia. It was recorded at only four sites, with three sites in Indonesia and Myanmar meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Indonesia	Jambi	Berbak National Park	8	2002
Myanmar	Sagaing	Nan Ezu (Eisu) Stream (Htamanthi Wildlife Sanc)	5	2004
Myanmar	Sagaing	Nga Yant In Lake	6	2003
Other sites where the species was recorded				
India	Assam	Tinikunia Pukhuri	2	2004

### Comb Duck *Sarkidiornis melanotos*

1% = 250 (*melanotos*, South and Southeast Asia). The species was reported mainly in India. One site in Cambodia and five sites in India met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir (Sarus Crane Reserve)	498	2004
India	Andhra Pradesh	Manjira Wildlife Sanctuary	500	2002
India	Gujarat	Deo Dam	918	2004
India	Gujarat	Jesola	500	2004
India	Gujarat	Narmada Main Canal	250	2002
India	Gujarat	Pariej	301	2004

### Cotton Pygmy Goose *Nettapus coromandelianus*

1% = 1,000 (*coromandelianus*, South Asia). East and Southeast Asia (*coromandelianus*) unknown. The species is widely distributed within its range, with 10 sites meeting the 1% criterion. A large concentration of birds was reported at Chilika Lake in India.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Kondakarla Lake	3,000	2002
India	Andhra Pradesh	Manjira Wildlife Sanctuary	7,000	2002
India	Goa	Macasana Tanks	3,030	2002
India	Karnataka	Kallur Tank	4,000	2004
India	Karnataka	Kunthur Tank	1,000	2004
India	Orissa	Chilika Lake	30,534	2002
India	Orissa	Denua	2,088	2003
India	Orissa	Hirakud Reservoir	1,230	2002
Thailand	Nakhon Sawan	Bung Boraphet	2,062	2004
Thailand	Pattalung	Thale Noi Non-Hunting Area	6,437	2004

### Mandarin Duck *Aix galericulata*

1% = 200 (Mainland China), 50 (Republic of Korea), 400 (Japan), 4 (Taiwan). The species is restricted to East Asia, with most records reported from Republic of Korea. Thirteen sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Jiangxi	Poyang Lake	718	2004
Republic of Korea	Chungbuk	Chungju Reservoir	240	2003
Republic of Korea	Chungnam	Daechung Reservoir	148	2004
Republic of Korea	Chungnam	Nonsan Reservoir	110	2002
Republic of Korea	Chungnam	Tapjeong Reservoir	115	2003
Republic of Korea	Gyeonggi	Namhan River	341	2003
Republic of Korea	Gyeonggi	Paldang Dam	58	2003
Republic of Korea	Gyeongnam	Angae Reservoir	293	2003
Republic of Korea	Gyeongnam	Hoiya Reservoir	80	2004
Republic of Korea	Gyeongnam	Hyongsan River	125	2002
Republic of Korea	Gyeongnam	Jinyang Reservoir	160	2003
Republic of Korea	Jeju	Hamduck–Hadori Coast	420	2002
Republic of Korea	Jeju	Seoguipo–Anduck Coast	850	2002

### Eurasian Wigeon *Anas penelope*

1% = 2,500 (South Asia) and 7,500 (East Asia). A total of 17 sites met the 1% criterion, mainly in South Asia; Chilika Lake alone recorded 100,793 individuals. The peak total count of 308 sites in South Asia across the three years recorded 268,658 individuals. It is suggested that the South Asian population estimate be updated to 300,000–500,000 individuals.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Barisal	Gazipur Char	3,000	2004
Bangladesh	Barisal	Tagrar Char	50,000	2004
Bangladesh	Chittagong	Muhuri Dam	3,500	2003
India	Gujarat	Kanewal	4,700	2004
India	Gujarat	Pipalava Bandharo	5,500	2003
India	Himachal Pradesh	Pong Dam Bird Sanctuary	5,441	2003

Country	Region	Site Name	Peak Count	Year
India	Orissa	Chilika Lake	100,793	2002
India	Tamil Nadu	Tenneri Tanks	3,000	2002
Japan	Ibaraki	Kasumigaura Nangan Sakuragawa-Mura	8,924	2003
Japan	Ishikawa	Kahokugata	7,806	2003
Pakistan	Punjab/NWFP	Chashma Barrage Reservoir	6,300	2004
Pakistan	Sindh	Keenjhar Lake	2,650	2002
Pakistan	Sindh	Lungh Lake	2,600	2002
Pakistan	Sindh	Nur-Ri Lake	2,500	2002
Pakistan	Sindh	Phoosna	2,570	2003
Sri Lanka	NP	Kayts Island and Mandaitivu	7,400	2004
Sri Lanka	NP	Vankalai Triangle	5,000	2004

### Falcated Duck *Anas falcata* NT

1% = 350. The species is restricted to East Asia. Ten sites met the 1% criterion. In 2004 almost half the total population of this species was reported from the Dongting Lakes (including East, West and South Dongting) in China.

Country	Region	Site Name	Peak Count	Year
China	Hunan	East Dongting Lake NR	2,013	2004
China	Hunan	South Dongting Lake NR	12,920	2004
China	Hunan	Taibai Hu	1,200	2004
China	Hunan	West Dongting Lake NR	1,730	2004
China	Jiangxi	Poyang Lake	3,100	2003
Japan	Ibaragi	Kitaura	441	2004
Japan	Ibaraki	Kasumigaura Nangan Sakuragawa-Mura	388	2004
Republic of Korea	Busan	Nakdong Estuary	975	2003
Republic of Korea	Gyeonggi	Siwha Reservoir	401	2004
Republic of Korea	Gyeongnam	Dongpan Reservoir	535	2002

### Gadwall *Anas strepera*

1% = 3,000 (*strepera*, South Asia), 7,500 (*strepera*, East Asia). Ten sites met the 1% criterion. Chilika Lake alone recorded 153,128 individuals, which is more than 50% of the South Asian population. The peak total count of 340 sites in South Asia across the three years was 375,296 individuals. The South Asian population estimate should be raised to 500,000. Balachandran and Sathiyaselvam (submitted) estimated the population of Gadwall at Chilika as 160,000 individuals, which further supports a population update for this species.

The East Asian population estimate, at 500,000–1,000,000, is too high. Barter *et al.* (2004 and 2005) recorded only 271 and 273 individuals in surveys of the Lower Yangtze River Floodplain in 2004 and 2005 respectively. It is believed that the current population is smaller than 500,000 individuals.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Barisal	Gazipur Char	3,000	2003
Bangladesh	Barisal	Tagrar Char	15,000	2004
Bangladesh	Sylhet	Aila Beel	9,500	2003
Bangladesh	Sylhet	Tangua Haor Complex	64,560	2004
India	Gujarat	Pipalava Bandharo	4,000	2003
India	Orissa	Chilika Lake	153,128	2004
India	Orissa	Harabhangi	15,000	2002
India	Orissa	Hirakud Reservoir	11,230	2002
India	West Bengal	Farakka Barrage (Ganges River)	3,200	2003
Pakistan	Sindh	Nur-Ri Lake	8,392	2002

### Baikal Teal *Anas formosa* VU

1% = 5,000. The species is restricted to East Asia (highly congregatory in the Republic of Korea). Five sites met the 1% criterion, and they host almost the entire population of this Vulnerable species. The population has increased considerably, from 75,000 in 1994, 105,000 in 1997, 300,000 in 2002 to 500,000 in 2006 (Rose and Scott 1994, 1997, Wetlands International 2002, 2006).

Country	Region	Site Name	Peak Count	Year
Republic of Korea	Chungnam	Geum River Reservoir	302,900	2003
Republic of Korea	Chungnam	Sapkyo Lake	10,000	2002
Republic of Korea	Jeonbuk	Dongrim Reservoir	250,000	2004
Republic of Korea	Jeonnam	Gocheonam Reservoir	83,000	2004
Republic of Korea	Jeonnam	Youngsan Reservoir (Estuary)	37,000	2004
<b>Other sites where the species was recorded</b>				
China	Anhui	Angingyanjiang NR: Caizi Hu	2	2004
China	Hunan	Maoli Hu	25	2004

Country	Region	Site Name	Peak Count	Year
China	Shanghai	Donghai Nongchang – Binghai Nongchang	1	2004
China	Taiwan Penghu	Sin-Jen Reservoir	1	2002
China	Taiwan Taipei	Chun-Cheng-Chiao	1	2004
China	Taiwan Taipei	Err Chung	1	2004
China	Taiwan Taipei	Guandu Marsh	1	2002
China	Taiwan Taoyuan	Kuan Ing	1	2002
Japan	Aichi	Kiso River Mouth	26	2004
Japan	Fukuoka	East Region of Hakata Bay	187	2004
Japan	Fukuoka	Imazu	335	2004
Japan	Gifu	Nagara River	1,286	2003
Japan	Ibaragi	Kitaura	8	2004
Japan	Ishikawa	Kahokugata	2,093	2003
Japan	Ishikawa	Kamo-Ike (Katano Kamoike)	75	2004
Japan	Osaka	Yodogawa River	1	2004
Japan	Shimane	Shinji Lake	9	2004
Japan	Shimane/Tottori	Nakaumi	6	2004
Republic of Korea	Busan	Lower Nakdong River	26	2002
Republic of Korea	Chungbuk	Chungju Reservoir	8	2003
Republic of Korea	Chungnam	Bunam Reservoir	12	2004
Republic of Korea	Chungnam	Daeho Lake	8	2004
Republic of Korea	Chungnam	Ganwol Reservoir	3,500	2004
Republic of Korea	Chungnam	Geum River Estuary	2,000	2004
Republic of Korea	Chungnam	Nonsan Reservoir	25	2002
Republic of Korea	Chungnam	Seongam Reservoir	7	2004
Republic of Korea	Chungnam	Tapjeong Reservoir	1	2003
Republic of Korea	Gangwon	Gyungpo Lagoon	2	2003
Republic of Korea	Gyeongbuk	Haepyong, Gumi City	10	2003
Republic of Korea	Gyeongbuk	Yeongdeok–Pyunghae Coast	5	2002
Republic of Korea	Gyeonggi	Asan Bay	1	2004
Republic of Korea	Gyeongnam	Jinyang Reservoir	155	2004
Republic of Korea	Gyeongnam	Junam Reservoirs (Sangnam, Chunsan, Dongpan)	3,000	2002
Republic of Korea	Jeonbuk	Cheongho Reservoir	244	2003
Republic of Korea	Jeonbuk	Dongjin River Estuary	2,750	2002
Republic of Korea	Jeonbuk	Mangyung River Estuary	3,600	2004
Republic of Korea	Jeonnam	Gangjin Bay	8	2004
Republic of Korea	Jeonnam	Geumho Reservoir	5	2004
Republic of Korea	Jeonnam	Muan Reservoir	2	2004
Republic of Korea	Jeonnam	Yungam Reservoir	51	2004

### Common Teal *Anas crecca*

1% = 4,000 (*crecca*, South Asia), 8,000 (*crecca*, East and Southeast Asia). This is one of the most widely distributed of the Anatidae species, recorded at 704 sites, with 15 sites meeting the 1% criterion. According to Sumit Sen (pers. comm., January 2007), the species is showing a declining trend in many parts of India and may require closer monitoring.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Barisal	Tagrar Char	4,000	2004
China	Anhui	Anqingyanjiang NR: Wuchang Hu	10,161	2004
China	Jiangxi	Poyang Lake	8,791	2004
India	Andhra Pradesh	Manjira Wildlife Sanctuary	6,000	2002
India	Gujarat	Pipalava Bandharo	7,000	2003
India	Himachal Pradesh	Pong Dam Bird Sanctuary	6,150	2003
India	Orissa	Chilika Lake: Combined	9,380	2002
India	West Bengal	Farakka Barrage (Ganges River)	4,500	2003
India	West Bengal	Naya Bandh Bill	4,000	2003
Japan	Ibaraki	Kasumigaura Nangan Sakuragawa-Mura	10,176	2003
Japan	Ishikawa	Kahokugata	8,665	2003
Pakistan	Sindh	Drigh Lake	5,600	2003
Pakistan	Sindh	Haleji Lake	5,260	2002
Pakistan	Sindh	Lungh Lake	10,156	2003
Pakistan	Sindh	Nur-Ri Lake	6,700	2002

### Mallard *Anas platyrhynchos*

1% = 750 (*platyrhynchos*, South Asia), 15,000 (*platyrhynchos*, East Asia). Eleven sites met the 1% criterion. The species is the second most numerous species recorded in 2002–2004, with a total count of 731,459 individuals recorded in 2003.

Country	Region	Site Name	Peak Count	Year
India	Uttarakhand	Asan Barrage	800	2003
Japan	Ibaraki	Kasumigaura Nangan Sakuragawa-Mura	33,902	2002
Japan	Ishikawa	Kahokugata	16,528	2003
Republic of Korea	Chungnam	Geum River Estuary	21,597	2002
Republic of Korea	Chungnam	Geum River Reservoir	28,252	2002
Republic of Korea	Gyeonggi	Siwha Reservoir	33,237	2004
Republic of Korea	Jeonbuk	Dongjin River Estuary	27,770	2003
Republic of Korea	Jeonbuk	Mangyung River Estuary	32,275	2002
Republic of Korea	Jeonnam	Youngsan Reservoir (Estuary)	45,500	2003
Pakistan	Punjab	Taunsa Barrage	1,800	2003
Pakistan	Punjab/NWFP	Chashma Barrage Reservoir	13,250	2003

### Spot-billed Duck *Anas poecilorhyncha*

1% = 1,000 (*poecilorhyncha*, South Asia), 12,000 (*zonorhyncha*, East Asia), 1,000 (*hartingtoni*, Southeast Asia). This is one of the most widely distributed of the Anatidae species, with 12 sites meeting the 1% criterion. The East Asian population estimates of 800,000-1,600,000 might be too high: in surveys of the main non-breeding areas in China, Barter *et al.* recorded only 22,562 and 29,210 individuals in 2004 and 2005, respectively (Barter *et al.* 2004, 2005).

Country	Region	Site Name	Peak Count	Year
China	Jiangxi	Poyang Lake	13,657	2004
India	Andhra Pradesh	Manjira Wildlife Sanctuary	1,500	2002
India	Andhra Pradesh	Sangameshwara	3,000	2002
India	Gujarat	Dedadra Talav	1,000	2004
India	Gujarat	Tapi River at Surat Causeway	2,000	2003
India	Karnataka	Byramangala Reservoir	2,348	2004
India	Kerala	Vembanad: Thollairam Kayal	10,000	2003
India	Orissa	Chilika Lake	1,642	2002
India	Uttar Pradesh	Ashpan	1,170	2002
Myanmar	Kachin	Indaw – Gyi Lake	1,564	2002
Myanmar	Mandalay	Minhla-Nyaung Yan Lake	1,000	2002
Myanmar	Sagaing	Chindwin R: Kalewa–Hkamti and to the North	1,286	2004

### Philippine Duck *Anas luzonica* VU

1% = 80. The species is endemic to the Philippines. It was recorded at 22 sites, 12 of which met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Philippines	Luzon	Carague Lake	308	2004
Philippines	Luzon	Magat Dam	1,060	2004
Philippines	Luzon	Malasi Lake	1,420	2004
Philippines	Luzon	Naujan Lake	400	2002
Philippines	Luzon	Paitan Lake	266	2004
Philippines	Luzon	Paoay Lake National Park	300	2004
Philippines	Luzon	Subic Bay	400	2003
Philippines	Mindanao	Agusan Marsh Wildlife Sanctuary	150	2002
Philippines	Mindanao	Lake Mainit	500	2002
Philippines	Visayas	Carigara Bay Wetlands	200	2003
Philippines	Visayas	Himamaylan, Kabankalan and Ileig Wetland	962	2002
Philippines	Visayas	Sipalay Hinoba-An Wetland	422	2004
<b>Other sites where the species was recorded</b>				
Philippines	Luzon	Monterey Lake	57	2004
Philippines	Luzon	Palau Island	7	2004
Philippines	Mindanao	Bonifacio Wetland	23	2003
Philippines	Mindanao	Maputi, Banaybanay	33	2004
Philippines	Mindanao	Mukas Mangrove Wetland	2	2003
Philippines	Mindanao	Pulangi Wetland Area	54	2002
Philippines	Mindanao	Sinacaban Mangrove	3	2004
Philippines	Visayas	Brgy. Baras Campoyong Mudflat	2	2004
Philippines	Visayas	Lagbangan Lake	4	2002
Philippines	Visayas	Ormoc Intertidal Flat	16	2004

### Northern Pintail *Anas acuta*

1% = 2,500 (East and Southeast Asia), 20,000 (for South Asia, the population estimate is given as >1,000,000 and the 1% criteria was not available). This is the most widely distributed of the Anatidae species (recorded at 722 sites), with 20 sites meeting the 1% criterion. The species was also the most numerous species recorded in the AWC 2002–2004, a total of 780,709 individuals being recorded in 2003.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Barisal	Tagrar Char	30,000	2004
Bangladesh	Sylhet	Aila Beel	105,000	2003
Bangladesh	Sylhet	Hakaluki Haors	20,000	2004
Bangladesh	Sylhet	Tangua Haor Complex	50,700	2002
China	Anhui	Sheng Jin Hu	4,760	2004
China	Hong Kong	Deep Bay	4,381	2003
India	Goa	Mandovi Estuary	120,000	2002
India	Himachal Pradesh	Pong Dam Bird Sanctuary	25,575	2003
India	Orissa	Bhitarkanika Mangrove	141,190	2003
India	Orissa	Chilika Lake	259,824	2004
India	Orissa	Hirakud Reservoir	25,920	2002
India	Uttar Pradesh	National Chambal Sanctuary	24,801	2002
Japan	Fukuoka	East Region of Ariake Sea	5,712	2002
Japan	Fukuoka	Imazu	2,653	2004
Japan	Gifu	Nagara River	3,280	2002
Republic of Korea	Chungnam	Geum River Estuary	5,655	2003
Republic of Korea	Chungnam	Geum River Reservoir	5,178	2002
Republic of Korea	Gyeonggi	Siwha Reservoir	10,510	2002
Myanmar	Sagaing	Chindwin R: Kalewa–Hkamti and to the North	4,385	2004
Sri Lanka	NP	Vankalai Triangle	95,000	2003

### Garganey *Anas querquedula*

1% = 3,500 (South Asia), 1,500 (East and Southeast Asia). Twelve sites met the 1% criterion. According to Phil Round (pers. comm. 2006), numbers have declined greatly in Thailand and may be indicative of a general decline of the population in East and Southeast Asia.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Tangua Haor Complex	5,510	2003
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	2,000	2002
India	Goa	Macasana Tanks	9,291	2003
India	Karnataka	Karigala Tank	8,000	2004
India	Karnataka	Krishnaraja Sagar Reservoir	4,300	2004
India	Kerala	Kattampally	7,000	2003
India	Kerala	Kole Wetlands	30,000	2003
India	Orissa	Chilika Lake	28,415	2002
India	Tamil Nadu	Karavetty Tank	15,000	2003
India	West Bengal	Farakka Barrage (Ganges River)	4,500	2002
Sri Lanka	SP	Hambantota Wetlands	8,300	2004
Thailand	Nakhon Sawan	Bung Boraphet	4,325	2004

### Northern Shoveler *Anas clypeata*

1% = 7,500 (South Asia), 5,000 (East and Southeast Asia). Only three sites met the 1% criterion. The East Asian population estimate may need to be reviewed. Barter *et al.* recorded only 22,562 and 307 individuals in 2004 and 2005, respectively, on the Yangtze River Flood Plain (Barter *et al.* 2004, 2005). Furthermore, none of the sites identified as internationally important by Miyabayashi and Mundkur (1999) met the 1% criterion during the 2002–2004 surveys.

Country	Region	Site Name	Peak Count	Year
India	Gujarat	Lambhvel Sewage Pond	8,700	2003
India	Orissa	Chilika Lake	158,855	2002
India	Orissa	Hirakud Reservoir	30,820	2002

### Marbled Teal *Marmaronetta angustirostris* VU

1% = 50 (South Asia). Seven sites were recorded for this species, only one of which met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Pakistan	Sindh	Lungh Lake	92	2003
<b>Other sites where the species was recorded</b>				
Pakistan	Baluchistan	Saiji Dam	15	2002
Pakistan	Sindh	Drigh Lake	2	2002
Pakistan	Sindh	Kathor Dhand	10	2003
Pakistan	Sindh	Manchar Lake	24	2003
Pakistan	Sindh	Pani Waro Dubho/Dhand (Deh Akro-II)	6	2003
Pakistan	Sindh	Pugri Dhand	25	2002



**Red-crested Pochard *Netta rufina***

1% = 1,000 (South Asia). Sixteen sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Tangua Haor Complex	14,328	2003
India	Maharashtra	Ambazari Reservoir	1,500	2003
India	Maharashtra	Ashband	4,003	2004
India	Maharashtra	Asolamendha Tank	1,509	2003
India	Maharashtra	Irai Dam	2,322	2002
India	Maharashtra	Wadgaon	1,600	2003
India	Orissa	Chilika Lake	28,936	2003
India	Orissa	Harabhangi	2,004	2002
India	Orissa	Hirakud Reservoir	20,220	2002
India	Orissa	Rengali	3,420	2002
India	Uttar Pradesh	Baadi Taal	1,000	2004
India	Uttar Pradesh	Katernia Ghat Sanctuary	5,000	2004
India	Uttarakhand	Haripura Reservoir	2,100	2002
India	West Bengal	Baghar Beel	1,200	2003
India	West Bengal	Panchet Dam	2,082	2003
India	West Bengal	Saheb Bandh	1,080	2003

**Common Pochard *Aythya ferina***

1% = 3,500 (South Asia), 3,000 (East Asia). Eleven sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Tangua Haor Complex	6,350	2004
India	Gujarat	Deo Dam	4,409	2004
India	Himachal Pradesh	Pong Dam Bird Sanctuary	5,795	2002
India	Orissa	Chilika Lake	90,399	2002
Japan	Osaka	Yodogawa River	5,863	2002
Japan	Shimane/Tottori	Nakaumi	29,039	2004
Republic of Korea	Busan	Lower Nakdong River	5,912	2002
Republic of Korea	Gyeonggi	Siwha Reservoir	13,120	2004
Republic of Korea	Gyeongnam	Taehwa River	6,878	2002
Pakistan	Punjab/NWFP	Chashma Barrage Reservoir	12,680	2003
Pakistan	Sindh	Haleji Lake	3,500	2002

**Baer's Pochard *Aythya baeri* VU**

1% = 150. The species is restricted to South, East and Southeast Asia. It was recorded at 29 sites, three of which met the 1% criterion. According to Phil Round (pers. comm. 2006), numbers have declined greatly in Thailand and may be indicative of a general decline of the species.

Country	Region	Site Name	Peak Count	Year
China	Jiangxi	Poyang Lake	600	2004
India	Assam	Dhir Beel	156	2003
India	Orissa	Kalo Reservoir	200	2003
<b>Other sites where the species was recorded</b>				
Bangladesh	Rajshahi	Gaibandha North	26	2002
Bangladesh	Sylhet	Khana Muia Beel	6	2002
Bangladesh	Sylhet	Pashua Haor	24	2002
Bangladesh	Sylhet	Rowa Beel	17	2004
Bangladesh	Sylhet	Shonir Haor	2	2004
Bangladesh	Sylhet	Tangua Haor Complex	95	2002
China	Anhui	Anqingyanjiang NR: Caizi Hu	13	2004
China	Hubei	Chang Hu	11	2004
China	Hunan	East Dongting Lake NR	4	2003
China	Shandong	Yellow River Delta NR	19	2002
China	Shanghai	Baoshan Shidongkou–Liuhe	6	2004
India	Assam	Chenamari Beel	25	2003
India	Assam	Deepor Beel	10	2004
India	Assam	Misamari Beel	28	2003
India	Assam	Sivasagar Tank	15	2003
India	Manipur	Logtak Lake	8	2004
India	Orissa	Chilika Lake	30	2003
India	Orissa	Hirakud Reservoir	116	2003
India	West Bengal	Chittaranjan Bara Dam	8	2003
India	West Bengal	Gajaldoba Teesta Barrage	10	2002
India	West Bengal	Satbeki Bill	18	2003
Myanmar	Kachin	Indaw-Gyi Lake	2	2002
Myanmar	Mandalay	Irrawaddy R: Pagan – Nyaung U	2	2002
Thailand	Buriram	Sanambin Non-Hunting Area	1	2002
Thailand	Chiang Rai	Nong Bong Khai	2	2004

**Ferruginous Duck *Aythya nyroca* NT**

1% = 1,000 (South, East and Southeast Asia). Eight sites met the 1% criterion. In 2002, 90,900 individuals, almost the entire population, were recorded at Tanguar Haor in Bangladesh.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Aila Beel	3,500	2003
Bangladesh	Sylhet	Hakaluki Haors	4,400	2003
Bangladesh	Sylhet	Pashua Haor	1,780	2002
Bangladesh	Sylhet	Rowa Beel	1,070	2004
Bangladesh	Sylhet	Shonir Haor	2,750	2004
Bangladesh	Sylhet	Tangua Haor Complex	90,900	2002
India	Manipur	Logtak Lake	1,100	2004
Myanmar	Kachin	Indaw-Gyi Lake	3,158	2002

**Tufted Duck *Aythya fuligula***

1% = 4,000 (South Asia), 2,500 (East and Southeast Asia). Fourteen sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Aila Beel	4,000	2003
India	Orissa	Chilika Lake	29,667	2003
India	Orissa	Harabhangi	10,631	2002
India	Orissa	Hirakud Reservoir	31,621	2002
India	Orissa	Rengali	6,740	2002
India	West Bengal	Farakka Barrage (Ganges River)	26,400	2003
Japan	Shimane	Shinji Lake	30,726	2002
Japan	Shimane/Tottori	Nakaumi	23,898	2004
Republic of Korea	Gyeonggi	Jungrang Stream	2,574	2003
Republic of Korea	Gyeonggi	Siwha Reservoir	2,540	2004
Pakistan	Punjab/NWFP	Chashma Barrage Reservoir	10,000	2003
Philippines	Luzon	Magat Dam	3,785	2002
Philippines	Luzon	Naujan Lake	10,100	2002
Philippines	Mindanao	Lake Mainit	5,300	2004

**Greater Scaup *Aythya marila***

1% = 2,500 (*mariloides*, East Asia). The species was reported mainly from Japan and Republic of Korea, a total of nine sites in the two countries meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Japan	Aichi	Mouth of the Toyokawa	70,000	2002
Japan	Aichi	Shio Kawa Tideland	3,024	2002
Japan	Aomori	Ogawara Lake	3,436	2002
Japan	Fukuoka	East Region of Hakata Bay	5,129	2002
Japan	Shimane	Shinji Lake	8,995	2003
Japan	Shimane/Tottori	Nakaumi	21,601	2004
Republic of Korea	Gyeonggi	Siwha Reservoir	4,556	2003
Republic of Korea	Gyeongnam	Dangdong Bay	4,980	2003
Republic of Korea	Jeonnam	Yeuja Bay	3,960	2002

**Common Goldeneye *Bucephala clangula***

1% = 10,000 (*clangula*, East Asia). No site met the 1% criterion. At two sites in the upper reaches of the Angara River, Irkutsk, Russia, a total of 12,400 individuals were recorded in 2004.

**Smew *Mergellus albellus***

1% = 250 (East Asia). Three sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Bo Hu	400	2004
China	Hunan	South Dongting Lake NR	467	2004
Republic of Korea	Gyeongbuk	Andong Reservoir	554	2002

**Red-breasted Merganser *Mergus serrator***

1% = 1,000 (East Asia). Reported mainly from Japan and Republic of Korea; no site met the 1% criterion.

**Scaly-sided Merganser *Mergus squamatus* EN**

1% = 18. The species is restricted to East Asia. It was reported at four sites, one of which met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Jiangxi	Poyang Lake	31	2004
<b>Other sites where the species was recorded</b>				
China	Taiwan Taipei	Kung-Liao	1	2004
Republic of Korea	Jeju	Seojuipo – Anduck Coast	1	2004
Republic of Korea	Jeonnam	Dangduri Reclaimed Area	2	2002

### Goosander, Common Merganser *Mergus merganser*

1% = 60 (*orientalis*, South Asia), 750 (*orientalis*, East Asia). Ten sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bhutan	Thimphu	Babesa Sewerage Station	89	2002
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	1,865	2004
India	Himachal Pradesh	Pong Dam Bird Sanctuary	67	2002
Republic of Korea	Gyeonggi	Han River (Haengju Bridge – Paland Dam)	2,630	2003
Republic of Korea	Gyeonggi	Siwha Reservoir	893	2002
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawlaw Sinbo	100	2004
Myanmar	Kachin	Nam Lah, Nam Yah Rivers	67	2002
Nepal	Cr: Narayani	Rapti River: Gatgai to Bahmara	82	2002
Nepal	Cr: Narayani	CNP: Narayani River: Amaltari Ghat – Tribeni Ghat	138	2004
Nepal	Cr: Narayani	CNP: Narayani River: Sigraili – Amaltari Ghat	177	2004

### White-headed Duck *Oxyura leucocephala* EN

1% = 1 (Pakistan). This species was recorded at only three sites, all in Pakistan.

Country	Region	Site Name	Peak Count	Year
Pakistan	Islamabad	Rawal Lake	7	2003
Pakistan	Punjab	Ucchali Wetland Complex: Jahlar Lake	5	2004
Pakistan	Punjab	Ucchali Wetland Complex: Ucchali Lake	16	2003

## 3.6.11 Cranes – Gruidae

### Demoiselle Crane *Grus virgo*

1% = 1,000 (Indian subcontinent). The species was reported only from India, and was concentrated in Gujarat State. Nineteen sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Thalamudupi	3,500	2003
India	Gujarat	Amipur Tank	33,000	2004
India	Gujarat	Dholi Dhaja Dam	1,100	2002
India	Gujarat	Jafarabad Coast	18,500	2003
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	11,178	2003
India	Gujarat	Karli Dam	6,500	2004
India	Gujarat	Madhavpura Marsh	5,000	2003
India	Gujarat	Medha Creek	10,000	2004
India	Gujarat	Naika Dam	2,500	2002
India	Gujarat	Nikol Bandhara	5,000	2003
India	Gujarat	Nyari-I	2,783	2003
India	Gujarat	Par	1,650	2004
India	Gujarat	Phophal-I	2,300	2002
India	Gujarat	Pipalava Bandhara (Kaj)	27,120	2003
India	Gujarat	Sorathi Dam	1,700	2004
India	Gujarat	Sudamda Pond	1,500	2002
India	Gujarat	Victor (Bherai) Salt Pans and Coastal Area	32,000	2003
India	Gujarat	Victor Pond and Sakriya Hanuman Pond – Bherai	6,540	2003
India	Maharashtra	Hipparga Tank	5,000	2003

### Siberian Crane *Grus leucogeranus* CR

1% = 1 (India), 30 (China). The eastern population is centred on Poyang Lake in China. The South Asian population is considered to be nearly extinct, with no birds being recorded at the traditional location of Bharatpur in India.

Country	Region	Site Name	Peak Count	Year
China	Jiangxi	Poyang Lake	3,160	2004
<b>Other sites where the species was reported</b>				
China	Anhui	Anqingyanjiang NR: Caizi Hu	2	2004
China	Anhui	Sheng Jin Hu	1	2002

Country	Region	Site Name	Peak Count	Year
China	Hunan	East Dongting Lake NR	16	2004
China	Hunan	Kongjia Hu	6	2004
China	Hunan	South Dongting Lake NR	4	2003
China	Hunan	West Dongting Lake NR	3	2003
China	Jiangxi	Sai Cheng Hu	3	2003

### Sarus Crane *Grus antigone* VU

1% = 90 (*antigone*, South Asia), 9 (*sharpii*, Vietnam, Cambodia and Laos), 7 (*sharpii*, Myanmar). The species was recorded at a total of 85 sites in India, Myanmar and Cambodia; three sites met the 1% criterion. Ang Tropeing Thmor Reservoir in Cambodia recorded a large concentration of this species in 2004.

Country	Region	Site Name	Peak Count	Year
Cambodia	Bantey Meanchey	Ang Tropeing Thmor Reservoir	231	2004
India	Uttar Pradesh	Sur Sarovar Bird Sanctuary	140	2003
Myanmar	Kachin	Indaw-Gyi Lake	12	2002
<b>Other sites where the species was recorded</b>				
India	Chhattishgarh	Gidhori Tank - II	3	2004
India	Gujarat	Ajwa	4	2002
India	Gujarat	Bandiabeli Talav	4	2004
India	Gujarat	Boriyala Tank	3	2004
India	Gujarat	Charakla Saltworks	4	2002
India	Gujarat	Chhab Talav	2	2002
India	Gujarat	Demli Tank	2	2002
India	Gujarat	Dholi Dhaja Dam	13	2002
India	Gujarat	Gatehara Pond – Saij	4	2004
India	Gujarat	Gobarapura	2	2004
India	Gujarat	Golabresda	3	2004
India	Gujarat	Guneli	4	2004
India	Gujarat	Gutal	2	2003
India	Gujarat	Hadmatiya Dam or Dairy Dam	2	2004
India	Gujarat	Heranj	4	2004
India	Gujarat	Javala Irrigation Tank	4	2004
India	Gujarat	Kabutaridam	2	2002
India	Gujarat	Kandav Talav	2	2004
India	Gujarat	Kanewal	11	2004
India	Gujarat	Kanka Talav	2	2002
India	Gujarat	Korda Sandher	3	2004
India	Gujarat	Lambhvel Sewage Pond	2	2004
India	Gujarat	Machhan Nala Dam	11	2002
India	Gujarat	Malav	3	2004
India	Gujarat	Mokar Rann	4	2004
India	Gujarat	Morva Hodaj Dam	4	2002
India	Gujarat	Muvalia Tank	3	2004
India	Gujarat	Nagarala Pond	3	2004
India	Gujarat	Nagarama Village Pond	7	2004
India	Gujarat	Naika Dam	3	2002
India	Gujarat	Nani Kakrad	11	2004
India	Gujarat	Narda Tank	60	2003
India	Gujarat	Narmada Main Canal	4	2002
India	Gujarat	New Port Salt pans, Bhavnagar	2	2002
India	Gujarat	Orwada Irri. Tank	5	2004
India	Gujarat	Palan Lake	3	2002
India	Gujarat	Pariej	17	2004
India	Gujarat	Morva Hadaf Dam (Patangdi)	2	2004
India	Gujarat	Ratanpaa Dam	2	2002
India	Gujarat	Ratneshvar Tank	3	2004
India	Gujarat	Rudarmata Dam	2	2003
India	Gujarat	Saiyant Tank	8	2004
India	Gujarat	Shivpuri Talav	3	2004
India	Gujarat	Sipu Dam	2	2004
India	Gujarat	Sokhda Talav	6	2002
India	Gujarat	Thol Lake Bird Sanctuary	6	2003
India	Gujarat	Tikar Village Pond	2	2004
India	Gujarat	Timbi Tank	2	2002
India	Gujarat	Traj Village Pond	2	2004
India	Gujarat	Traj Village – Sala Pond	4	2004
India	Gujarat	Tranja	2	2003
India	Gujarat	Tundel	8	2004
India	Gujarat	Tuva	2	2004
India	Gujarat	Vadadala	3	2002

Country	Region	Site Name	Peak Count	Year
India	Gujarat	Vadadhra	2	2004
India	Haryana	Sultanpur Bird Sanctuary	4	2003
India	Himachal Pradesh	Pong Dam Bird Sanctuary	8	2003
India	Madhya Pradesh	Chambal River: (National Chambal Sanctuary)	3	2003
India	Madhya Pradesh	Narna	2	2004
India	Madhya Pradesh	Sarekha – Bada Talab	4	2004
India	Madhya Pradesh	Upper Lake, Bhopal City	2	2003
India	Maharashtra	Januna Tank	4	2002
India	Maharashtra	Junona Lake	4	2003
India	Rajasthan	Abheda	1	2002
India	Rajasthan	Alniya Dam	32	2002
India	Rajasthan	Bardha Dam	6	2002
India	Rajasthan	Chandalai	2	2003
India	Rajasthan	Golyahedi Village Pond	4	2003
India	Rajasthan	KTPS Ash Pond	2	2002
India	Rajasthan	Pathik Sagar	9	2003
India	Rajasthan	Rajpura Village Pond	2	2003
India	Rajasthan	Right Main Canal	22	2004
India	Rajasthan	Ummedganj	38	2002
India	Uttar Pradesh	Ashpan	2	2002
India	Uttar Pradesh	Baadi Taal	5	2004
India	Uttar Pradesh	Katernia Ghat Sanctuary	11	2004
India	Uttar Pradesh	Nawabganj Bird Sanctuary	2	2003
India	Uttar Pradesh	Pili Dam	2	2002
India	Uttarakhand	Nanakmata Reservoir	10	2002
India	Uttarakhand	Tumeria Dam	9	2002
Myanmar	Kachin	Byee Lake	3	2004
Myanmar	Kachin	Indaw R: Shwetaung–Chaungwa	5	2004

### White-naped Crane *Grus vipio* VU

1% = 30 (China), 35 (Republic of Korea and Japan). The species is restricted to East Asia. It was recorded at 12 sites, five of which met the 1% criterion. The majority of the population that winters in China was recorded at Poyang Lake. The count of 3,460 birds recorded at Poyang Lake in 2004 exceeded the current population estimate of 3,000.

Country	Region	Site Name	Peak Count	Year
China	Jiangxi	Poyang Lake	3,460	2004
Republic of Korea	Gangwon	Cheolwon Basin	488	2004
Republic of Korea	Gyeongbuk	Haepyong, Gumi City	37	2004
Republic of Korea	Gyeonggi	Han River Estuary	56	2004
Republic of Korea	Gyeongnam	Junam Reservoirs	53	2003
<b>Other sites where the species was recorded</b>				
China	Anhui	Anqingyanjiang NR: Long Gan Hu	1	2004
China	Hunan	East Dongting Lake NR	2	2004
Republic of Korea	Busan	Nakdong Estuary	2	2003
Republic of Korea	Gyeonggi	Paldang Dam	3	2002
Republic of Korea	Jeonbuk	Mangyung River Estuary	2	2002
Republic of Korea	Jeonnam	Youngsan Reservoir (Estuary)	4	2004
Republic of Korea	Jeonnam	Yungam Reservoir	1	2004

### Common Crane *Grus grus*

1% = 700 (*lifordi*, South Asia), 110 (*lifordi*, China), 75 (*lifordi*, Southwest China and North Myanmar). The species is widely recorded in South Asia, Myanmar and China, with a total of 29 sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Guizhou	Caohai NR	553	2002
China	Hunan	East Dongting Lake NR	170	2004
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	123	2004
China	Jiangxi	Poyang Lake	1,027	2004
China	Liaoning	Shuangtai Hekou NR	386	2004
China	Yunnan	Huize County	743	2003
China	Yunnan	Lashihai Lake	134	2003
India	Gujarat	Amipur Tank	3,150	2004
India	Gujarat	Great Rann of Kachchh	1,600	2004
India	Gujarat	Jamnagar District: Dhrol Taluka wetlands	1,928	2003
India	Gujarat	Jamnagar District: Dwaraka Taluka wetlands	15,500	2003
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	9,151	2003
India	Gujarat	Jamnagar District: Kalyanpur Taluka wetlands	735	2003

Country	Region	Site Name	Peak Count	Year
India	Gujarat	Jamnagar District: Khambhalia Taluka wetlands	16,076	2003
India	Gujarat	Madhavpura Marsh	2,000	2004
India	Gujarat	Nani Kakrad	1,150	2003
India	Gujarat	Nikol Bandhara	700	2004
India	Gujarat	Phophal-I	2,100	2002
India	Gujarat	Victor (Bherai) Salt Pans and Coastal Area	2,850	2003
India	Gujarat	Victor Pond and Sakriya Hanuman Pond – Bherai	842	2003
Myanmar	Kachin	Byee Lake	129	2004
Myanmar	Kachin	Indaw R: Shwetaung – Chaungwa	275	2004
Myanmar	Kachin	Indaw – Gyi Lake	370	2004
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawtaw Sinbo	1,503	2003
Myanmar	Kachin	Sahmaw	440	2004
Myanmar	Kachin	Yaimaw	1,093	2004
Myanmar	Sagaing	Chindwin R: Kalewa–Hkamti and to the North	87	2004
Myanmar	Sagaing	Maha Nandar Lake	121	2002
Myanmar	Sagaing	Yemyetkyi Inn	246	2002

### Hooded Crane *Grus monacha* VU

1% = 15 (China), 85 (Republic of Korea and Japan). The species is restricted to East Asia. It was recorded at 11 sites, eight of which met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Caizi Hu	333	2004
China	Anhui	Sheng Jin Hu	294	2002
China	Hunan	East Dongting Lake NR	27	2003
China	Jiangxi	Poyang Lake	380	2002
China	Jiangxi	Sai Cheng Hu	29	2003
China	Shanghai	Chongming Island	109	2004
Japan	Yamaguchi	Yashiro	17	2002
Republic of Korea	Jeonnam	Suncheon Bay	201	2004
<b>Other sites where the species was recorded</b>				
Republic of Korea	Chungnam	Bunam Reservoir	14	2004
Republic of Korea	Gyeongnam	Taehwa River	1	2002
Republic of Korea	Jeonnam	Youngsan Reservoir (Estuary)	1	2004

### Black-necked Crane *Grus nigricollis* VU

1% = 80. This high-altitude species is restricted to Southwest China and the adjacent mountainous regions of Bhutan and India. Counts were received only from Yunnan and Guizhou Provinces, in China, during 2002–2004, with eight sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Guizhou	Caohai Reserve	779	2004
China	Yunnan	Dashanbao	1,176	2004
China	Yunnan	Huize County	593	2002
China	Yunnan	Ludian County	210	2003
China	Yunnan	Napahai Reserve	281	2002
China	Yunnan	Qiaojia County	154	2003
China	Yunnan	Xundian County	91	2004
China	Yunnan	Yongshan County	409	2003
<b>Other sites where the species was recorded</b>				
China	Yunnan	Bitahai Lake	35	2004
China	Yunnan	Lashihai Lake	10	2004
China	Yunnan	Luguahu	5	2004

### Red-crowned Crane *Grus japonensis* EN

1% = 10 (China), 8 (Republic of Korea), 9 (Japan). The species is restricted to East Asia. It was reported at nine sites, five of which met the 1% criterion. The species was concentrated in Yancheng (China), Kushiro (Japan) and Cheolwon (Republic of Korea).

Country	Region	Site Name	Peak Count	Year
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	612	2004
China	Shandong	Yellow River Delta NR	21	2002
Japan	Hokkaido	Kushiro Marsh and Surrounding Rivers	356	2002
Republic of Korea	Gangwon	Cheolwon Basin	581	2004
Republic of Korea	Incheon	Gangwha Island: South Coast Mudflats	10	2002
<b>Other sites where the species was recorded</b>				
China	Taiwan Hsinchu	Ku-Liao (Kang Nan)	1	2004
China	Taiwan Taipei	Kung-Liao	1	2004
Japan	Hokkaido	Lake Furen	4	2004
Republic of Korea	Jeonbuk	Mangyung River Estuary	2	2003

### 3.6.12 Rails, gallinules & coots – Rallidae

Most rail species are general solitary, normally hiding in vegetation or bushes at the edge of the wetland, therefore the Rallidae have always been under-counted by the AWC. This section highlights only the globally threatened species or species with a noteworthy count.

#### Swinhoe's Rail *Coturnicops exquisitus* VU

1% = 100. The species is restricted to East Asia, with only one record, at Poyang Lake, China, in 2004.

#### White-breasted Waterhen *Amaurornis phoenicurus*

1% Unknown. The species is widely distributed in South, East and Southeast Asia. It was recorded at a total of 500 sites.

#### Purple Swamphen *Porphyrio porphyrio*

1% Unknown. The species is widely distributed in South and Southeast Asia. It was recorded at a total of 392 sites.

#### Common Moorhen *Gallinula chloropus*

1% Unknown. The species is widely distributed in South, East and Southeast Asia. It was recorded at a total of 568 sites.

#### Common Coot *Fulica atra*

1% = 15,000 (*atra*, South Asia), East and Southeast Asia (*atra*) unknown. The species is the only congregatory member of the Rallidae family and was recorded at a total of 735 sites, eight of which met the 1% criterion. The peak count total of 117 sites in East Asia across the three years recorded only 26,542 individuals. On this basis, it is suggested that a population estimate of 100,000–500,000 might be appropriate for East and Southeast Asia.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Tangua Haor Complex	37,150	2003
India	Gujarat	Kanewal	22,917	2004
India	Gujarat	Pariej	30,800	2003
India	Orissa	Chilika Lake	96,687	2002
India	Orissa	Hirakud Reservoir	18,230	2002
Pakistan	Punjab/NWFP	Chashma Barrage Reservoir	35,000	2004
Pakistan	Sindh	Keenjhar Lake	15,500	2002
Pakistan	Sindh	Nur-Ri Lake	15,000	2002

### 3.6.13 Finfoots – Heliornithidae

#### Masked Finfoot *Heliopais personata* VU

1% = 60. This generally solitary species is restricted to South and Southeast Asia. It was recorded at only five sites. It is unlikely that any site can be expected to hold 1% of the population of this species.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Khulna	Sundarbans: Katka	2	2002
Cambodia	Battambang	Prek Toal	1	2003
Myanmar	Kachin	Nam Sam Chaung (Near Ayeyarwady)	1	2002
Myanmar	Sagaing	Nan Ezu (Eisu) Stream (Htamanthi Wildlife Sanctuary)	2	2004
Myanmar	Sagaing	Nan Phi Lin River	1	2004

### 3.6.14 Jacanas – Jacanidae

#### Pheasant-tailed Jacana *Hydrophasianus chirurgus*

1% = 1,250. The species is restricted to and widely distributed in South and Southeast Asia. Only one site, namely Chilika Lake, in India, met the 1% criterion (27,804 in 2002).

#### Bronze-winged Jacana *Metopidius indicus*

1% = 750. The species is restricted to and widely distributed in South and Southeast Asia. Only one site, namely Chilika Lake, in India, met the 1% criterion (23,704 in 2002).

### 3.6.15 Painted-Snipe – Rostratulidae

#### Greater Painted-Snipe *Rostratula benghalensis*

1% = 250 (Asia). It was recorded at a total of 84 sites, with no site meeting the 1% criterion.

### 3.6.16 Crab Plovers – Dromadidae

#### Crab Plover *Dromas ardeola*

1% = 700 (Northwest Indian Ocean). This coastal species was concentrated in the Jamnagar District of Gujarat State in India, with three sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	1,122	2003
India	Gujarat	Jamnagar District: Jodiya Taluka wetlands	2,212	2003
India	Gujarat	Jamnagar District: Khambhalia Taluka wetlands	3,587	2003

### 3.6.17 Oystercatchers – Haematopodidae

#### Eurasian Oystercatcher *Haematopus ostralegus*

1% = 1,500 (*longipes*, Northeast Africa to South Asia), 100 (*osculans*, East Asia). Large concentrations of this species were recorded only on the coast of Chungnam Province in Republic of Korea; two sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Republic of Korea	Chungnam	Janghang Coast	2,463	2003
Republic of Korea	Chungnam	Yubu Island	3,200	2002

#### Australian Pied Oystercatcher *Haematopus longirostris*

1% = 110. The species is restricted to Australasia. Nine sites in southeast Australia met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Bowen	118	2003
Australia	Queensland	Moreton Bay	557	2002
Australia	South Australia	Western Eyre Peninsula	1,078	2003
Australia	Tasmania	East Derwent (Pittwater)	1,066	2002
Australia	Tasmania	Marion Bay	154	2002
Australia	Tasmania	Tasmania – North West Coast	1,192	2003
Australia	Victoria	Corner Inlet East	786	2003
Australia	Victoria	Corner Inlet West	176	2002
Australia	Victoria	Westernport Bay	342	2002

#### Sooty Oystercatcher *Haematopus fuliginosus*

1% = 40 (*fuliginosus*, South Australia), 75 (*ophthalmicus*, North Australia). Six sites in southeast Australia met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	South Australia	Western Eyre Peninsula	530	2003
Australia	Tasmania	Cape Portland	42	2002
Australia	Tasmania	East Derwent (Pittwater)	47	2002
Australia	Tasmania	Tasmania – North West Coast	790	2003
Australia	Victoria	Corner Inlet East	156	2004
Australia	Victoria	Corner Inlet West	244	2004

### 3.6.18 Ibisbill – Ibidorhynchidae

#### Ibisbill *Ibidorhyncha struthersii*

1% Unknown. This riverine species is restricted to Central and South Asia. It was recorded in Bhutan, India and Myanmar, with 102 individuals reported from Bhutan in 2002.



### 3.6.19 Stilts & avocets – *Recurvirostridae*

#### Black-winged Stilt *Himantopus himantopus*

1% = 1,750 (*himantopus*, South Asia), 250 (*ceylonensis*, Sri Lanka), 1,000 (*himantopus*, East and Southeast Asia), 3,000 (*leucocephalus*, Australia). The species is one of the most widely distributed shorebirds across its range, recorded at 717 sites, with seven sites meeting the 1% criterion. It was not possible to be certain about the 1% criterion for *ceylonensis* as both *himantopus* and *ceylonensis* were reported in Sri Lanka, and they could not be separated in the count (Udaya Sirivardana, pers. comm., February 2007).

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Tangua Haor Complex	2,100	2002
India	Gujarat	Great Rann of Kachchh	6,000	2004
India	Gujarat	New Port Saltpans, Bhavnagar	1,800	2004
India	Gujarat	Onchal Lake	2,000	2004
India	Orissa	Chilika Lake	21,311	2003
Sri Lanka	NWP	Puttalam Salt Pans	2,500	2002
Thailand	Pattalung	Thale Noi Non-Hunting Area	1,673	2004

#### Banded Stilt *Cladorhynchus leucocephalus*

1% = 2,100. The species is restricted to Australia, with two sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Victoria	Bellarine Peninsula	5,921	2002
Australia	Western Australia	Swan River	7,649	2003

#### Pied Avocet *Recurvirostra avosetta*

1% = 1,000 (South and East Asia). The major congregations of the species were recorded from Gujarat State in India and the Lower Yangtze Floodplain in China, with a total of 10 sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Baidang Hu	1,942	2004
China	Anhui	Anqingyanjiang NR: Caizi Hu	1,770	2003
China	Hunan	East Dongting Lake NR	5,297	2003
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	1,485	2004
China	Jiangxi	Poyang Lake	6,344	2004
China	Hong Kong	Deep Bay	3,500	2004
India	Gujarat	Great Rann of Kachchh	1,000	2004
India	Gujarat	Nakti Creek (New Kandla)	1,200	2003
India	Gujarat	Nava Talao	1,500	2003
India	Gujarat	New Port Saltpans, Bhavnagar	5,815	2003

#### Red-necked Avocet *Recurvirostra novaehollandiae*

1% = 1,100. The species is restricted to Australia, with two sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	New South Wales	Hunter Estuary	3,869	2003
Australia	Victoria	Werribee	1,166	2003

### 3.6.20 Thick-knees – *Burhinidae*

#### Bush Thick-knee *Burhinus grallarius* NT

1% unknown. Only a few records, from north Australia.

#### Great Thick-knee *Burhinus (Esacus) recurvirostris*

1% = 250. The species was recorded mainly in India. It is unlikely that any site can be expected to hold 1% of the population of this non-congregatory species.

#### Beach Thick-knee *Burhinus gigantea (Esacus magnirostris)* NT

1% = 250. The species is restricted to Southeast Asia and Australasia. Only a few records were received from Australia. It is unlikely that any site can be expected to hold 1% of the population of this non-congregatory species.

### 3.6.21 Coursers & pratincoles – Glareolidae

#### Oriental Pratincole *Glareola maldivarum*

1% = 1,000 (India and Sri Lanka), 20,000 (East, Southeast Asia and Australia). The species is restricted to the range of the AWC and is often found away from wetlands. No site met the 1% criterion.

#### Small Pratincole *Glareola lactea*

1% = 750. The species is restricted to South and Southeast Asia, with five sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Dhaka	Dighirpar	4,000	2002
India	Kerala	Kole Wetlands	1,500	2004
India	West Bengal	Gajaldoba Teesta Barrage	789	2003
Myanmar	Kachin	Irrawaddy R: Myitkyina Panmathi Ngapyawtaw Sinbo	2,920	2003
Myanmar	Sagaing	Chindwin R: Kalewa–Hkamti and to the North	1,758	2004

### 3.6.22 Plovers – Charadriidae

#### Northern Lapwing *Vanellus vanellus*

1% = 250 (South Asia), 10,000 (East and Southeast Asia). Good numbers of this species were recorded in the Lower Yangtze floodplain. However, as this species does not congregate in large flocks in Asia it is unlikely that many sites can be expected to hold 1% of the population.

#### River Lapwing *Vanellus duvaucelli*

1% = 250. The species is restricted to South and Southeast Asia. Only one site, namely Kishore Sagar, Rajasthan State, in India, met the 1% criterion (250 individuals recorded in 2003). The species does not normally congregate in large flocks, hence it is unlikely that many sites can be expected to hold 1% of the population.

#### Yellow-wattled Lapwing *Vanellus malabaricus*

1% = 75. The species is restricted to South Asia. Seven sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Assam	Bordoloni	260	2003
India	Assam	Kuarbari-Dalani	300	2003
India	Gujarat	Boriyala Tank	100	2004
India	Gujarat	Machhan Nala Dam	100	2002
India	Gujarat	Munva Hadaf Dam	100	2002
India	Gujarat	Nagarala Pond	100	2004
India	Orissa	Harabhangi	88	2002

#### Grey-headed Lapwing *Vanellus cinereus*

1% = 1,000. The species is restricted to South, East and Southeast Asia. As this species does not normally congregate in large flocks it is unlikely that many sites can be expected to hold 1% of the population.

#### Red-wattled Lapwing *Vanellus indicus*

1% = 500 (*indicus*, South Asia), 100 (*lankae*, Sri Lanka) and unknown (*atronuchalis*, Northeast India to Malaysia). The species is the most widely distributed of the lapwings, recorded at 771 sites; four sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Sangameshwara	1,500	2002
India	Gujarat	Munva Hadaf Dam	1,000	2004
India	Orissa	Chilika Lake	879	2002
Sri Lanka	NCP	Kaudulla Tank	104	2004

#### Sociable Lapwing *Vanellus gregarius* CR

1% = 8 (South Asia). Only two records were received, from India and Pakistan, for this very rare species.

Country	Region	Site Name	Peak Count	Year
India	Uttarakhand	Tumeria Dam	2	2002
Pakistan	NWFP	Kabul River (40-km stretch)	6	2002

**White-tailed Lapwing *Vanellus leucurus***

1% = 1,000 (South Asia). The species does not normally congregate in large flocks, hence it is unlikely that many sites can be expected to hold 1% of the population. The population estimate of 100,000 may be too high and may need to be reviewed.

**Pacific Golden Plover *Pluvialis fulva***

1% = 750 (South and Southwest Asia), 1,000 (East, Southeast Asia and Australasia). The species was widely distributed across the range of the AWC, with nine sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Barisal	Kazir Char	800	2004
Bangladesh	Sylhet	Tangua Haor Complex	1,217	2002
China	Taiwan Ilan	Chu-An	1,740	2004
China	Taiwan Ilan	Lan-Yang-Hsi (River)	3,050	2004
India	Kerala	Kole Wetlands	1,000	2004
India	Orissa	Bhitarkanika Mangrove	758	2003
India	Orissa	Chilika Lake	12,013	2002
Japan	Okinawa	Awase Higata	1,021	2004
Japan	Okinawa	Hiyagon Shicchi	823	2003

**Grey Plover *Pluvialis squatarola***

1% = 300 (*squatarola*, South Asia), 1,300 (*squatarola*, East, Southeast Asia and Australasia). The species was widely distributed across the range of the AWC, with three sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Orissa	Chilika Lake	3,518	2002
China	Hunan	East Dongting Lake NR	3,233	2003
Japan	Saga	Daijugarami	1,400	2003

**Little Ringed Plover *Charadrius dubius***

1% = 1,000 (*jerdoni*, South Asia; *dubius*, Philippines), 250 (*curonicus*, East and Southeast Asia). Seven sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Hubei	Chen Hu	510	2003
China	Taiwan Changhua	Han-Pao	302	2002
China	Taiwan Chiayi	Ao-Ku	800	2004
China	Taiwan Ilan	Lan-Yang-Hsi (River)	330	2004
China	Taiwan Tainan	Szu-Tsao	280	2004
China	Taiwan Tainan	Tseng-Wen Hsi (River)	300	2004
Vietnam	Binh Dinh	Tra O Lagoon	300	2002

**Kentish Plover *Charadrius alexandrinus***

1% = 750 (*alexandrinus*, South Asia), 90 (*seebohmi*, Sri Lanka), 1,000 (*dealbatus*, East and Southeast Asia). Fifteen sites met the 1% criterion. Yancheng Nature Reserve, which covers the entire coast of Jiangsu Province in China, recorded a large concentration of 36,729 individuals. It was not possible to be certain about the 1% criterion for *seebohmi* as both *seebohmi* and *alexandrinus* were reported in Sri Lanka, and they could not be separated in the count (Udaya Sirivardana, pers. comm., February 2007).

Country	Region	Site Name	Peak Count	Year
China	Hubei	Chen Hu	1,000	2003
China	Hunan	East Dongting Lake NR	3,356	2003
China	Hunan	Heng Ling Hu–He Ye Hu	1,640	2003
China	Hunan	South Dongting Lake NR	1,270	2004
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	36,729	2004
China	Shanghai	Chongming Island NR	2,389	2003
China	Hong Kong	Deep Bay	2,210	2004
China	Taiwan Changhua	Han-Pao	3,510	2002
China	Taiwan Changhua	Hsi-Kang (Ta Cheng)	1,000	2002
China	Taiwan Chiayi	Ao-Ku	1,000	2003
China	Taiwan Chiayi	Pu-Tai	1,030	2002
China	Taiwan Ilan	Chu-An	3,700	2004
China	Taiwan Ilan	Lan-Yang-His (River)	4,150	2004
China	Taiwan Tainan	Szu-Tsao	1,400	2002
India	Orissa	Chilika Lake	2,070	2004

**Javan Plover *Charadrius javanicus* NT**

Population status unknown. The species is restricted to Java, with only two records received.

**Red-capped Plover *Charadrius ruficapillus***

1% = 950. The species is restricted to Australia, with three sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Bowen	2,069	2003
Australia	South Australia	Western Eyre Peninsula	4,719	2003
Australia	Western Australia	Eighty Mile Beach	2,020	2004

**Malaysian Plover *Charadrius peronii* NT**

1% = 250. The species is restricted to Southeast Asia. As this species does not normally congregate, it is unlikely that any site can be expected to hold 1% of the population.

**Lesser Sandplover *Charadrius mongolus***

1% = 1,300. Four sub-species found in the AWC region, the 1% criteria are as follows, *mongolus* (Taiwan to Australia) = 400; *pamirensis* (coastal West India) = 1,250; *atrifrons* (India to Sumatra) = 1,300; *schaeferi* (coastal Thailand to Greater Sunda Islands) = 300; *stegmanni* (Kyushu, Izu Bonin and Ryukyu Islands (Japan) and Taiwan to Australia) = 200. As the non-breeding grounds of these sub-species overlap, it is difficult to apply the 1% criterion to identifying internationally important sites for them, therefore 1,300 individuals (*atrifrons*, India to Sumatra) have been used to determine the internationally important sites for this species in the AWC region. The same figure was also proposed by Bamford *et al.* (2006) for the East Asian – Australasian Flyway.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Moreton Bay	1,711	2004
Bangladesh	Chittagong	Patenga Beach	1,800	2003
India	Kerala	Purathur (Bharatapuza) Estuary	1,500	2004
India	Maharashtra	Sewree Jetty	7,000	2003
India	Orissa	Bhitarkanika Mangrove	12,857	2003
India	Orissa	Chilika Lake	5,718	2004
Malaysia	Selangor	Kapar Power Station Ash Ponds	1,940	2004
Philippines	Visayas	Olango Island Wildlife Sanctuary	1,329	2003
Sri Lanka	SP	Hambantota Wetlands	3,550	2004
Sri Lanka	SP	Palatupana Saltern	1,500	2002
Thailand	Petchaburi	Pak Thale (Laem Phak Bia)	1,700	2004

**Greater Sandplover *Charadrius leschenaultii***

1% = 1,000 for South Asia (*leschenaultii*), East, Southeast Asia and Australasia (*leschenaultii*). Three sites met the 1% criterion. Eighty Mile Beach in Australia recorded a significant 33,495 individuals in 2002.

Country	Region	Site Name	Peak Count	Year
Australia	Western Australia	Eighty Mile Beach	33,495	2002
Australia	Western Australia	Broome	4,470	2002
India	Orissa	Chilika Lake	1,120	2002

**Oriental Plover *Charadrius veredus***

1% = 700. The species is restricted to Southeast Asia and Australasia. One site, namely Eighty Mile Beach in Australia, met the 1% criterion with a significant count of 16,340 individuals in 2003.

**Hooded Plover *Charadrius rubricollis* NT**

1% = 45 (*rubricollis*, SE Australia), 60 (*tregellasi*, Western Australia). The species is restricted to Australia; the Northwest Tasmania Coast was the only site that met the 1% criterion (54 individuals in 2002).

**3.6.23 Snipe, sandpipers & phalaropes – Scolopacidae****Wood Snipe *Gallinago nemoricola* VU**

1% = 60. The species is restricted to South and Southeast Asia. Only one individual was recorded, at Indaw-Gyi Lake, Kachin Province, Myanmar, in 2003. For this species it is unlikely that any site can be expected to hold 1% of the population.

**Common Snipe *Gallinago gallinago***

1% = 10,000 (*gallinago*, South Asia; East and Southeast Asia). This is one of most common snipe species. Snipe normally hide in grassland or rice paddies therefore the species has been always under-counted and it is unlikely that 1% of the population could be recorded at any one site.

**Asian Dowitcher *Limnodromus semipalmatus* NT**

1% = 230. The species is restricted to the East Asian – Australasian Flyway. Sungai Cemara Beach, Jambi Province, Indonesia, was the only site that met the 1% criterion, with 500 individuals recorded in 2002.

**Black-tailed Godwit *Limosa limosa* NT**

1% = 1,500 (*limosa*, South Asia), 1,600 (*melanuroides*, East, Southeast Asia and Australasia). Ten sites met the 1% criterion. Two sites on the coast of Orissa, in India, recorded large concentrations of the species in 2002–2003; the population appears to be stable in South Asia. In the East Asian – Australasian Flyway, only one site in Australia met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Western Australia	Broome	2,120	2004
Bangladesh	Sylhet	Tangua Haor Complex	5,800	2003
India	Andhra Pradesh	Pulicat Lake Bird Sanctuary	1,500	2004
India	Gujarat	Lambhvel Sewage Pond	2,896	2004
India	Gujarat	Pipalava Bandharo	7,000	2003
India	Orissa	Bhitarkanika Mangrove	85,414	2003
India	Orissa	Chilika Lake	98,283	2002
India	Tamil Nadu	Andi Odai Tank	1,700	2003
Sri Lanka	NP	Jaffna–Arali–Punalai	3,285	2004
Sri Lanka	NP	Mannar Causeway	3,000	2003

**Bar-tailed Godwit *Limosa lapponica***

1% = 1,300 (*taymyrensis*, South Asia), 1,700 (*menzbieri* and *anadyrensis*) East and Southeast Asia), 1,600 (*baueri*, East Australia and New Zealand). Eight sites, five of which are in Australia, met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Moreton Bay	9,458	2002
Australia	Queensland	Townsville	1,806	2003
Australia	Victoria	Corner Inlet East	10,648	2004
Australia	Western Australia	Eighty Mile Beach	20,020	2004
Australia	Western Australia	Broome	16,635	2004
Bangladesh	Barisal	Gazipur Char	2,500	2002
India	Orissa	Chilika Lake	4,230	2003
Indonesia	Jambi	Sungai Cemara Beach	3,000	2002

**Whimbrel *Numenius phaeopus***

1% = 1,000 (*variegatus*, South Asia), 550 (*variegatus*, East, Southeast Asia and Australasia). Four sites on the East Asian – Australasian Flyway met the 1% criterion; Kapar Power Station Ash Ponds in Malaysia recorded the highest number of this species.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Bowen	615	2003
Australia	Queensland	Moreton Bay	872	2002
Australia	Queensland	Townsville	979	2003
Malaysia	Selangor	Kapar Power Station Ash Ponds	1,501	2003

**Eurasian Curlew *Numenius arquata***

1% = 1,000 (*orientalis*, South Asia), 350 (*orientalis*, East and Southeast Asia). Eleven sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Barisal	Mudflat in east of Moulovir Char	1,000	2002
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	2,108	2004
China	Hong Kong	Deep Bay	976	2003
China	Taiwan Chinmen	Chin-Men Island	380	2003
India	Orissa	Chilika Lake	12,082	2002
Republic of Korea	Chungnam	Janghang Coast	1,952	2003
Republic of Korea	Chungnam	Yubu Island	436	2004
Republic of Korea	Incheon	Youngjong Island	350	2002
Republic of Korea	Jeonbuk	Dongjin River Estuary	597	2003
Republic of Korea	Jeonnam	Yeuja Bay	1,343	2003
Malaysia	Selangor	Kapar Power Station Ash Ponds	911	2003

**Far Eastern Curlew *Numenius madagascariensis***

1% = 380. The species is restricted to the East Asian – Australasian Flyway, with the main non-breeding population across Australia. Six sites in Australia met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	New South Wales	Hunter Estuary	617	2002
Australia	Queensland	Moreton Bay	2,448	2002
Australia	Queensland	Townsville	867	2003
Australia	Victoria	Corner Inlet East	940	2003
Australia	Victoria	Westernport Bay	637	2002
Australia	Western Australia	Broome	460	2004

**Spotted Redshank *Tringa erythropus***

1% = 250 (South Asia), 1,000 (East and Southeast Asia). A total of eight sites met the 1% criterion. The majority of the species on the East Asian – Australasian Flyway reported in China, where six sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Anqingyanjiang NR: Baidang Hu	1,245	2004
China	Anhui	Anqingyanjiang NR: Bo Hu	4,238	2004
China	Anhui	Anqingyanjiang NR: Long Gan Hu	1,009	2004
China	Hunan	East Dongting Lake NR	6,832	2003
China	Jiangxi	Poyang Lake	5,791	2004
China	Hong Kong	Deep Bay	2,500	2002
India	Andhra Pradesh	Sangameshwara	500	2002
India	Orissa	Chilika Lake	333	2003

**Common Redshank *Tringa totanus***

1% = 1,000 (*ussuriensis*, South and Southeast Asia; *terrignotae*, East and Southeast Asia; *craggi*, East China?; *eurhinus*, India and Sri Lanka). A total of nine sites met the 1% criterion. On the East Asian–Australasian Flyway, only one site, namely Kapar Power Station Ash Ponds in Malaysia, met the criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Chinatumbulum Tank	1,230	2002
India	Andhra Pradesh	Sangameshwara	1,500	2002
India	Gujarat	Great Rann of Kachchh	1,500	2004
India	Gujarat	Victor (Bherai) Salt Pans and Coastal Area	1,000	2003
India	Maharashtra	Sewree Jetty	1,500	2003
India	Orissa	Bhitarkanika Mangrove	3,670	2003
India	Orissa	Chilika Lake	1,862	2002
Malaysia	Selangor	Kapar Power Station Ash Ponds	1,440	2003
Sri Lanka	SP	Hambantota Wetlands	1,020	2004

**Marsh Sandpiper *Tringa stagnatilis***

1% = 1,000 (South Asia), 10,000 (East, Southeast Asia and Australasia). The 1% criterion proposed by Wetlands International (2006) for the East Asian population is too high, therefore no site met it. Instead, the 1% criterion set by Bamford *et al.* (2006) at 1,000 for the East Asian – Australasian Flyway population was used to identify internationally important sites for this species. Four sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Hong Kong	Deep Bay	1,130	2003
India	Orissa	Chilika Lake	7,153	2002
Philippines	Mindanao	Brgy. Lapaz, Carmen	1,000	2004
Sri Lanka	SP	Hambantota Wetlands	8,020	2004

**Common Greenshank *Tringa nebularia***

1% = 750 (South Asia), 1,000 (East, Southeast and Australia). Only one site in South Asia met the 1% criterion. The criterion for East and Southeast Asia might be set too high, as no sites met it. The 1% criterion of 600 individuals, as established by Bamford *et al.* (2006), was used here for the East and Southeast Asian population, with two sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Western Australia	Eighty Mile Beach	937	2002
India	Orissa	Chilika Lake	2,158	2002
Philippines	Luzon	Coastal Road Lagoons at Paranaque	745	2004

**Nordmann's Greenshank *Tringa guttifer* EN**

1% = 8. The species is restricted to the East Asian – Australasian Flyway. It is one of the rarest shorebird species, recorded at only seven sites, two of which met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Malaysia	Penang	Kuala Bekah (Telok Air Tawar)–Kuala Muda coast	31	2004
Thailand	Samut Sakhon	Khok Kham	28	2004
<b>Other sites where the species was recorded</b>				
Indonesia	Jambi	Sungai Cemara Beach	5	2002
Malaysia	Sarawak	Bako–Buntal Bay and surrounding areas	4	2003
Malaysia	Selangor	Kapar Power Station Ash Ponds	6	2004
Thailand	Krabi	Pak Nam (Krabi Mangroves)	7	2003
Thailand	Petchaburi	Pak Thale (Laem Phak Bia)	7	2004

**Green Sandpiper *Tringa ochropus***

1% = 1,000 (South Asia; East and Southeast Asia). Only one site in South Asia, namely Chilika Lake in India, met the 1% criterion (1,108 individuals in 2002). The criterion for East and Southeast Asia might be set too high as no sites met it.

**Wood Sandpiper *Tringa glareola***

1% = 1,500 (South Asia), 1,000 (East, Southeast Asia and Australasia). Only one site, namely Chilika Lake in India, met the 1% criterion (3,427 individuals in 2003).

**Terek Sandpiper *Xenus cinereus***

1% = 1,000 (South Asia), 500 (East, Southeast Asia and Australasia). Three sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Western Australia	Eighty Mile Beach	6,186	2002
Australia	Western Australia	Broome	1,840	2004
Malaysia	Selangor	Kapar Power Station Ash Ponds	500	2002

**Common Sandpiper *Actitis hypoleucos***

1% = 750 (South Asia), 500 (East, Southeast Asia and Australasia). This is the most widely distributed of the shorebird species, recorded at 926 sites, however it does not normally congregate in large flocks, and therefore no sites met the 1% criterion.

**Grey-tailed Tattler *Heteroscelus brevipes***

1% = 400. The species is restricted to the East Asian – Australasian Flyway and spend the non-breeding period mainly in Australia. Four sites in Australia met the 1% criterion; Eighty Mile Beach recorded 30% of the population in 2002.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Moreton Bay	1,607	2002
Australia	Queensland	Townsville	607	2003
Australia	Western Australia	Eighty Mile Beach	12,420	2002
Australia	Western Australia	Broome	1,690	2002

**Ruddy Turnstone *Arenaria interpres***

1% = 1,000 (*interpres*, South Asia; *interpres*, Pacific and Southeast Asia). One site, namely the North West Tasmania Coast in Australia, met the 1% criterion (2,217 in 2003).

**Great Knot *Calidris tenuirostris***

1% = 35 (Northwest India, Pakistan and Sri Lanka), 3,800 (Southeast India, East, Southeast Asia and Australasia). The species spend the non-breeding period mainly in Australia, with three sites meeting the 1% criterion. Eighty Mile Beach alone recorded more than 10% of the population.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Townsville	18,702	2003
Australia	Western Australia	Eighty Mile Beach	47,994	2002
Australia	Western Australia	Broome	15,935	2003

**Red Knot *Calidris canutus***

1% = 2,200 for both *rogersi* (Southeast Asia and Australasia) and *piersmai* (Australia and New Zealand). The two populations spend the non-breeding period mainly in Australasia, where two sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Victoria	Corner Inlet East	2,501	2004
Australia	Western Australia	Eighty Mile Beach	5,781	2002

### Sanderling *Calidris alba*

1% = 1,000 (South Asia), 220 (East and Southeast Asia). Eleven sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	South Australia	South East Coast – South Australia	329	2002
Australia	South Australia	Western Eyre Peninsula	787	2003
Australia	Western Australia	Eighty Mile Beach	233	2002
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	1,542	2004
Japan	Chiba	Banzu	223	2003
Japan	Chiba	Ilioka Kaigan	223	2003
Japan	Chiba	Magame-Gawa, Sakuda-Gawa	496	2002
Japan	Chiba	Sakuda-Gawa, Kido-Gawa	379	2002
Japan	Fukuoka	Wajiro Higata	235	2003
Japan	Ishikawa	Takamatsu, Kahoku Kaigan	446	2004
Republic of Korea	Busan	Nakdong Estuary	290	2004

### Red-necked Stint *Calidris ruficollis*

1% = 3,200. The species is restricted to the East Asian – Australasian Flyway. Large flocks were recorded only in Australia, where 11 sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Moreton Bay	7,488	2004
Australia	Queensland	Townsville	5,429	2003
Australia	South Australia	Western Eyre Peninsula	13,858	2003
Australia	Tasmania	Tasmania – North West Coast	13,882	2004
Australia	Victoria	Altona	8,343	2003
Australia	Victoria	Bellarine Peninsula	14,777	2003
Australia	Victoria	Corner Inlet East	16,210	2004
Australia	Victoria	Werribee	13,642	2003
Australia	Victoria	Westernport Bay	8,903	2004
Australia	Western Australia	Eighty Mile Beach	9,080	2002
Australia	Western Australia	Broome	4,875	2003

### Little Stint *Calidris minuta*

1% = 2,500 (South Asia). Five sites met the 1% criterion; the Pulicat Lake Bird Sanctuary alone recorded 8% of the population.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Kondakarla Lake	3,500	2002
India	Andhra Pradesh	Pulicat Lake Bird Sanctuary	20,000	2003
India	Orissa	Bhitarkanika Mangrove	2,937	2003
India	Orissa	Chilika Lake	5,368	2003
Sri Lanka	SP	Hambantota Wetlands	8,025	2004

### Temminck's Stint *Calidris temminckii*

1% = 1,000 (South Asia; East and Southeast Asia). Three sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Gujarat	Nava Talao	1,000	2003
India	Orissa	Bhitarkanika Mangrove	1,090	2003
India	Orissa	Chilika Lake	1,234	2002

### Long-toed Stint *Calidris subminuta*

1% = 250. The species is restricted to the range of the AWC, with two sites in Taiwan meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Taiwan Changhua	Han-Pao	300	2002
China	Taiwan Pingtung	Tung Kung	300	2004

### Sharp-tailed Sandpiper *Calidris acuminata*

1% = 1,600. The species is restricted to the East Asian – Australasian Flyway and spend the non-breeding period mainly in Australia. Five sites met the 1% criterion.



Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Bowen	2,997	2003
Australia	South Australia	Western Eyre Peninsula	2,924	2003
Australia	Victoria	Bellarine Peninsula	3,990	2003
Australia	Victoria	Eastern Port Phillip	1,658	2002
Australia	Victoria	Werribee	2,894	2002

### **Curlew Sandpiper *Calidris ferruginea***

1% = 2,500 (South Asia), 1,800 (East, Southeast Asia and Australasia). Eleven sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Australia	Queensland	Bowen	3,333	2003
Australia	South Australia	Western Eyre Peninsula	2,140	2003
Australia	Tasmania	Tasmania – North West Coast	1,959	2004
Australia	Victoria	Werribee	2,226	2004
Australia	Victoria	Westernport Bay	3,170	2002
Australia	Western Australia	Eighty Mile Beach	6,330	2002
Australia	Western Australia	Broome	1,829	2004
India	Maharashtra	Sewree Jetty	2,500	2003
India	Orissa	Chilika Lake	2,668	2004
Sri Lanka	NP	Uppu Aru Lagoon	10,228	2004
Sri Lanka	SP	Hambantota Wetlands	10,100	2004

### **Dunlin *Calidris alpina***

1% = 1,000 (*centralis*, South Asia), 10,000 (*sakhalina*, East Asia; *kistchinskii*, unknown), 7,500 (*arctica*, East Asia), 9 (*actites*, unknown). As the non-breeding grounds of the sub-species overlap, it was difficult to apply the 1% criterion to the East Asian – Australasian Flyway population; therefore 10,000 was used as the 1% criteria for identifying internationally important sites in East and Southeast Asia. Three sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Hunan	East Dongting Lake NR	16,117	2003
China	Taiwan Chiayi	Ao-Ku	10,000	2003
India	Orissa	Chilika Lake	20,092	2002

### **Spoon-billed Sandpiper *Eurynorhynchus pygmeus* EN**

1% = 30. The species is one of the rarest shorebird species restricted to the East Asian – Australasian Flyway. It was recorded at only five sites, with no sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Orissa	Chilika Lake	6	2003
Japan	Fukuoka	Sone-Higata (Tideland)	1	2002
Malaysia	Selangor	Kapar Power Station Ash Ponds	1	2002
Thailand	Petchaburi	Pak Thale (Laem Phak Bia)	2	2004
Thailand	Samut Sakhon	Khok Kham	3	2003

### **Broad-billed Sandpiper *Limicola falcinellus***

1% = 630 (*falcinellus*, West and South India), 1,000 (*sibirica*, East India, East, Southeast Asia and Australasia). The species often mixes with Curlew Sandpiper, a similar-looking species, therefore it may have been overlooked during the census; no site met the 1% criterion.

### **Ruff *Philomachus pugnax***

1% = 1,000 (South Asia). Seven sites in northwest India met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	9,885	2003
India	Gujarat	Jamnagar District: Khambhalia Taluka wetlands	3,740	2003
India	Gujarat	Lambhvel Sewage Pond	5,550	2003
India	Gujarat	Nava Talao	3,000	2003
India	Orissa	Chilika Lake	1,538	2002
India	Rajasthan	Bardha Dam	2,000	2002
India	Rajasthan	Vardha Dam	3,000	2004

### 3.6.24 Gulls – Laridae

As the definitive classification of the 'large white-headed gulls' groups is still under development, observers used different field guides, the nomenclatures used by the different guides varying. For this reason, information on this group is not summarised here.

#### Black-tailed Gull *Larus crassirostris*

1% = 10,500. The species is restricted to East Asia. No site met the 1% criterion.

#### Common Gull *Larus canus*

1% = 1,000 (*kamtschatschensis*, East and Southeast Asia). Three sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	1,156	2004
Republic of Korea	Busan	Nakdong Estuary	1,054	2004
Republic of Korea	Gangwon	Gangneung – Jumunjin Coast	2,726	2003

#### Slaty-backed Gull *Larus schistisagus*

1% Unknown. The species is restricted to East Asia.

#### Great Black-headed Gull, Pallas's Gull *Larus ichthyaetus*

1% = 1,000 (South Asia). Two sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Orissa	Bhitarkanika Mangrove	1,028	2003
Sri Lanka	NP	Kora Kulam	1,900	2003

#### Brown-headed Gull *Larus brunnicephalus*

1% = 1,500 (South Asia, Indochina and South China). Eight sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Goa	Chapora Estuary: Marjim – 'Tembwado' Coastline	6,000	2003
India	Goa	Mandovi Estuary	1,600	2004
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	1,668	2003
India	Gujarat	Lakhota Lake	1,500	2003
India	Orissa	Bhitarkanika Mangrove	2,513	2003
India	Orissa	Chilika Lake	1,935	2004
India	West Bengal	Farakka Barrage (Ganges River)	2,100	2003
Thailand	Samut Prakan	Bangpoo Bang Pu	8,500	2003

#### Common Black-headed Gull *Larus ridibundus*

The 1% criteria for the South, East and Southeast Asian populations are unknown. This is the most widely distributed gull species recorded at 309 sites, with large concentrations in China and India.

#### Slender-billed Gull *Larus genei*

1% = 1,500 (South Asia). A major congregation of this species was recorded in Gujarat State in India. No site met the 1% criterion.

#### Saunders's Gull *Larus saundersi* VU

1% = 85. The species is restricted to East Asia. It was recorded at 45 sites, 10 of which met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	498	2004
China	Taiwan Changhua	Han-Pao	286	2002
China	Taiwan Chiayi	Ao-Ku	300	2002
Republic of Korea	Chungnam	Ganwol Reservoir	120	2002
Republic of Korea	Chungnam	Geum River Estuary	645	2004
Republic of Korea	Chungnam	Janghang Coast	94	2002
Republic of Korea	Chungnam	Yubu Island	505	2004
Republic of Korea	Jeonbuk	Mangyung River Estuary	85	2003
Republic of Korea	Jeonnam	Suncheon Bay	305	2003
Republic of Korea	Jeonnam	Yeuja Bay	351	2003
Other sites where the species was recorded				
China	Fujian	Huaqiao Farm, Jiangjing Town	11	2003
China	Fujian	Quanzhou Bay	6	2003
China	Fujian	Tangdong Mudflat	12	2004

Country	Region	Site Name	Peak Count	Year
China	Fujian	Xiamen Coast: Aotou Mudflat	6	2003
China	Fujian	Xiamen Coast: Fenglin Mangrove	3	2003
China	Guangdong	Zhanjiang Nature Reserve	12	2003
China	Jiangsu	Gaoyou	10	2004
China	Tianjin	Tianjin Haibin Fish Farm	12	2004
China	Hong Kong	Deep Bay: Combined	34	2003
China	Taiwan Changhua	Hsi-Kang (Ta Cheng)	60	2002
China	Taiwan Chiayi	Pei Kang Hsi (Yun-Chia-Chiao)	7	2002
China	Taiwan Chiayi	Pu-Tai	11	2004
China	Taiwan Chinmen	Chin-Men Island	54	2004
China	Taiwan Hsinchu	Ku-Liao (Kang Nan)	20	2002
China	Taiwan Ilan	Chu-An	1	2003
China	Taiwan Taichung	Ta-Chia River (Kao Mei)	51	2002
China	Taiwan Tainan	Pei-Men	3	2002
China	Taiwan Tainan	Tseng-Wen Chi (River)	5	2004
China	Taiwan Yunlin	Shui-Lin	12	2002
Japan	Aichi	Shio Kawa Tideland	4	2002
Japan	Fukuoka	East Region of Ariake Sea	23	2002
Japan	Fukuoka	East Region of Hakata Bay	6	2004
Japan	Fukuoka	Imazu	33	2003
Republic of Korea	Busan	Nakdong Estuary	55	2003
Republic of Korea	Chungnam	Bunam Reservoir	2	2003
Republic of Korea	Gangwon	Samcheok – Gangneung Coast	3	2002
Republic of Korea	Gyeonggi	Asan Lake	3	2002
Republic of Korea	Gyeongnam	Dangdong Bay	1	2004
Republic of Korea	Gyeongnam	Sacheon Bay	5	2004
Republic of Korea	Jeonnam	Boseong and Deukryang Bay	18	2003
Republic of Korea	Jeonnam	Gwangyang and Galsa Bay	22	2003
Vietnam	Nam Dinh (Nam Ha)	Xuan Thuy Ramsar Site	2	2004
Vietnam	Quang Ninh Province	Tra Co Peninsula	8	2002
Vietnam	Thai Binh	Thai Thuy District	1	2002

### Relict Gull *Larus relictus* VU

1% = 120. The species is restricted to Central and East Asia. It was recorded at four sites; one site on the Tianjin coast (China) met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Tianjin	Tianjin Haibin Fish Farm	3,362	2004
<b>Other sites where the species was recorded</b>				
China	Jiangsu	Yancheng NR: Entire coast of Jiangsu Province	5	2004
Republic of Korea	Busan	Nakdong Estuary	1	2003
Republic of Korea	Jeonnam	Yeuja Bay	1	2003

### 3.6.25 Terns – Sternidae

#### Gull-billed Tern *Sterna nilotica*

1% = 800 (*nilotica*, South Asia), 1,000 (*addenda*, East, Southeast and Australasia). It was recorded at a total of 177 sites, with no site meeting the 1% criterion.

#### Caspian Tern *Sterna caspia*

1% = 750 (South Asia), 250 (East and Southeast Asia). Two sites in Taiwan met the 1% criterion; no site in South Asia met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
China	Taiwan Chiayi	Pu-Tai	500	2004
China	Taiwan Tainan	Tseng-Wen Hsi (River)	450	2004

#### Lesser Crested Tern *Sterna (Thalasseus) bengalensis*

1% = 1,700 (*bengalensis*, South Asia). The species is concentrated in Sri Lanka, where two sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
Sri Lanka	NP	Adam's Bridge Islands	25,000	2003
Sri Lanka	NP	Delft Island	3,160	2002

**Greater Crested Tern *Sterna (Thalasseus) bergii***

1% = 10,000 (*velox*, South Asia) and unknown (*cristata*, East and Southeast Asia). One site in Sri Lanka, namely Adam's Bridge Islands, met the 1% criterion (13,677 individuals recorded in 2003).

**River Tern *Sterna aurantia***

1% = 750. The species is largely restricted to South Asia extending eastwards to the Mekong River, with five sites meeting the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Andhra Pradesh	Kolleru Wetland: Penumaka Lanka	1,000	2003
India	Gujarat	Nyari-I	2,004	2004
India	Himachal Pradesh	Pong Dam Bird Sanctuary	907	2002
India	Maharashtra	Thane–Ulhas Estuary	1,505	2003
India	Orissa	Chilika Lake	2,179	2002

**Black-naped Tern *Sterna sumatrana***

1% unknown. The species was recorded at a few sites in Southeast Asia.

**Common Tern *Sterna hirundo***

1% = 1,000 (*tibetana*, East Indian Ocean). Unknown for *minussensis* (North Indian Ocean) and *longipennis* (SE Asia to Australia). It was recorded at a total of 137 sites, with no site meeting the 1% criterion.

**Little Tern *Sterna albifrons***

1% = 750 (*pusilla*, South Asia), 1,000 (*sinensis*, Southeast Asia). Two sites met the 1% criterion.

Country	Region	Site Name	Peak Count	Year
India	Orissa	Chilika Lake	1,890	2003
Philippines	Mindanao	Bonifacio Wetland	1,231	2004

**Black-bellied Tern *Sterna acuticauda* NT**

1% = 250. The species is restricted to South and Southeast Asia. One site, namely Victor Salt Pans and Coastal Area, in Gujarat State in India, met the 1% criterion (305 individuals in 2003).

**Whiskered Tern *Chlidonias hybrida***

1% = 1,000 (*indica*, South Asia; *javanica*, South Asia), East and Southeast Asia (*swinhoei*) unknown. Five sites in South Asia met the 1% criterion. For the East and Southeast Asian population, a peak total count of 23,592 birds was recorded at 53 sites across the three years. It is proposed, therefore, that a population estimate of 50,000–100,000 to be used.

Country	Region	Site Name	Peak Count	Year
India	Kerala	Kole Wetlands	15,000	2004
India	Kerala	Vembanad: Vembanad Lake	3,000	2002
India	Orissa	Chilika Lake	7,748	2002
India	Tamil Nadu	Karavetty Tank	1,200	2003
Sri Lanka	NCP	Minneriya National Park	1,500	2004

**White-winged (Black) Tern *Chlidonias leucopterus***

1% in South, East and Southeast Asia unknown. The species was recorded at a total of 41 sites.

**3.6.26 Skimmers – Rynchopidae****Indian Skimmer *Rynchops albicollis* VU**

1% = 80. The species is restricted to South Asia. It was recorded at a total of 21 sites, with two sites meeting the 1% criterion. Jahajmara, on the coast of Bangladesh, recording more than 10% of the population.

Country	Region	Site Name	PeakCount	Year
Bangladesh	Chittagong	Jahajmara	1,000	2004
India	Uttar Pradesh	National Chambal Sanctuary	341	2002
<b>Other sites where the species was recorded</b>				
Bangladesh	Barisal	Doba Char	3	2002
India	Andhra Pradesh	Icrisat Campus (Patancheru)	1	2002
India	Gujarat	Jafarabad Coast	2	2003
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	3	2003

Country	Region	Site Name	PeakCount	Year
India	Gujarat	Victor (Bherai) Salt Pans and Coastal Area	2	2003
India	Karnataka	Krishna River – Karnataka	4	2003
India	Madhya Pradesh	Chambal River: National Chambal Sanctuary	22	2003
India	Maharashtra	Hipparga Tank	2	2003
India	Orissa	Bhitarkanika Mangrove	61	2003
India	Orissa	Chilika Lake	4	2002
India	Orissa	Dhulia Nali Dam – Manpur	5	2003
India	Orissa	Hirakud Reservoir	66	2002
India	Orissa	Sisilo: Badapokhari Tank	55	2002
India	Orissa	Sundar Dam	18	2003
India	Orissa	Suvarnapur – Ansupa	14	2003
India	Punjab	Harike Wetland	5	2002
India	West Bengal	Chittaranjan Bara Dam	9	2003
Myanmar	Sagaing	Chindwin R: Kalewa – Hkamti and to the North	1	2004
Myanmar	Shan	Inle Lake Wildlife Sanctuary	2	2003

### 3.6.27 Seabirds

#### Laysan Albatross *Phoebastria immutabilis* VU

One individual was recorded at Han-Pao, Changhua County, Taiwan, in 2004.

#### Christmas Frigatebird *Fregata andrewsi* CR

1% = 45. Seven hundred individuals were recorded at Mantanani Island, Sabah, Malaysia, in 2003.

### 3.6.28 Birds of prey

Raptors generally do not form large flocks and for most species the population figure in Asia is unknown, therefore was not possible to identify the internationally important sites according to 1% criteria. Distribution maps for the following species are given in section 3.6.30.

#### Osprey *Pandion haliaetus*

The species was recorded at a total of 138 sites within the range of the AWC.

#### Brahminy Kite *Haliastur indus*

The species is restricted to the range of the AWC and was recorded at 230 sites; it was one of the most widely distributed raptor species reported.

#### White-bellied Fish-eagle *Haliaeetus leucogaster*

The species is restricted to the range of the AWC and is observed mainly in coastal areas. It was recorded at a total of 60 sites.

#### Pallas's Fish-eagle *Haliaeetus leucoryphus* VU

The species was recorded at 28 sites in South Asia.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Khajauory Beel	1	2002
Bangladesh	Sylhet	Pana Beel	2	2003
Bangladesh	Sylhet	Pashua Haor	2	2002
Bangladesh	Sylhet	Tangua Haor Complex	4	2004
India	Andhra Pradesh	Pulicat Lake Bird Sanctuary	1	2004
India	Assam	Bordoibam Bilmukh Bird Sanctuary	1	2004
India	Assam	Bordoloni	3	2003
India	Assam	Kaziranga National Park	2	2004
India	Assam	Kuarbari-Dalani	1	2003
India	Chhattishgarh	Bharda Village	1	2004
India	Gujarat	Jamnagar District: Jamnagar Taluka wetlands	1	2003
India	Himachal Pradesh	Pong Dam Bird Sanctuary	3	2004
India	Madhya Pradesh	Upper Lake, Bhopal City	1	2003
India	Maharashtra	Powai Lake	1	2003
India	Maharashtra	Tansa (Belnala) WLS	1	2003
India	Orissa	Hirakud Reservoir	1	2003
India	Uttar Pradesh	Chaltuwa Wetland	2	2003
India	Uttar Pradesh	Kishanpur Wildlife Sanctuary	2	2003

Country	Region	Site Name	Peak Count	Year
India	Uttar Pradesh	Nachan Tal	2	2003
India	Uttarakhand	Asan Barrage	1	2002
India	Uttarakhand	Gol Tapper	1	2003
India	Uttarakhand	Tumeria Dam	1	2003
India	West Bengal	Ahiron, Murshidabad	1	2003
India	West Bengal	Chittaranjan Bara Dam	2	2003
India	West Bengal	Purbasthali	1	2004
India	West Bengal	Rasik Bill	1	2003
Pakistan	Baluchistan	Gwadar Beach	1	2002
Pakistan	Sindh	Hub Dam	2	2003

#### White-tailed Eagle *Haliaeetus albicilla* NT

The species was recorded at a total of 34 sites within the range of the AWC.

#### Steller's Sea-eagle *Haliaeetus pelagicus* VU

The species is restricted to East Asia. The population was estimated at 5,000 individuals by Ferguson-Lee *et al.* (2001). It was recorded at six sites.

Country	Region	Site Name	Peak Count	Year
Japan	Hokkaido	Kushiro: Akkeshi Lake	27	2002
Republic of Korea	Busan	Nakdong Estuary	1	2002
Republic of Korea	Chungnam	Ganwol Reservoir	2	2003
Republic of Korea	Gangwon	Yangyang-Sokcho Coast	1	2003
Republic of Korea	Gyeongbuk	Pohang-Yeongdeok Coast	2	2002
Russia	Kamchatka Region	Petropavlovsk – Kamchatsky (Avacha Bay)	30	2002

#### Lesser Fish-eagle *Ichthyophaga humilis* NT

The species is restricted to South and Southeast Asia. It was recorded at a total of 10 sites.

#### Grey-headed Fish-eagle *Ichthyophaga ichthyaetus* NT

The species is restricted to South and Southeast Asia. It was recorded at a total of 31 sites.

#### Pallid Harrier *Circus macrourus* NT

The species was recorded at a total of 9 sites within the range of the AWC.

#### Western Marsh Harrier *Circus aeruginosus*

The species was recorded at 240 sites mainly in South Asia.

#### Greater Spotted Eagle *Aquila clanga* VU

The species was reported from the following 50 sites.

Country	Region	Site Name	Peak Count	Year
Bangladesh	Sylhet	Hail Haor	2	2004
Bangladesh	Sylhet	Hakaluki Haors	1	2004
China	Hong Kong	Deep Bay	3	2004
India	Bihar	Vikramshila Ganga Dolphin Sanctuary	1	2003
India	Goa	Curtorim Mangroves	1	2003
India	Goa	Macasana Tanks	1	2003
India	Goa	Neura Wetlands	3	2003
India	Goa	Raiturem Mangroves	1	2003
India	Goa	Santa Cruz Pond	1	2003
India	Goa	Seraulim Lake	1	2003
India	Gujarat	Lambhvel Sewage Pond	1	2004
India	Gujarat	Nagarama Village Pond	1	2004
India	Gujarat	Nani Kakrad	5	2004
India	Gujarat	Narda Tank	3	2004
India	Gujarat	Nava Talao	1	2003
India	Gujarat	Pariej	4	2004
India	Gujarat	Pipalava Bandharo	3	2003
India	Gujarat	Thol Lake Bird Sanctuary	1	2003
India	Haryana	Basai Wetlands	3	2003
India	Haryana	Bhindavas Lake Bird Sanctuary	3	2003
India	Haryana	Sultanpur Bird Sanctuary	2	2003
India	Karnataka	Kallur Tank	1	2004
India	Karnataka	Krishnaraja Sagar Reservoir	2	2004
India	Karnataka	Kunthur Tank	2	2004
India	Karnataka	Lingambudhi Tank	1	2004

Country	Region	Site Name	Peak Count	Year
India	Kerala	Kattampally	12	2003
India	Kerala	Vembanad: Kaippuzha Muttu	2	2004
India	Maharashtra	Hipparga Tank	3	2003
India	Orissa	Bhitarkanika Mangrove	4	2003
India	Rajasthan	Ram Sagar Lake (Hindoli)	1	2004
India	Uttar Pradesh	Yamuna R: Agra	1	2003
India	West Bengal	Naya Bandh Bill	1	2003
Malaysia	Johor	Parit Jawa	5	2002
Malaysia	Johor	Sungai Balang	2	2004
Malaysia	Melaka	Batang Tiga Ricefields	2	2002
Myanmar	Kachin	Byee Lake	1	2004
Myanmar	Kachin	Indaw – Gyi Lake	2	2004
Myanmar	Sagaing	Yemyetkyi Inn	2	2002
Myanmar	Shan	Nadi Kan	2	2002
Myanmar	Shan	Sagar Kan (Connected to Inle Kan)	1	2002
Pakistan	Baluchistan	Aakra River Estuary (on Arabian Sea)	2	2002
Pakistan	Baluchistan	Akara (Kaur) Dam	1	2002
Pakistan	Baluchistan	Saiji Dam	2	2002
Pakistan	Sindh	Charvo Lake	1	2002
Pakistan	Sindh	Haleji Lake	4	2002
Pakistan	Sindh	Hawkes Bay/Sandspit	4	2002
Pakistan	Sindh	Hub Dam	4	2002
Pakistan	Sindh	Keenjhar Lake	6	2002
Pakistan	Sindh	Lungh Lake	8	2003
Pakistan	Sindh	Phoosna	1	2002

### Imperial Eagle *Aquila heliaca* VU

The species was recorded at the following 13 sites.

Country	Region	Site Name	Peak Count	Year
China	Anhui	Sheng Jin Hu	1	2002
China	Hong Kong	Deep Bay	4	2004
India	Gujarat	Bajana Creek – Tandi	1	2003
India	Gujarat	Nani Kakrad	4	2004
India	Uttar Pradesh	Tiger Haven	1	2003
India	West Bengal	Fulbari	1	2004
Republic of Korea	Chungnam	Ganwol Reservoir	1	2002
Malaysia	Johor	Parit Jawa	1	2002
Pakistan	Baluchistan	Aakra River Estuary (on Arabian Sea)	1	2002
Pakistan	Baluchistan	Gwadar Beach	1	2002
Pakistan	Islamabad	Rawal Lake	1	2003
Pakistan	Punjab	Ucchali Wetland Complex: Khabbaki Lake	1	2003
Pakistan	Sindh	Hub Dam	2	2002

### 3.6.29 Kingfishers

Population figures for most of the kingfishers in Asia are unknown, therefore it was not possible to identify the internationally important sites according to the 1% criterion. Maps for the following species are given in section 3.6.30.

#### White-throated Kingfisher *Halcyon smyrnensis*

This is the most common kingfisher species, recorded at 480 sites within the range of the AWC.

#### Black-capped Kingfisher *Halcyon pileata*

The species is restricted to South, East and Southeast Asia. It was recorded at a total of 40 sites.

#### Collared Kingfisher *Todiramphus chloris*

This is mainly a coastal species, recorded at 30 sites.

#### Common Kingfisher *Alcedo atthis*

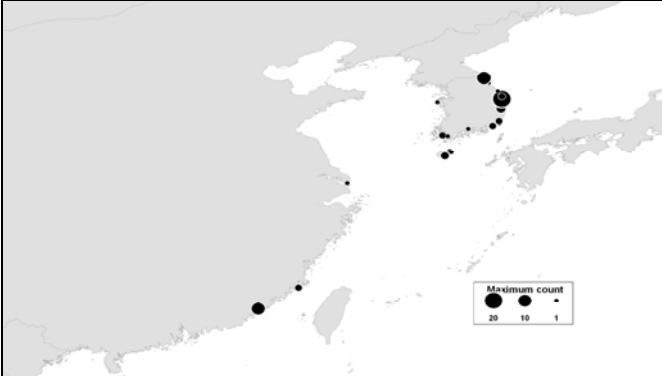
This is a common species, recorded at 354 sites.

#### Pied Kingfisher *Ceryle rudis*

The species is restricted to South, East and Southeast Asia. It was recorded at a total of 296 sites.

3.6.30 Distribution maps of the selected species

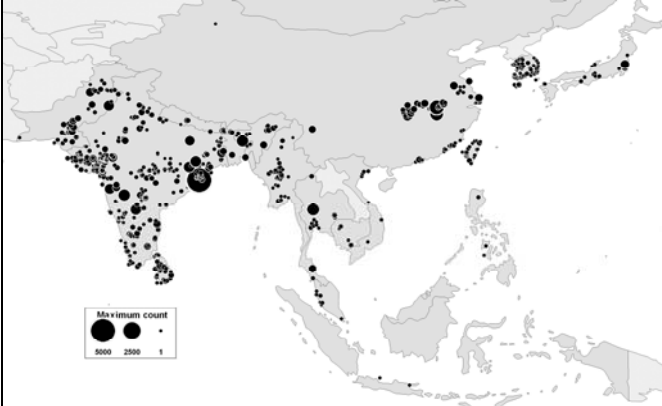
Red-throated (Diver) Loon *Gavia stellata*



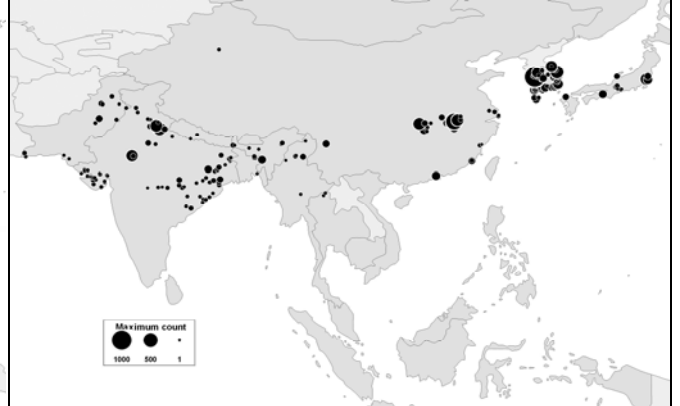
Pacific Diver *Gavia pacifica*



Little Grebe *Tachybaptus ruficollis*



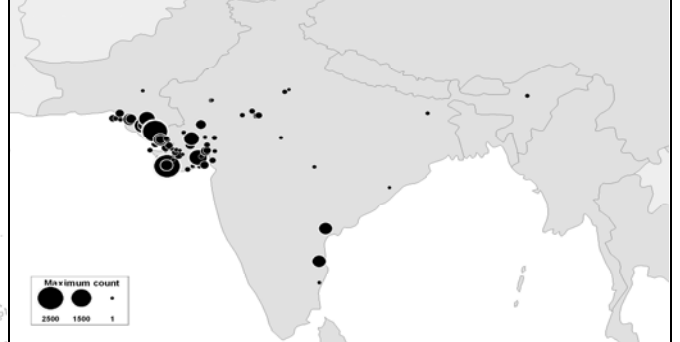
Great Crested Grebe *Podiceps cristatus*



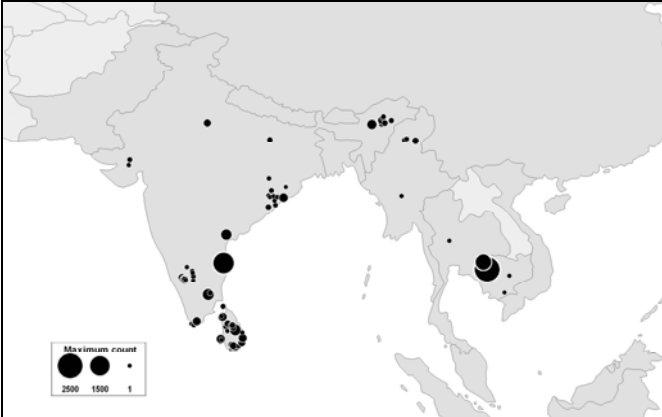
Black-necked Grebe *Podiceps nigricollis*



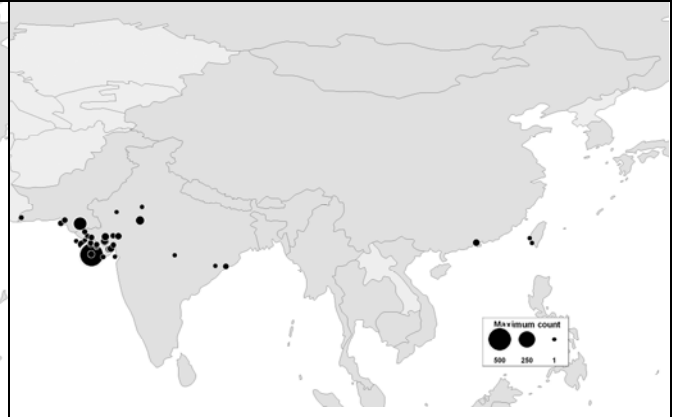
Great White Pelican *Pelecanus onocrotalus*



Spot-billed Pelican *Pelecanus philippensis* VU

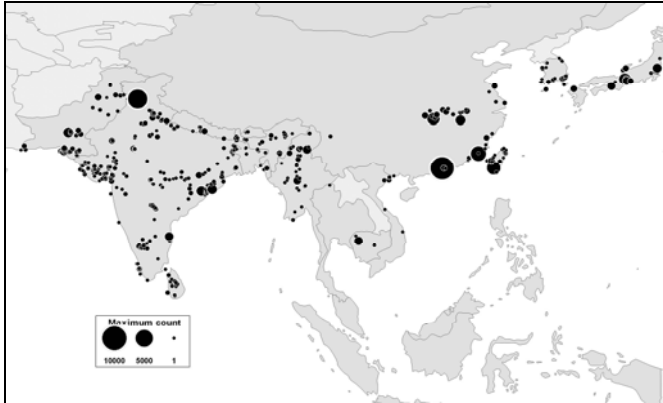


Dalmatian Pelican *Pelecanus crispus* VU

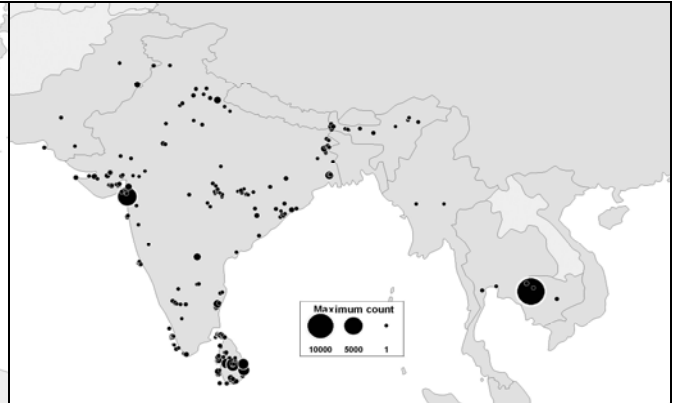




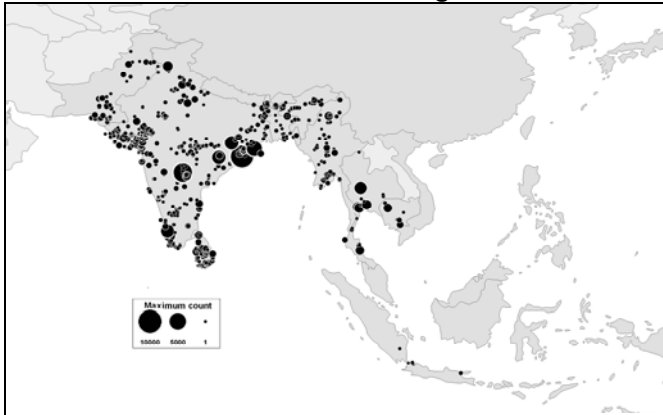
**Great Cormorant *Phalacrocorax carbo***



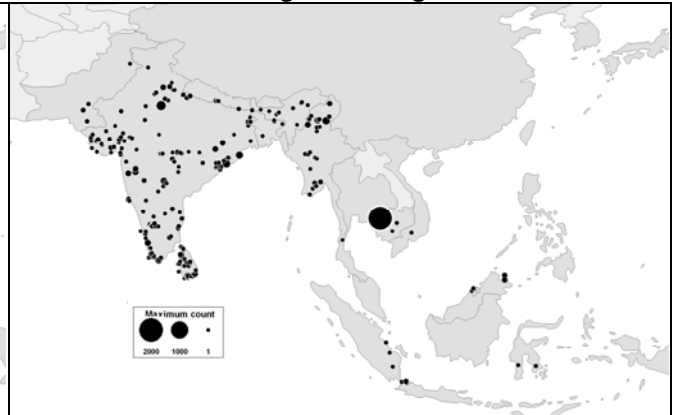
**Indian Cormorant *Phalacrocorax fuscicollis***



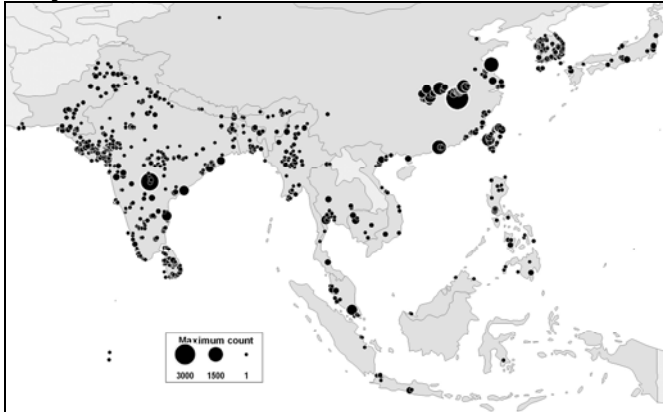
**Little Cormorant *Phalacrocorax niger***



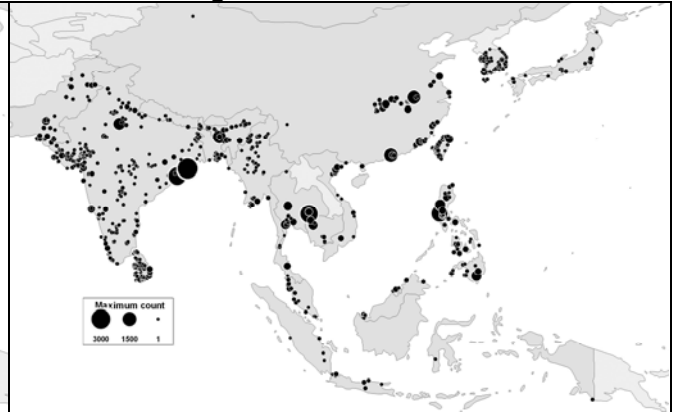
**Oriental Darter *Anhinga melanogaster***



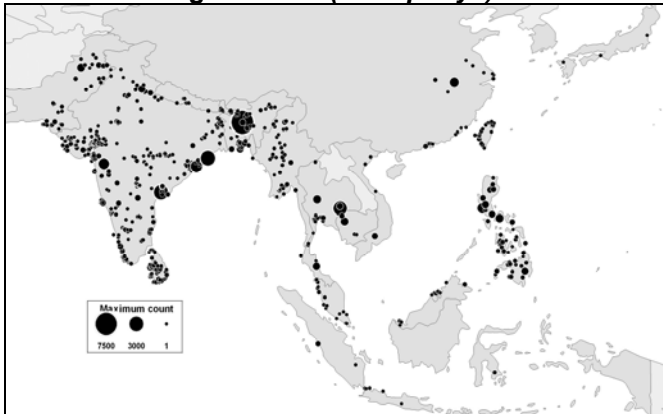
**Grey Heron *Ardea cinerea***



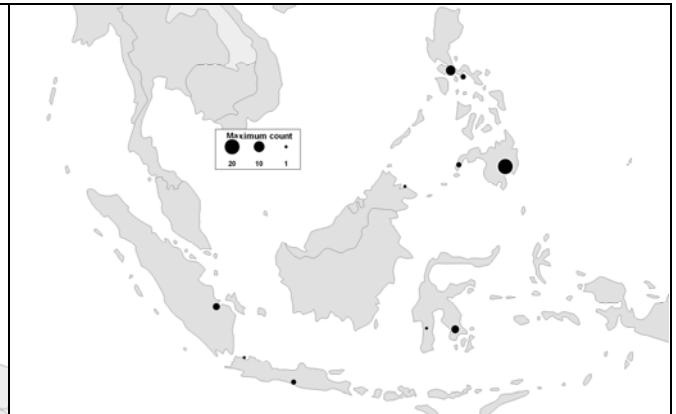
**Eastern Great Egret *Ardea modesta***



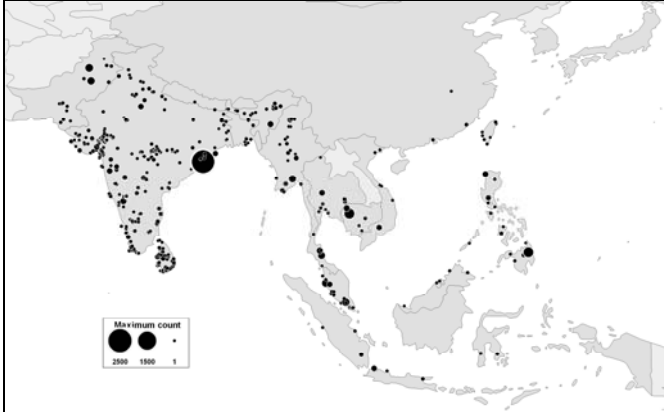
**Intermediate Egret *Ardea (Mesophoyx) intermedia***



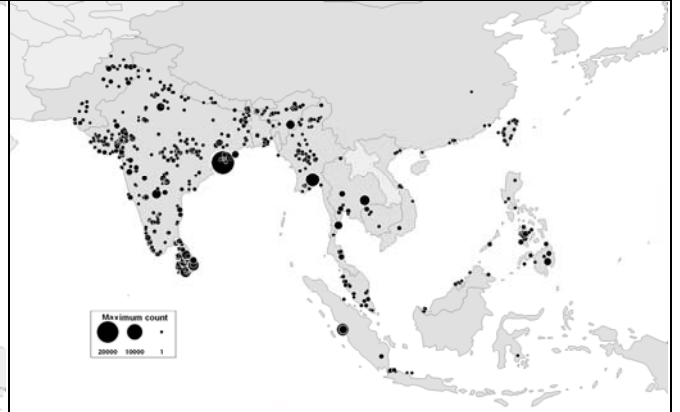
**Great-billed Heron *Ardea sumatrana***



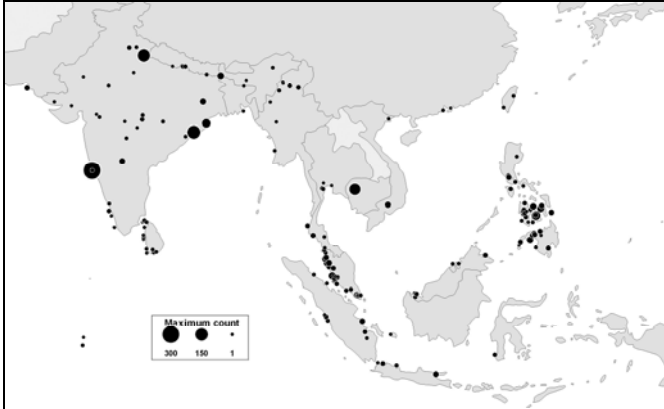
Purple Heron *Ardea purpurea*



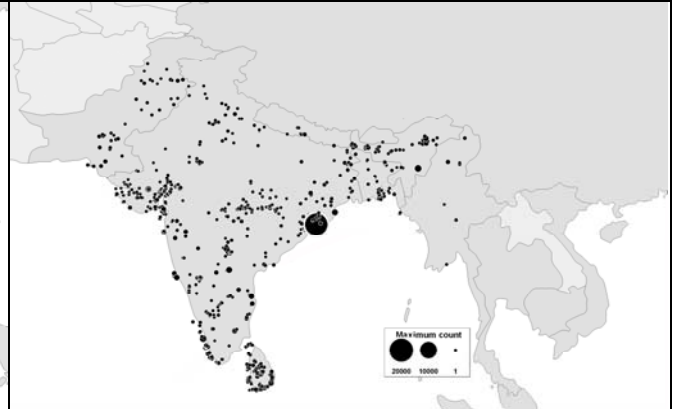
Cattle Egret *Ardea (Bubulcus) ibis*



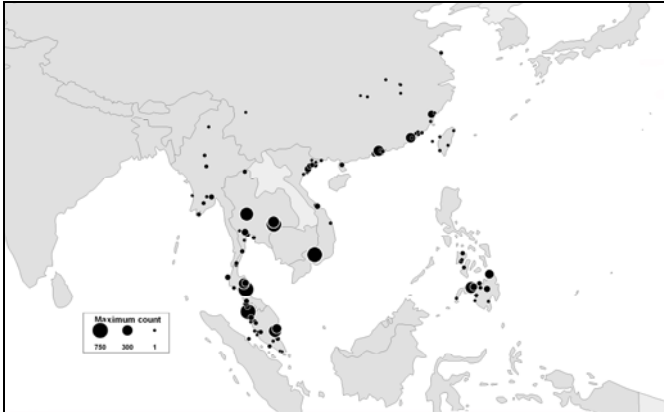
Striated Heron *Butorides striata*



Indian Pond-Heron *Ardeola grayii*



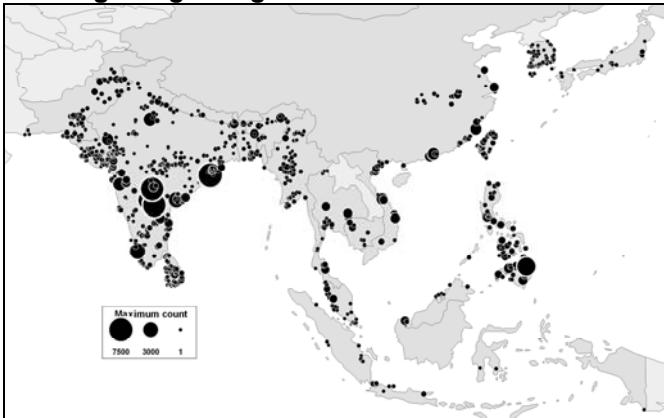
Chinese Pond-Heron *Ardeola bacchus*



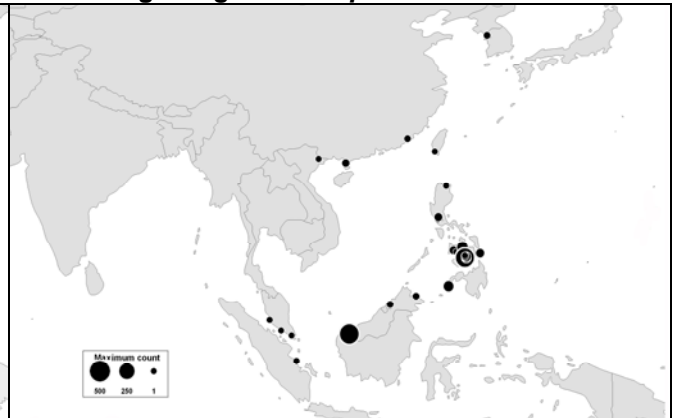
Javan Pond-Heron *Ardeola speciosa*



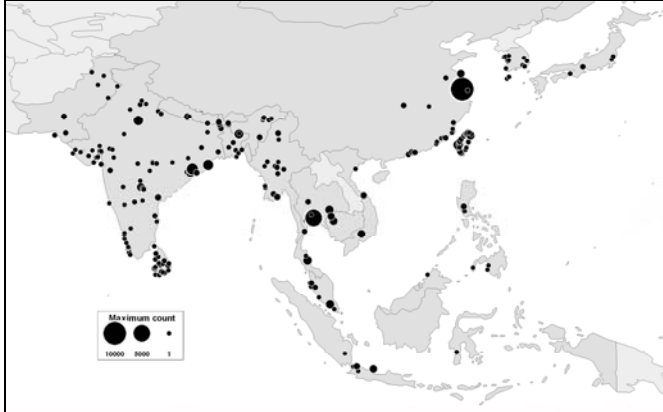
Little Egret *Egretta garzetta*



Chinese Egret *Egretta eulophotes* VU



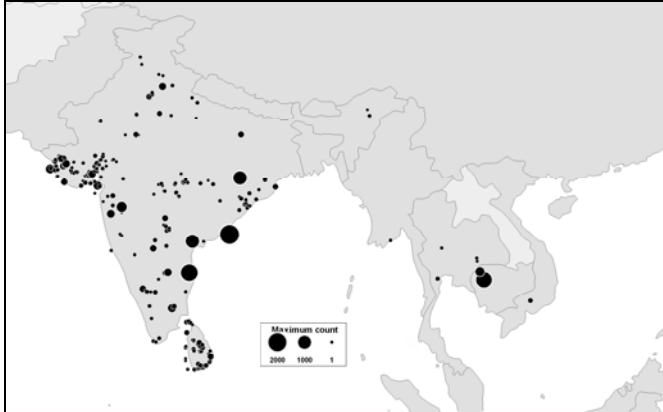
**Black-crowned Night-Heron *Nycticorax nycticorax***



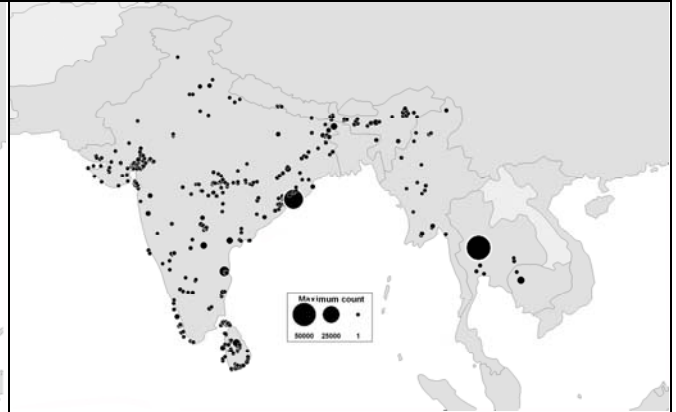
**Milky Stork *Mycteria cinerea* VU**



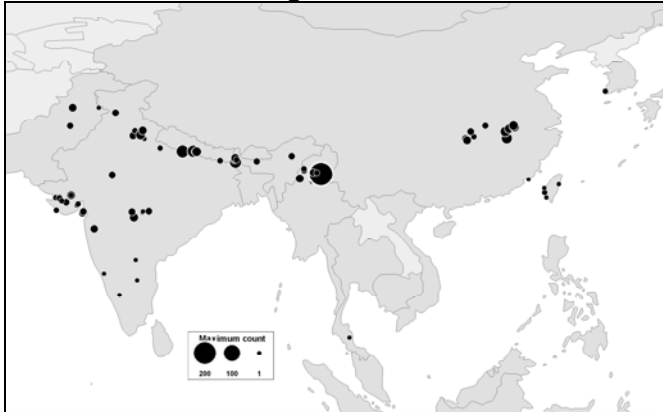
**Painted Stork *Mycteria leucocephala* NT**



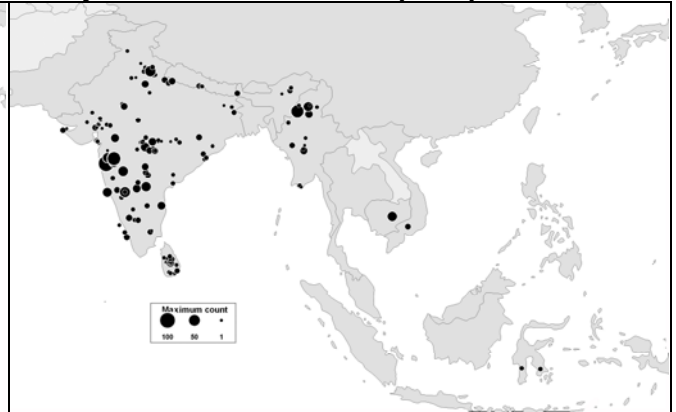
**Asian Openbill *Anastomus oscitans***



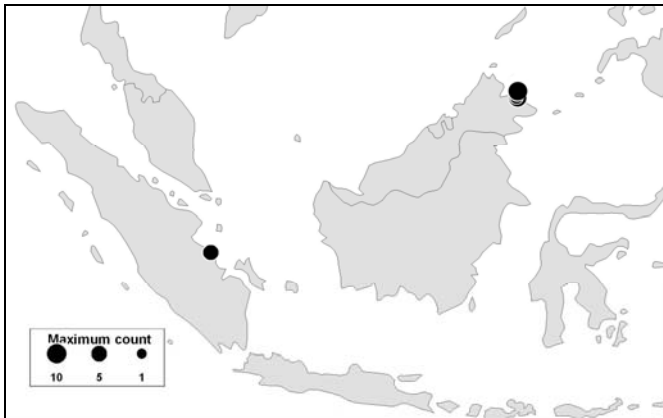
**Black Stork *Ciconia nigra***



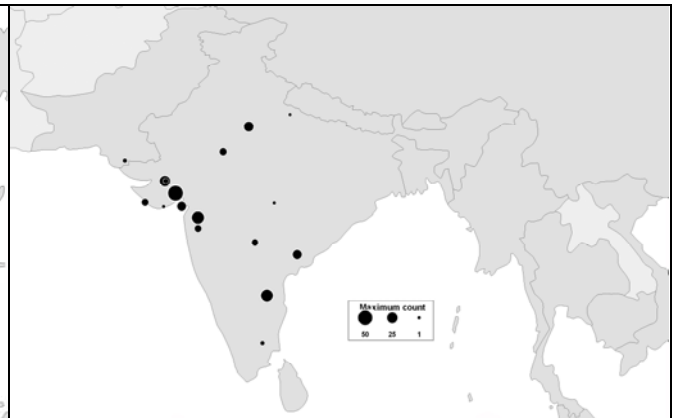
**Woolly-necked Stork *Ciconia episcopus***



**Storm's Stork *Ciconia stormi* EN**



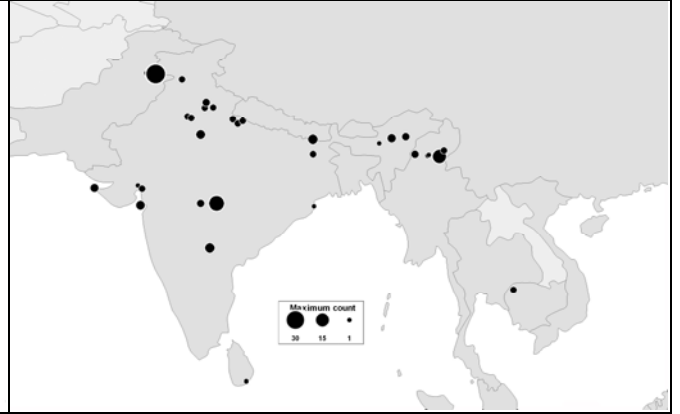
**Eurasian White Stork *Ciconia ciconia***



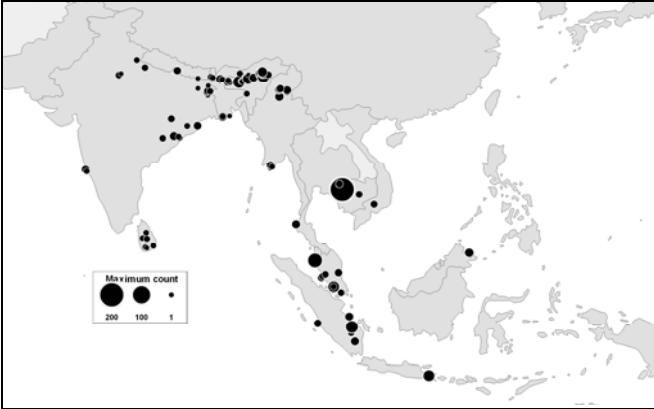
**Oriental (White) Stork *Ciconia boyciana* EN**



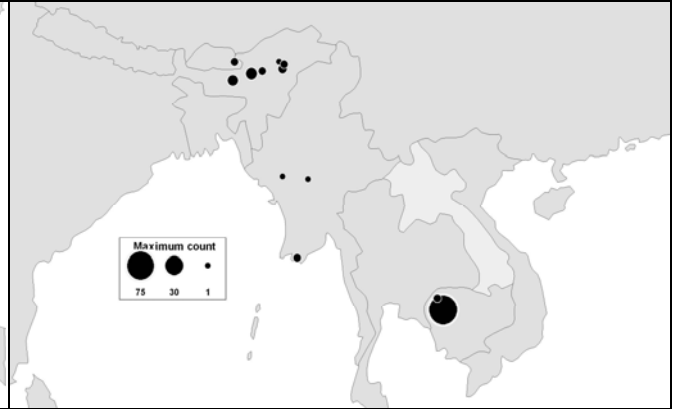
**Black-necked Stork *Ephippiorhynchus asiaticus* NT**



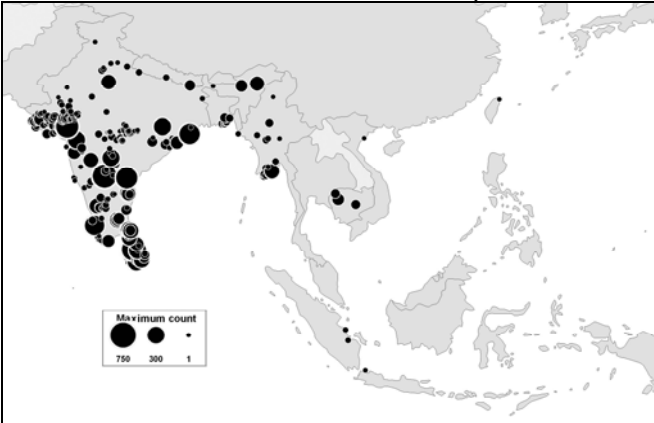
**Lesser Adjutant *Leptoptilos javanicus* VU**



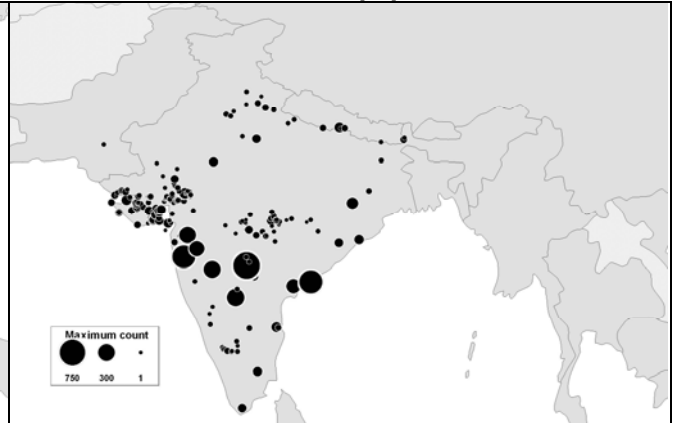
**Greater Adjutant *Leptoptilos dubius* EN**



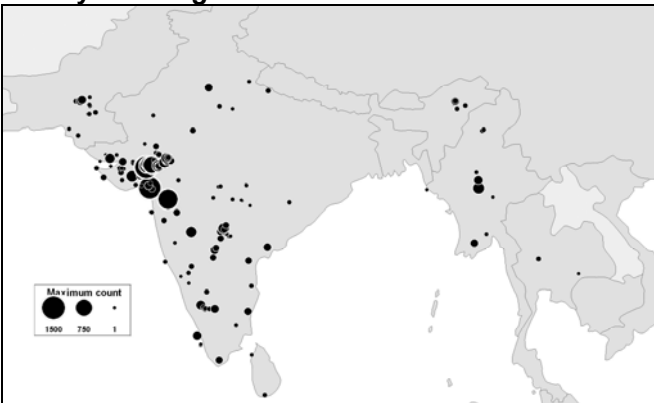
**Black-headed Ibis *Threskiornis melanocephalus* NT**



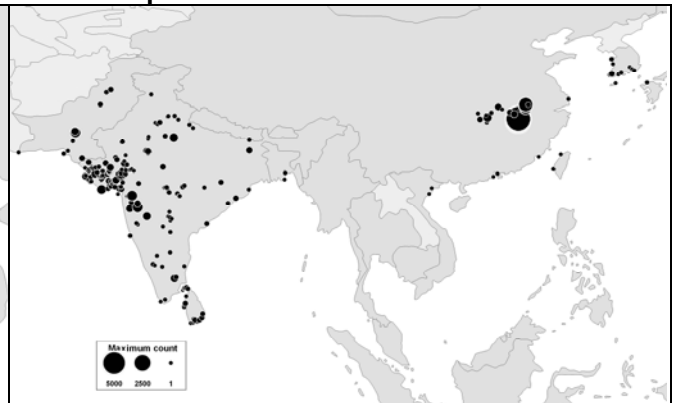
**Indian Black Ibis *Pseudibis papillosa***



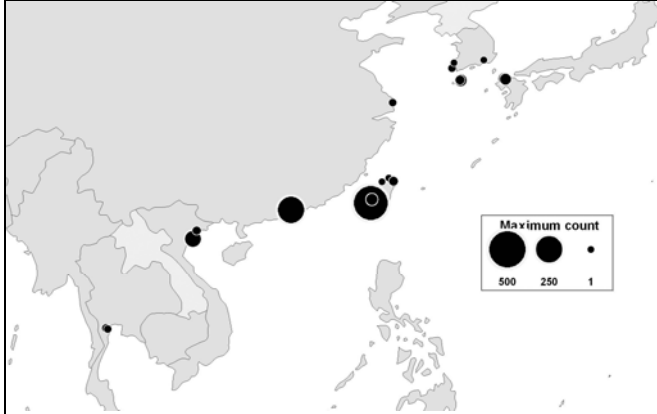
**Glossy Ibis *Plegadis falcinellus***



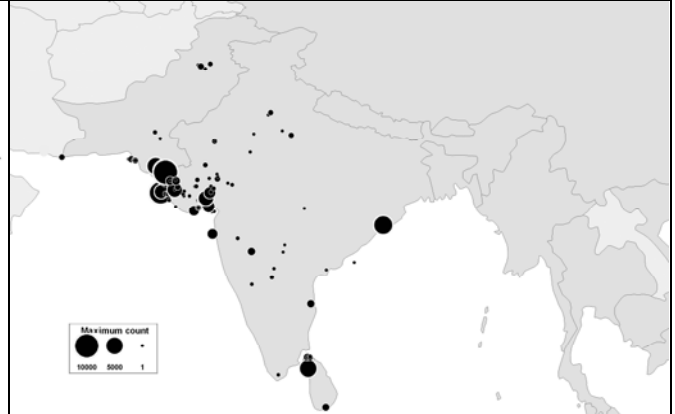
**Eurasian Spoonbill *Platalea leucorodia***



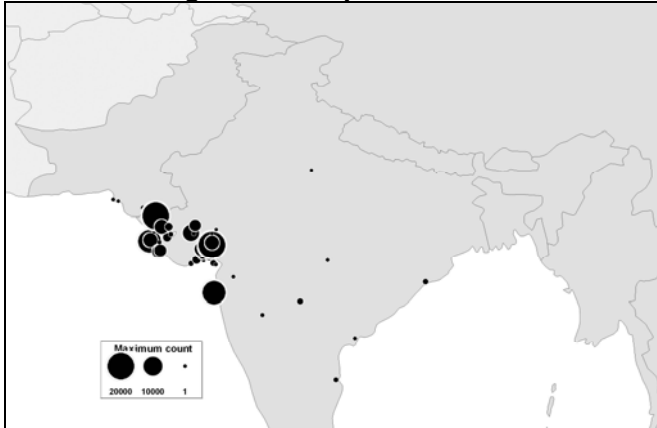
**Black-faced Spoonbill *Platalea minor* EN**



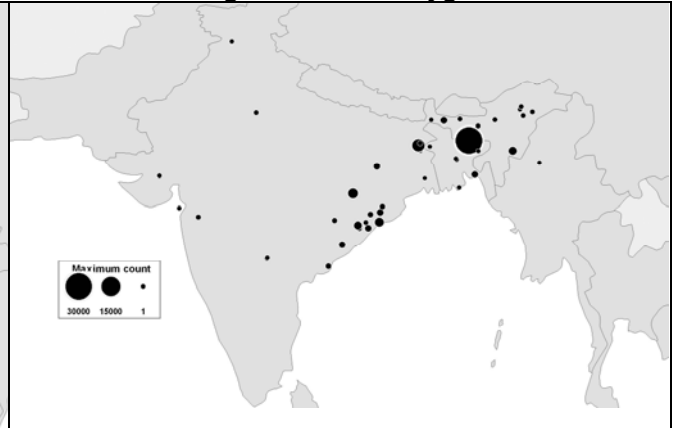
**Greater Flamingo *Phoenicopterus roseus***



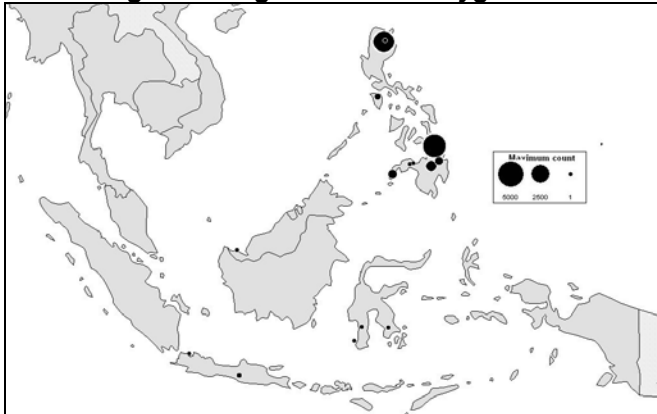
**Lesser Flamingo *Phoenicopterus minor* NT**



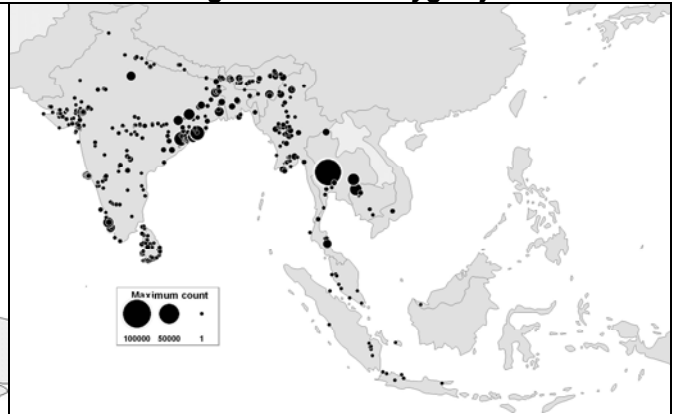
**Fulvous Whistling Duck *Dendrocygna bicolor***



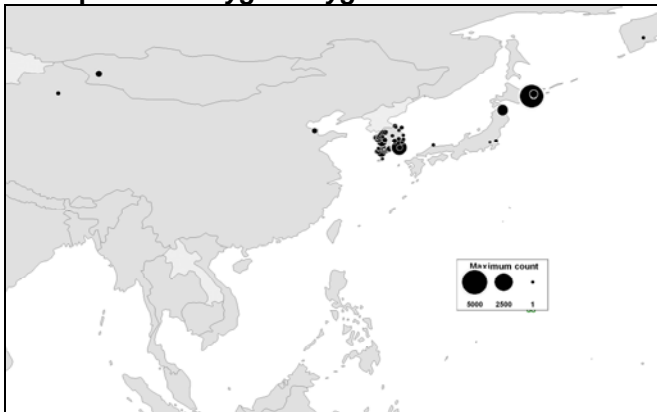
**Wandering Whistling Duck *Dendrocygna arcuata***



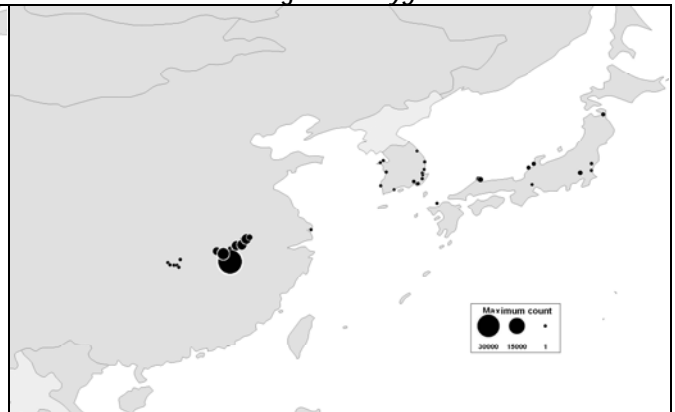
**Lesser Whistling Duck *Dendrocygna javanica***



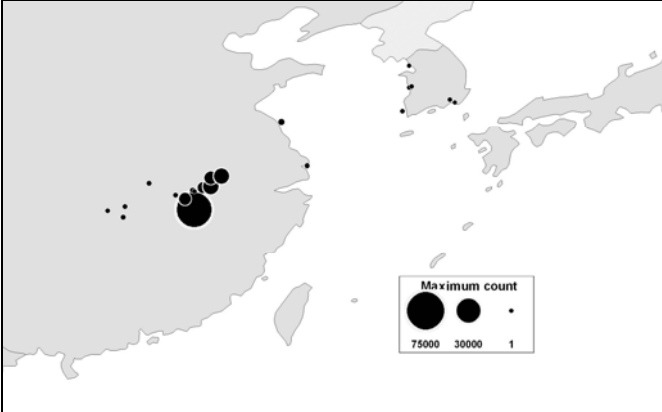
**Whooper Swan *Cygnus cygnus***



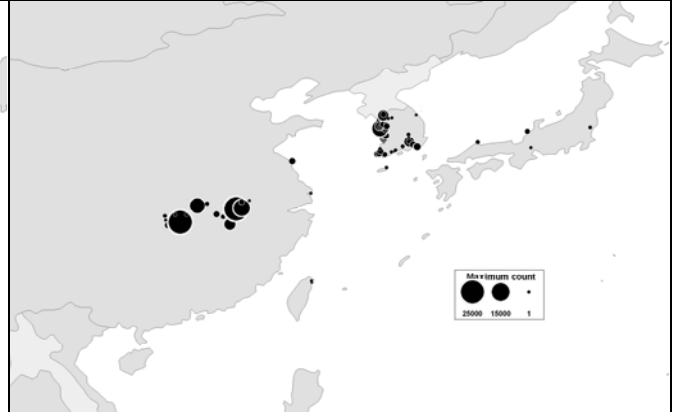
**Tundra Swan "Whistling Swan" *Cygnus columbianus***



**Swan Goose *Anser cygnoides* EN**



**Bean Goose *Anser fabalis***



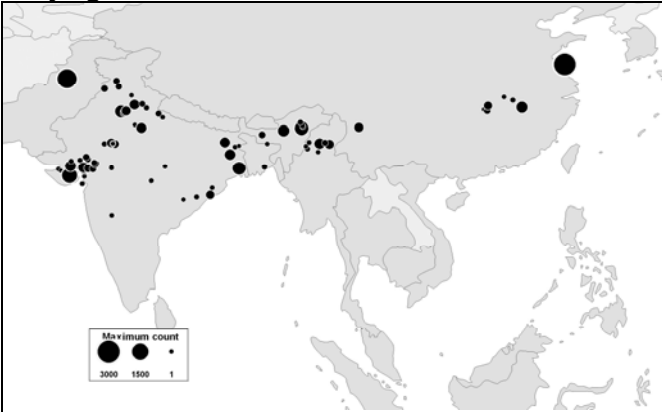
**Greater White-fronted Goose *Anser albifrons***



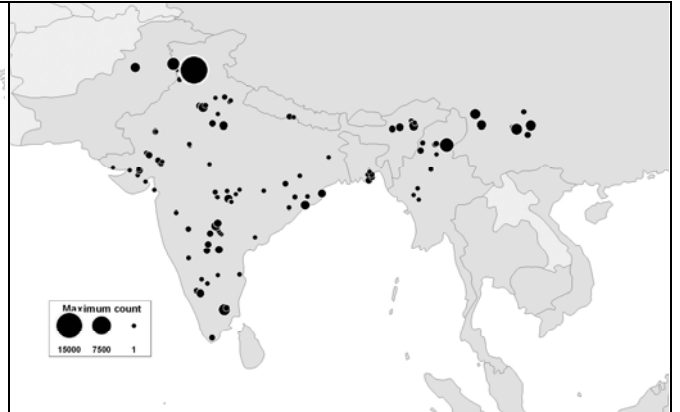
**Lesser White-fronted Goose *Anser erythropus* VU**



**Greylag Goose *Anser anser***



**Bar-headed Goose *Anser indicus***



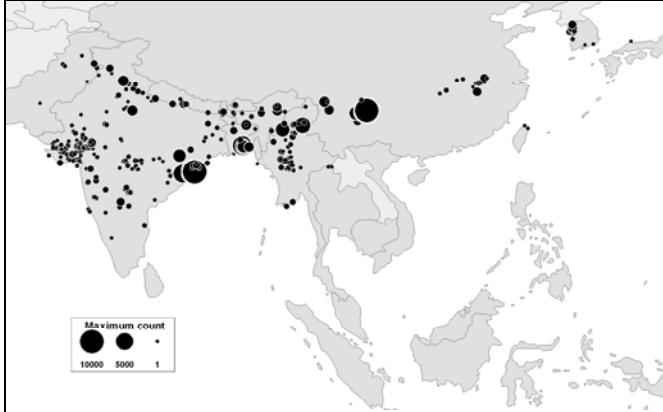
**Lesser Snow Goose *Chen (Anser) caerulescens***



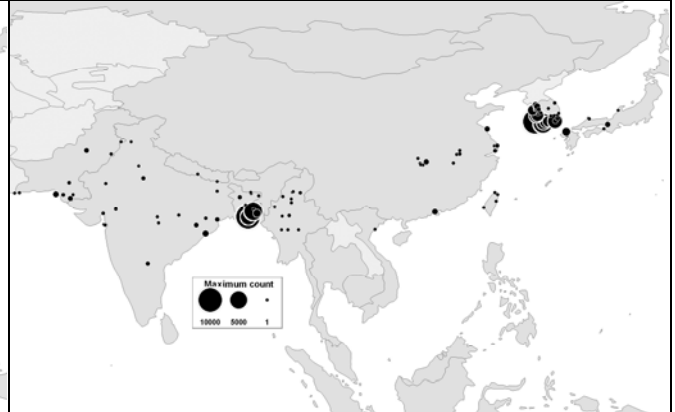
**Brent Goose *Branta bernicla***



**Ruddy Shelduck *Tadorna ferruginea***



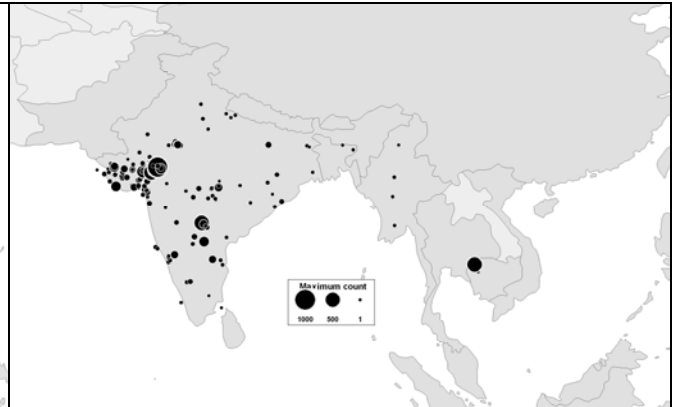
**Common Shelduck *Tadorna tadorna***



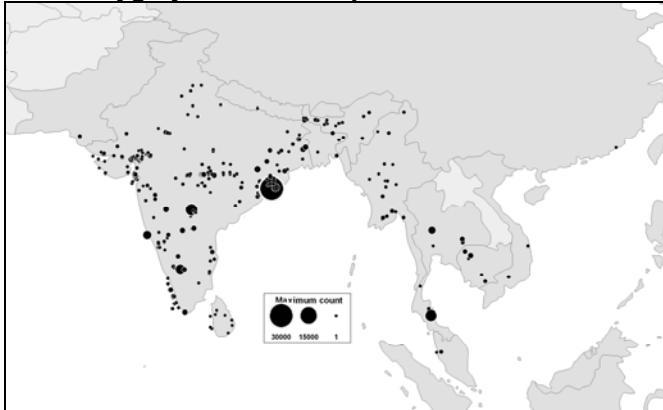
**White-winged Duck *Cairina scutulata* EN**



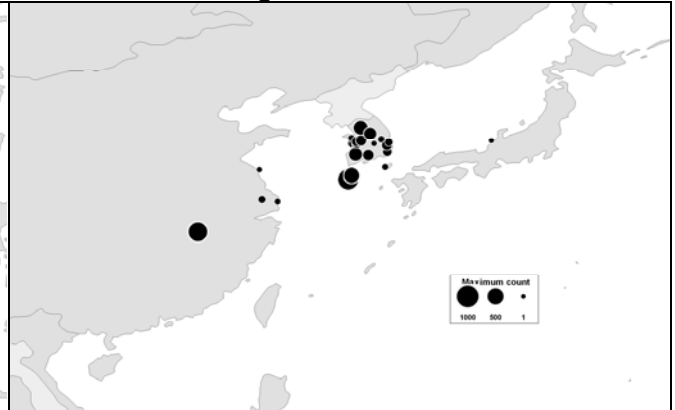
**Comb Duck *Sarkidiornis melanotos***



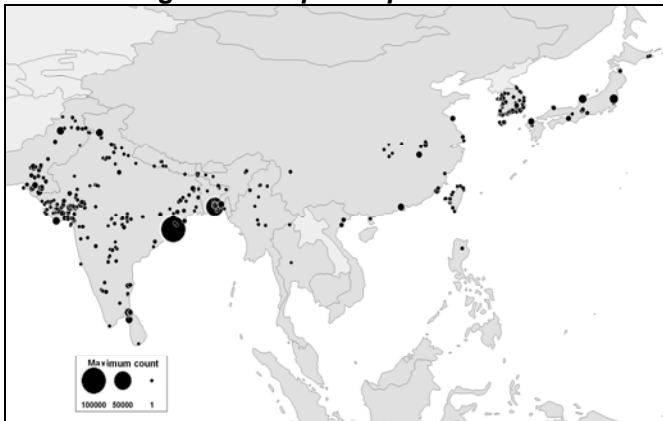
**Cotton Pygmy-Goose *Nettapus coromandelianus***



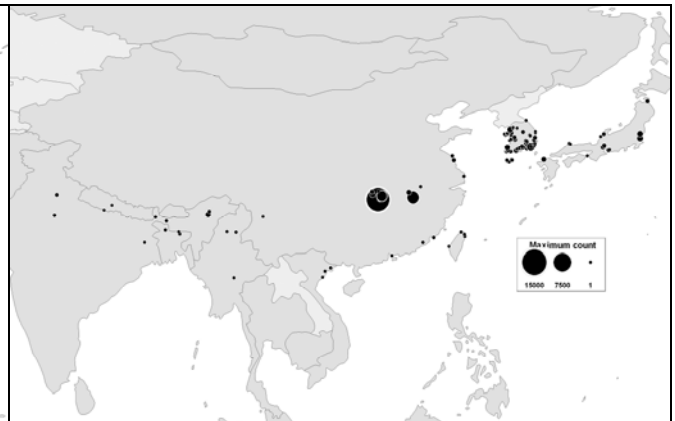
**Mandarin Duck *Aix galericulata***



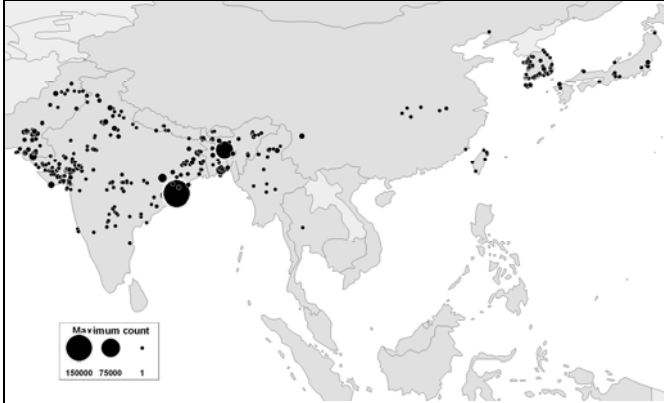
**Eurasian Wigeon *Anas penelope***



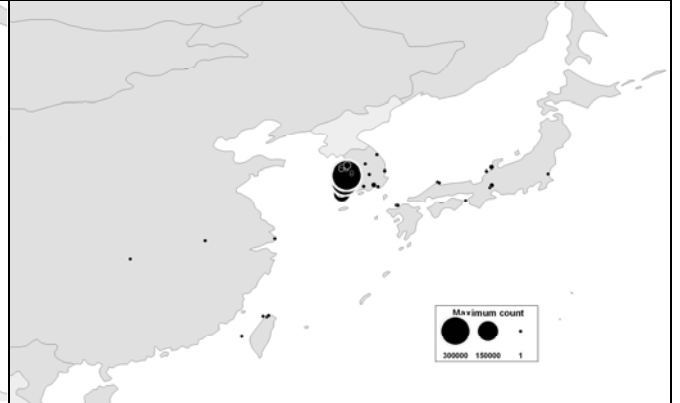
**Falcated Duck *Anas falcata* NT**



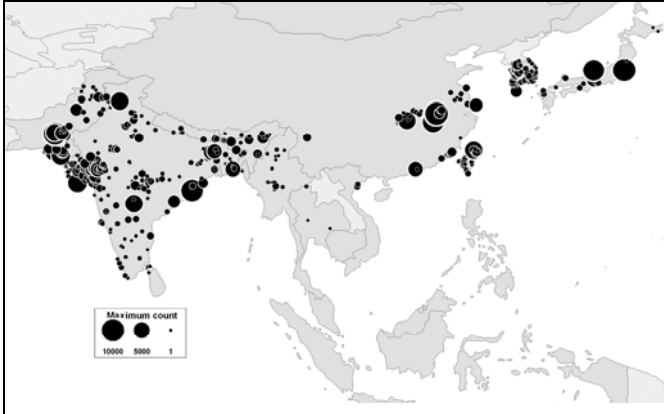
**Gadwall *Anas strepera***



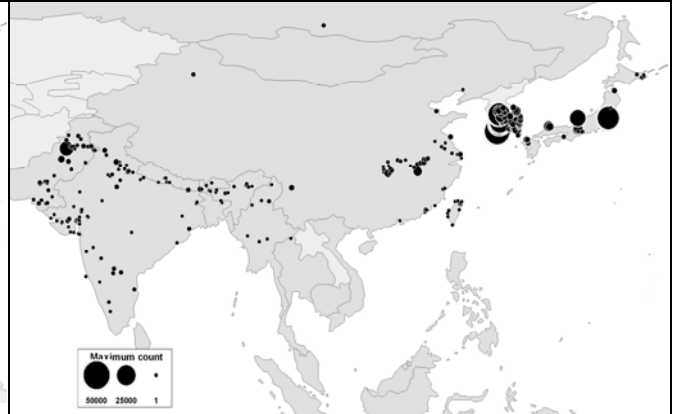
**Baikal Teal *Anas formosa* VU**



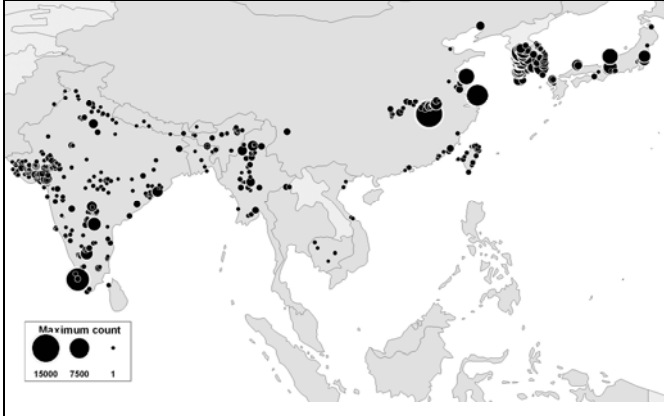
**Common Teal *Anas crecca***



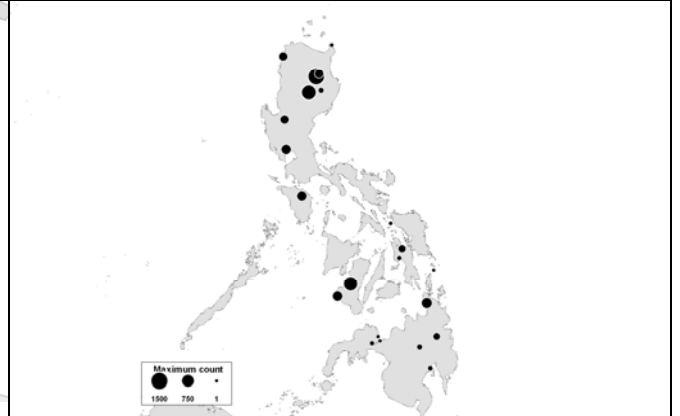
**Mallard *Anas platyrhynchos***



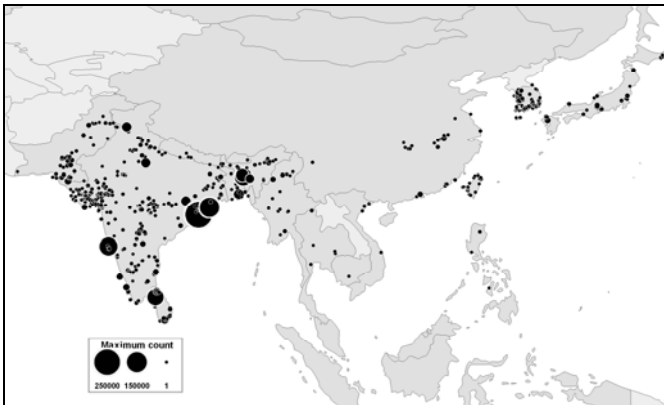
**Spot-billed Duck *Anas poecilorhyncha***



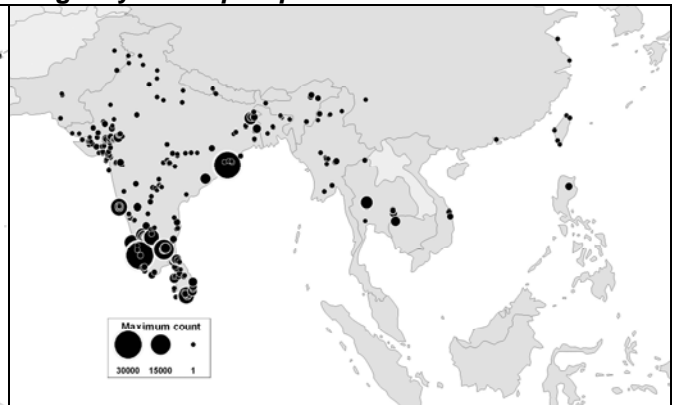
**Philippine Duck *Anas luzonica* VU**



**Northern Pintail *Anas acuta***

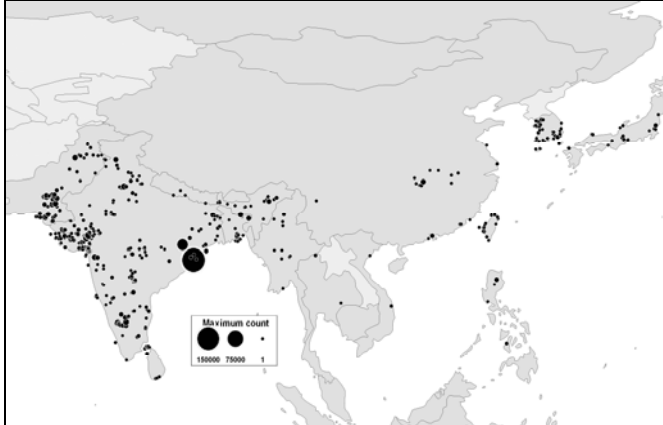


**Garganey *Anas querquedula***

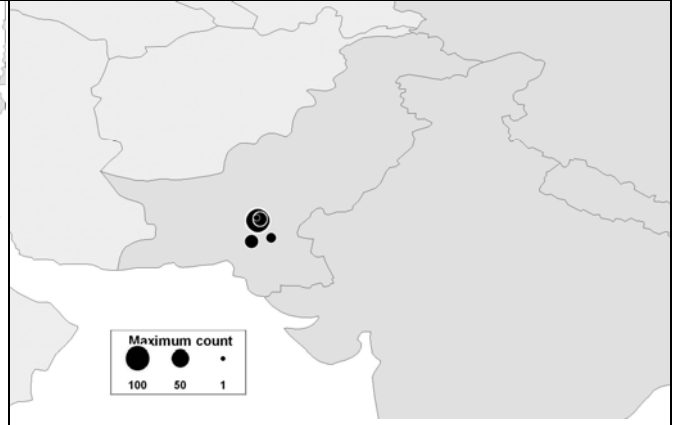




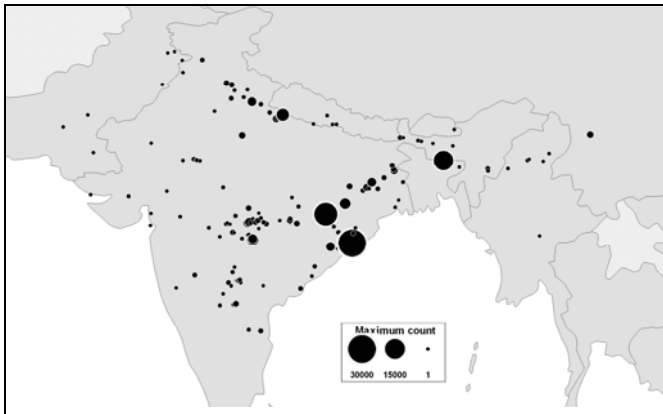
**Northern Shoveler *Anas clypeata***



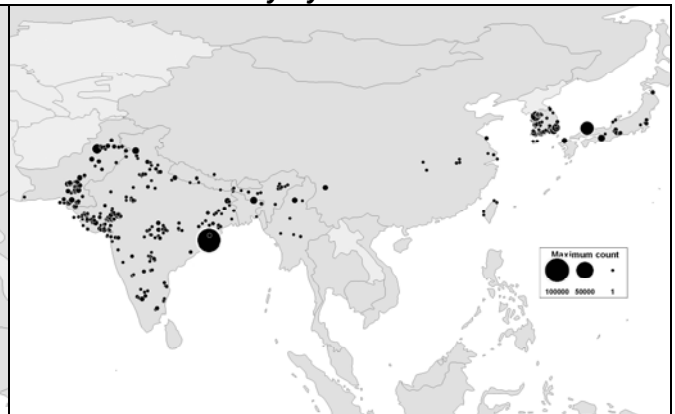
**Marbled Teal *Marmaronetta angustirostris* VU**



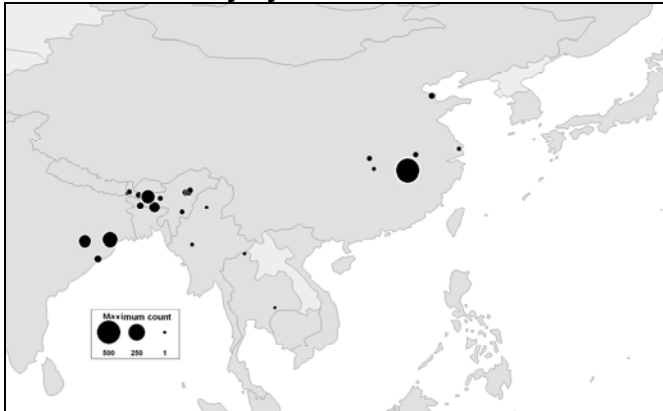
**Red-crested Pochard *Netta rufina***



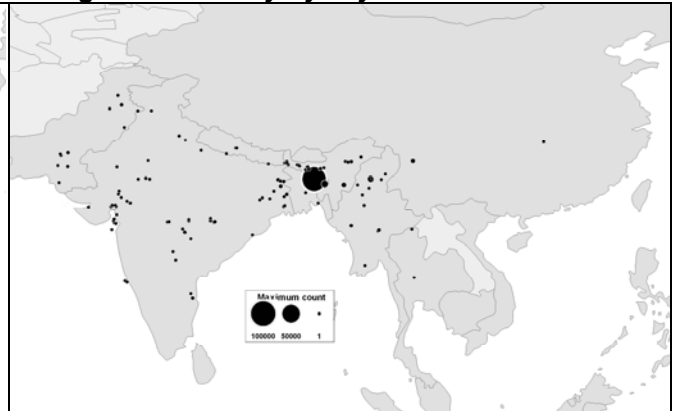
**Common Pochard *Aythya ferina***



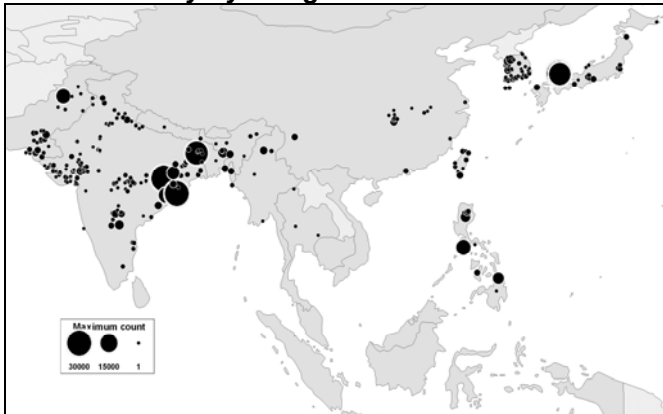
**Baer's Pochard *Aythya baeri* VU**



**Ferruginous Duck *Aythya nyroca* NT**



**Tufted Duck *Aythya fuligula***



**Greater Scaup *Aythya marila***



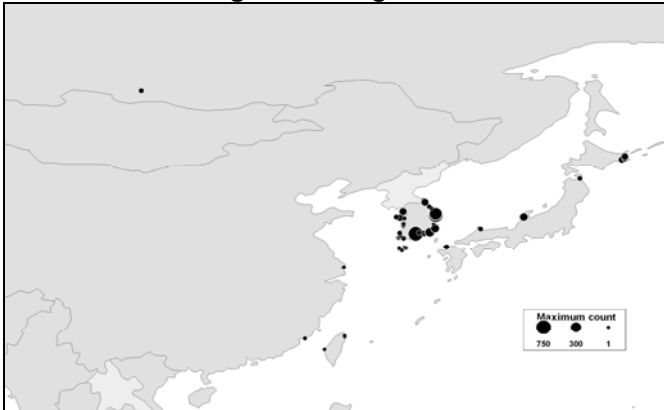
**Common Goldeneye *Bucephala clangula***



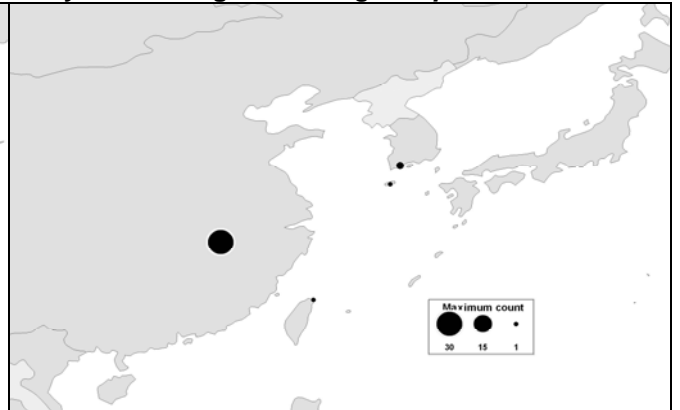
**Smew *Mergellus albellus***



**Red-breasted Merganser *Mergus serrator***



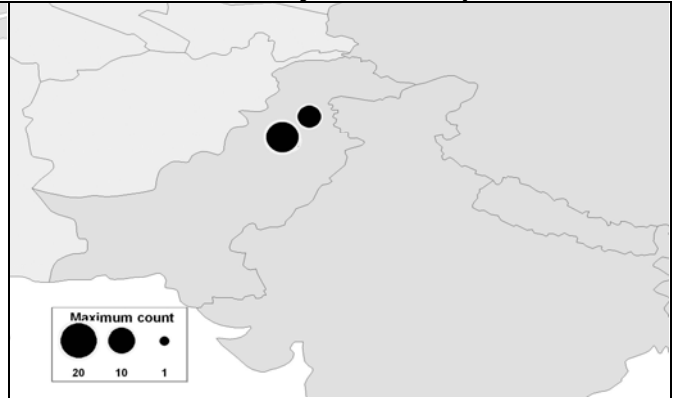
**Scaly-sided Merganser *Mergus squamatus* EN**



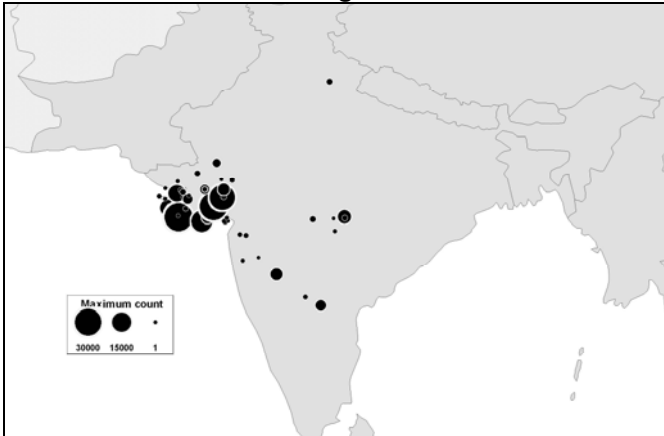
**Goosander *Mergus merganser***



**White-headed Duck *Oxyura leucocephala* EN**



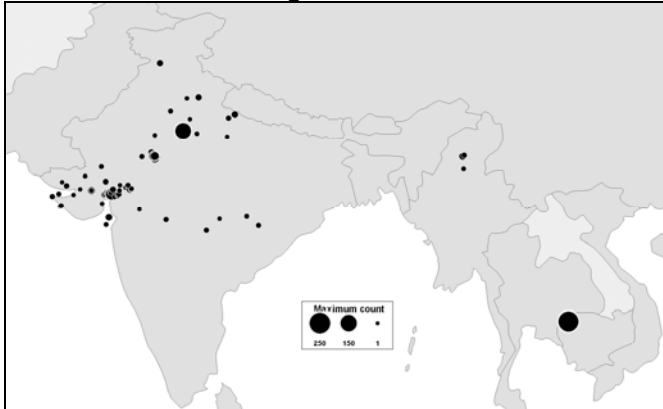
**Demoiselle Crane *Grus virgo***



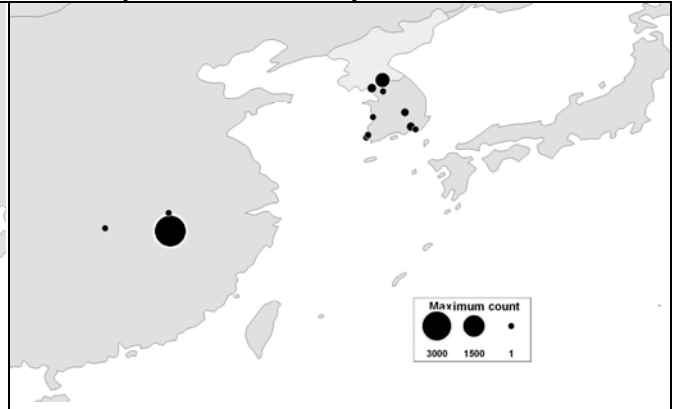
**Siberian Crane *Grus leucogeranus* CR**



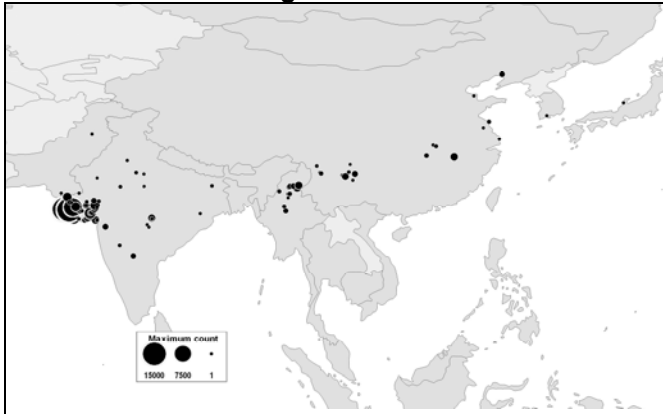
**Sarus Crane *Grus antigone* VU**



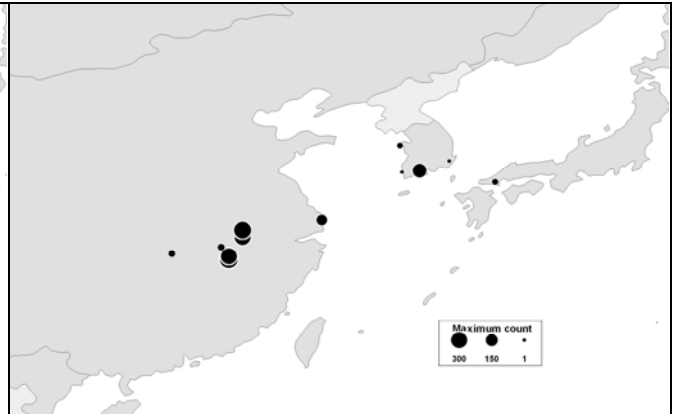
**White-naped Crane *Grus vipio* VU**



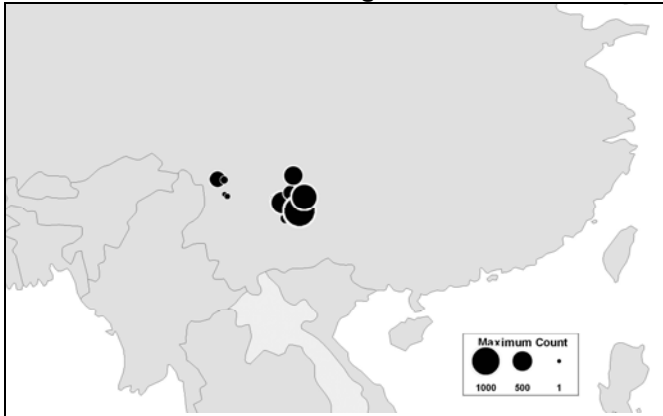
**Common Crane *Grus grus***



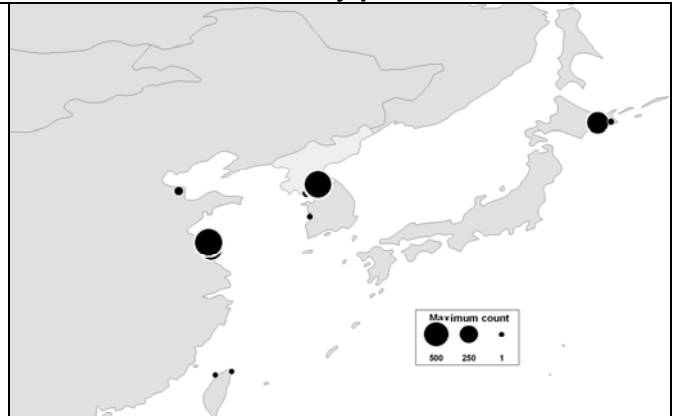
**Hooded Crane *Grus monacha* VU**



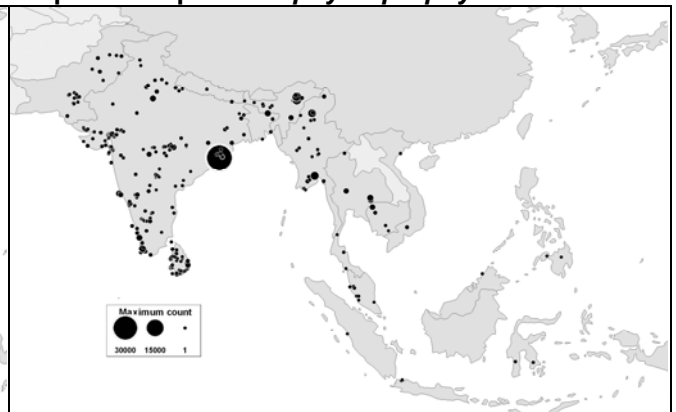
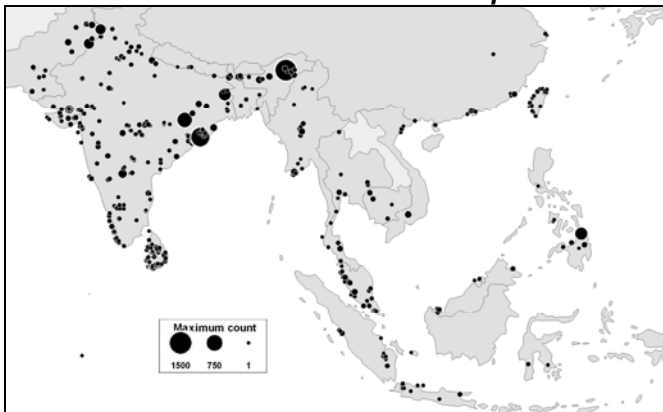
**Black-necked Crane *Grus nigricollis* VU**



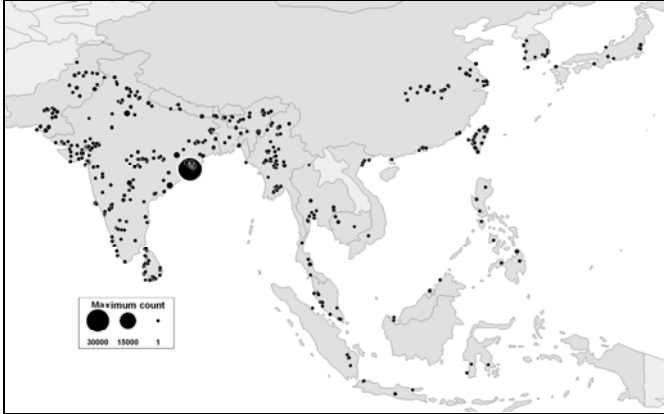
**Red-crowned Crane *Grus japonensis* EN**



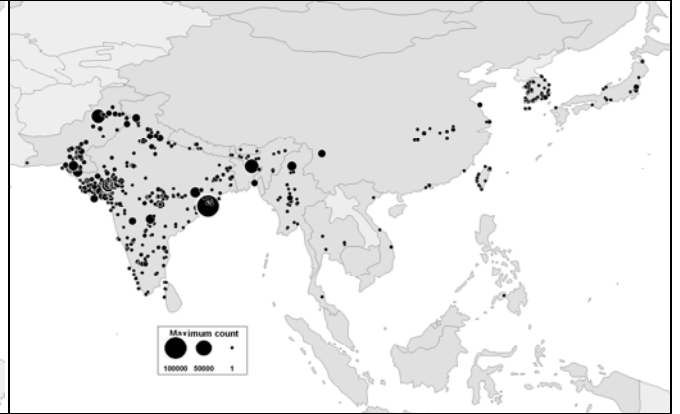
**White-breasted Waterhen *Amaurornis phoenicurus* Purple Swamphen *Porphyrio porphyrio***



**Common Moorhen *Gallinula chloropus***



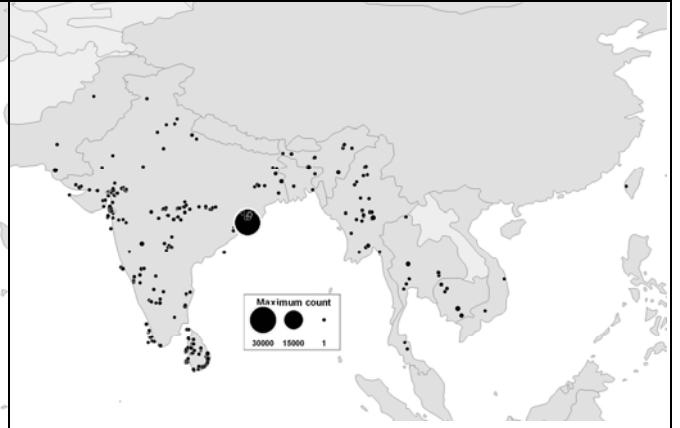
**Common Coot *Fulica atra***



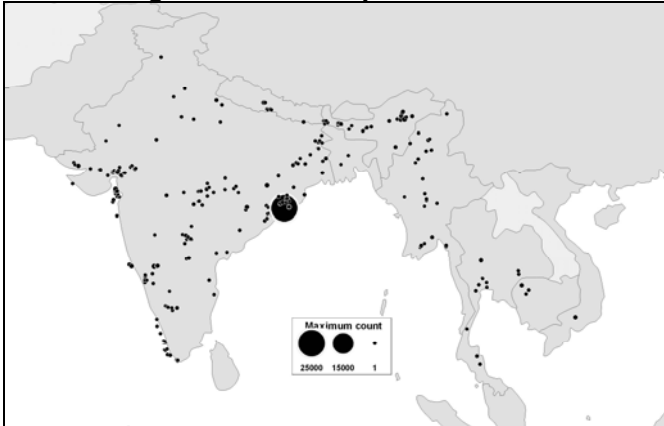
**Masked Finfoot *Heliopais personata* VU**



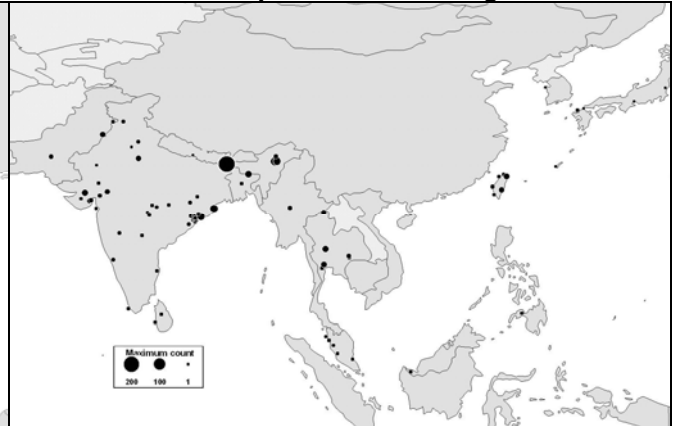
**Pheasant-tailed Jacana *Hydrophasianus chirurgus***



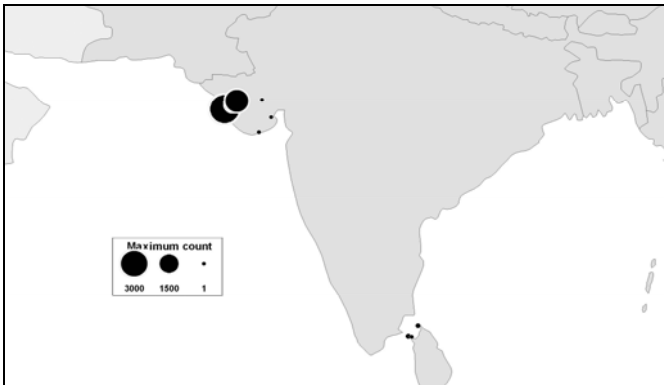
**Bronze-winged Jacana *Metopidius indicus***



**Greater Painted-Snipe *Rostratula benghalensis***



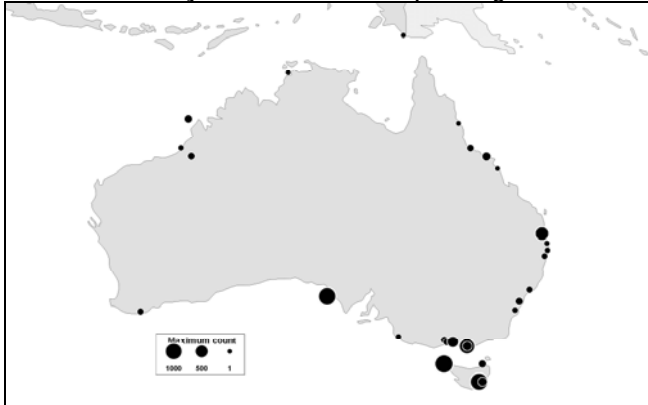
**Crab Plover *Dromas ardeola***



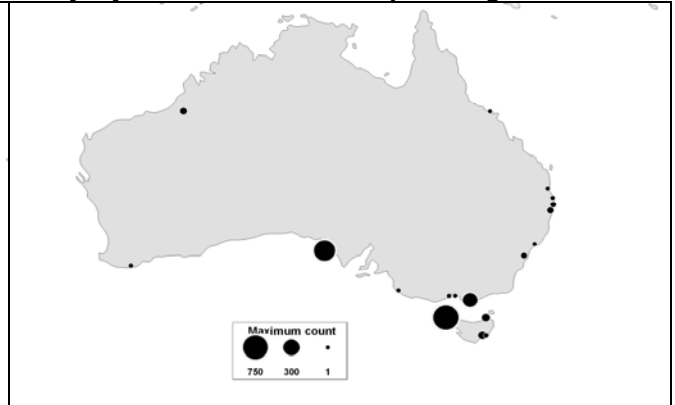
**Eurasian Oystercatcher *Haematopus ostralegus***



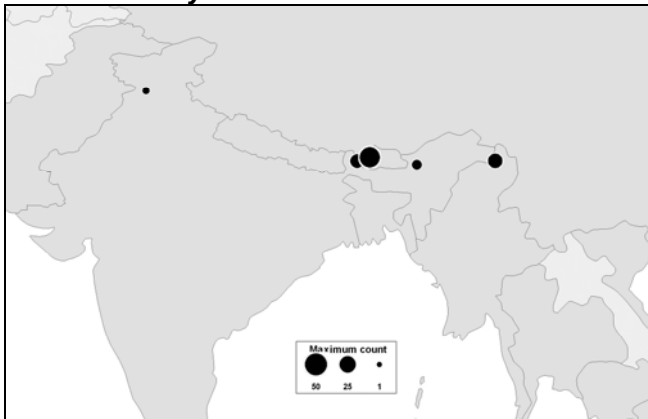
**Australian Pied Oystercatcher *Haematopus longirostris***



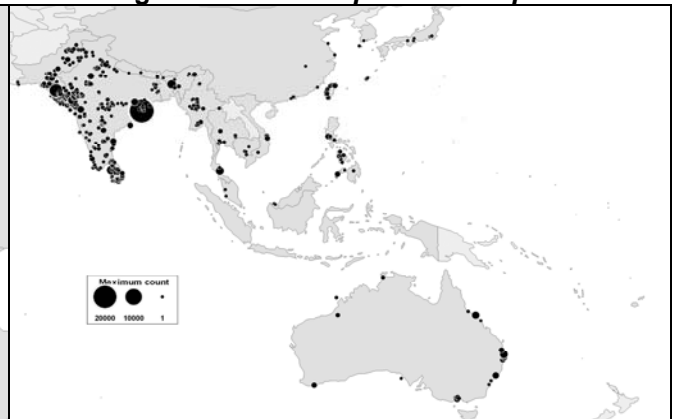
**Sooty Oystercatcher *Haematopus fuliginosus***



**Ibisbill *Ibidorhyncha struthersii***



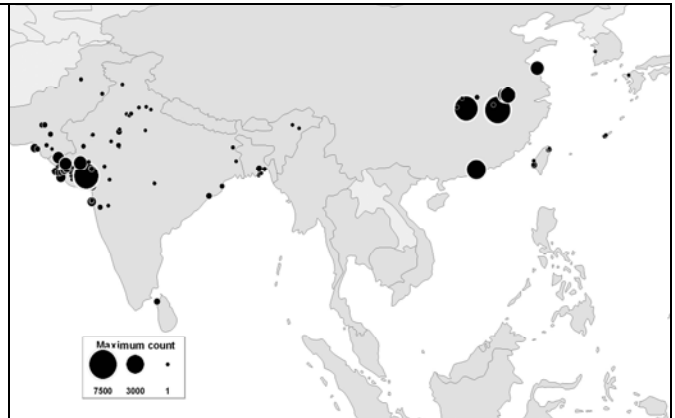
**Black-winged Stilt *Himantopus himantopus***



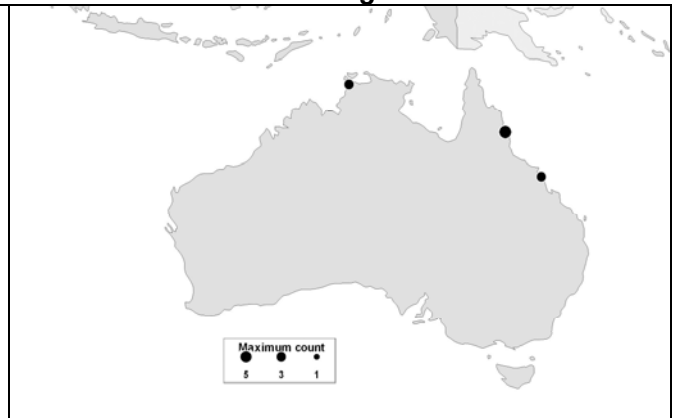
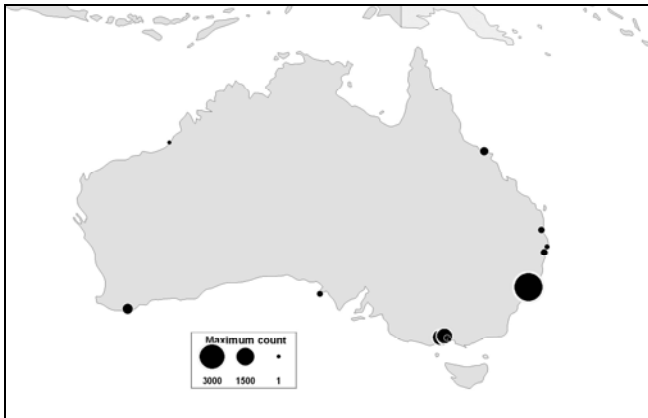
**Banded Stilt *Cladorhynchus leucocephalus***



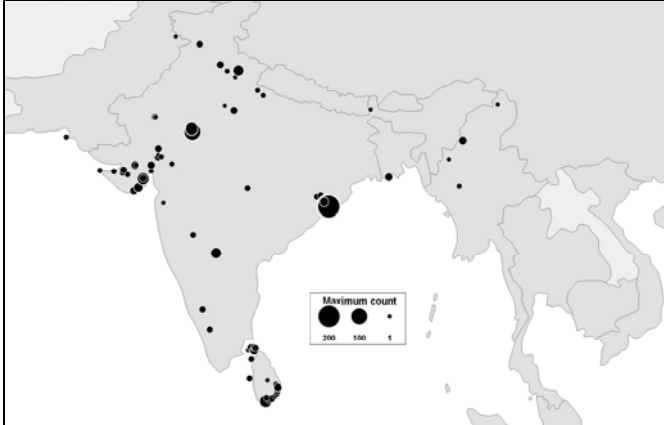
**Pied Avocet *Recurvirostra avosetta***



**Red-necked Avocet *Recurvirostra novaehollandiae* Bush Thick-Knee *Burhinus grallarius* NT**



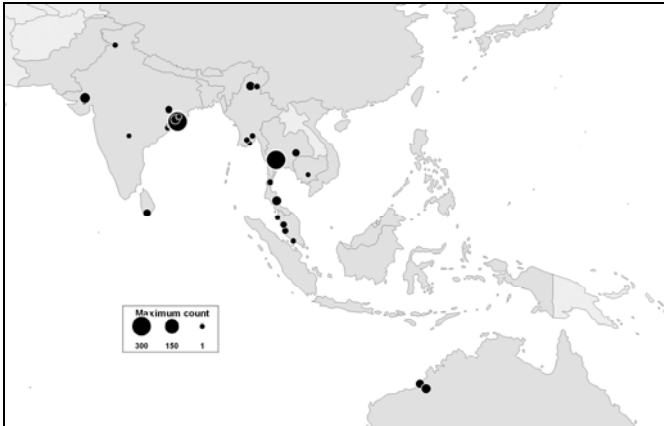
**Great Thick-Knee *Burhinus (Esacus) recurvirostris***



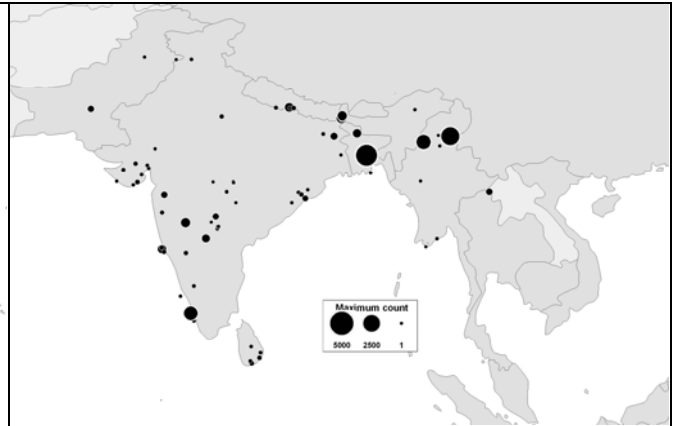
**Beach Thick-Knee *Burhinus gigantea (Esacus magnirostris)* NT**



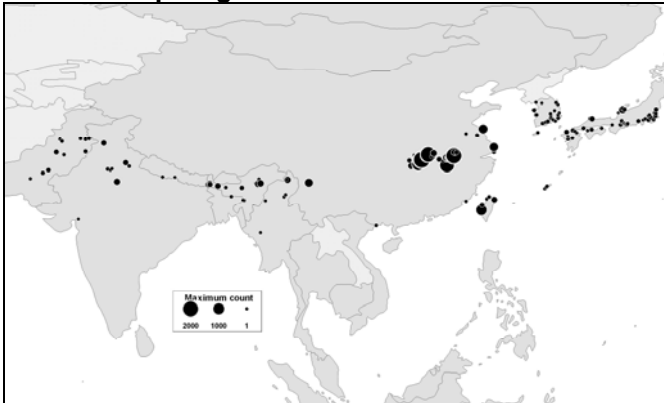
**Oriental Pratincole *Glareola maldivarum***



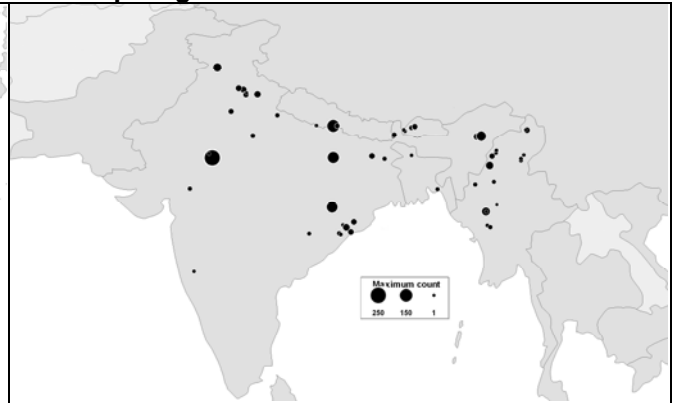
**Small Pratincole *Glareola lactea***



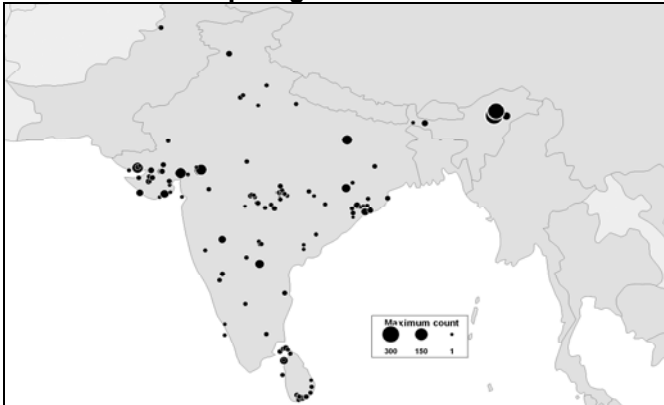
**Northern Lapwing *Vanellus vanellus***



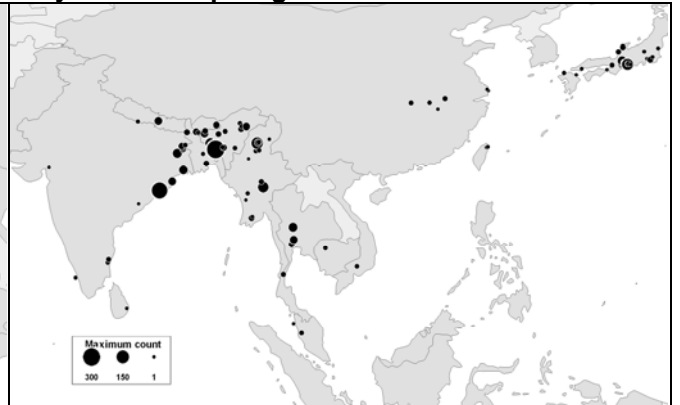
**River Lapwing *Vanellus duvaucelli***



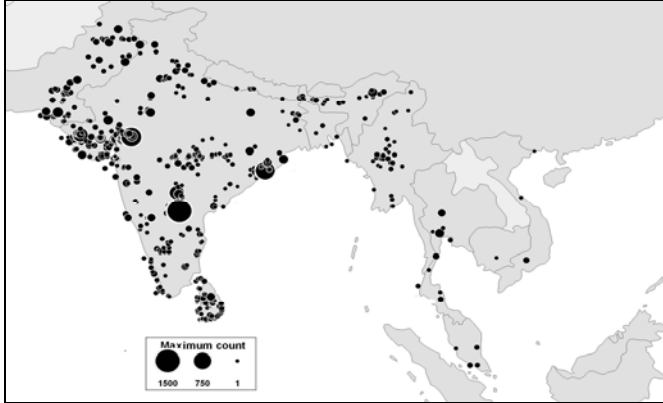
**Yellow-wattled Lapwing *Vanellus malabaricus***



**Grey-headed Lapwing *Vanellus cinereus***



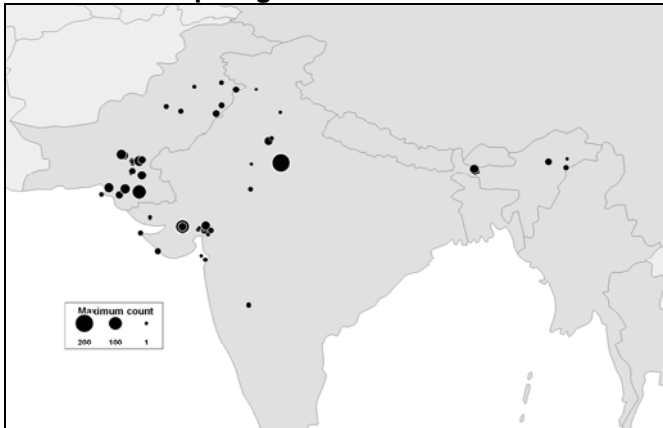
**Red-wattled Lapwing *Vanellus indicus***



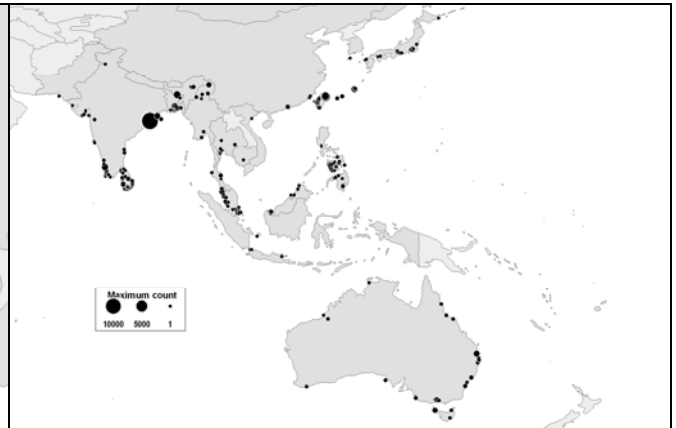
**Sociable Lapwing *Vanellus gregarius* CR**



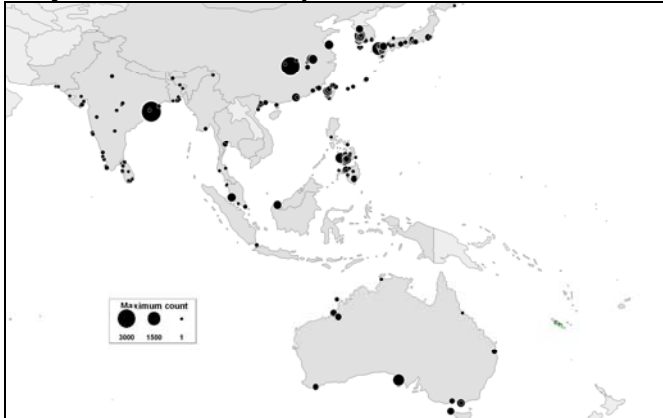
**White-tailed Lapwing *Vanellus leucurus***



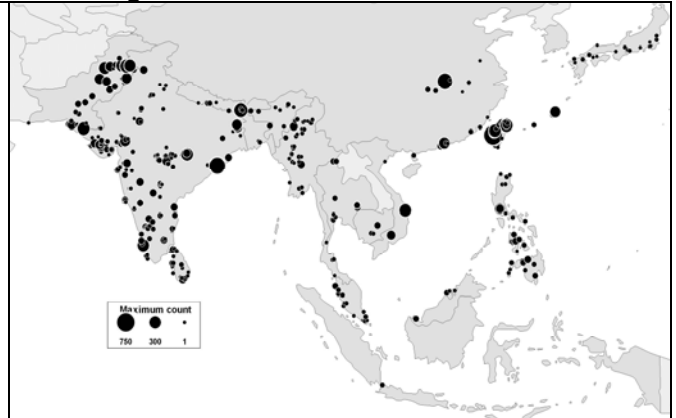
**Pacific Golden Plover *Pluvialis fulva***



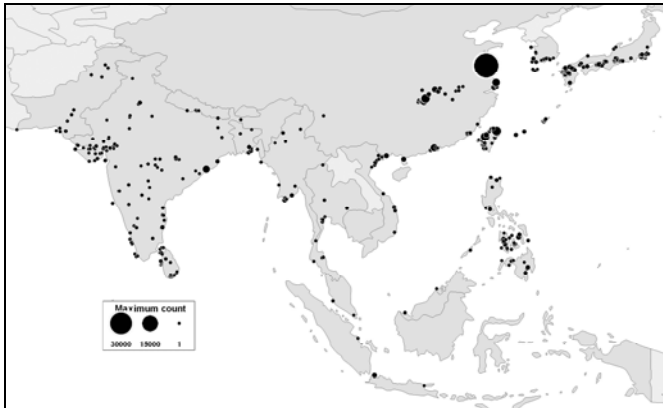
**Grey Plover *Pluvialis squatarola***



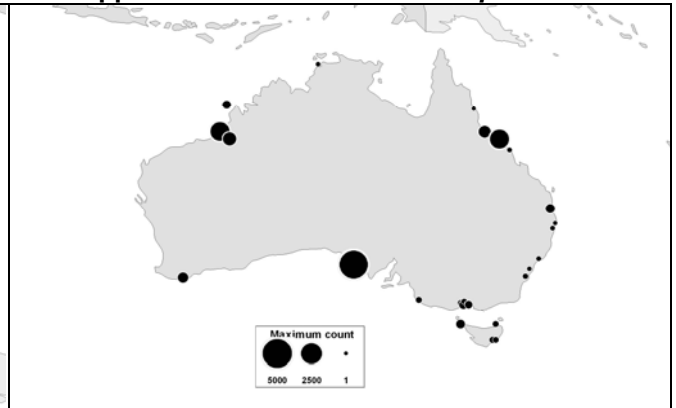
**Little Ringed Plover *Charadrius dubius***



**Kentish Plover *Charadrius alexandrinus***



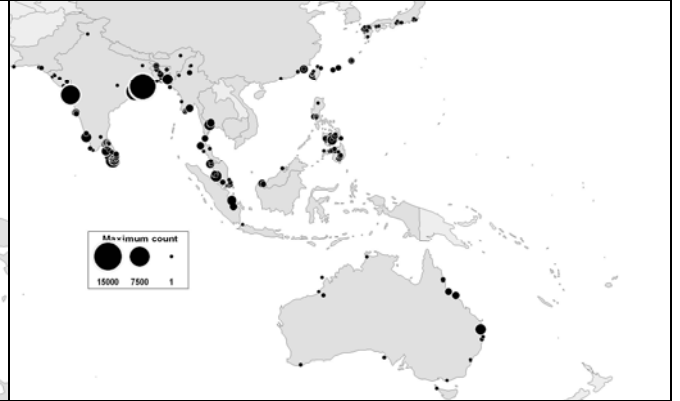
**Red-capped Plover *Charadrius ruficapillus***



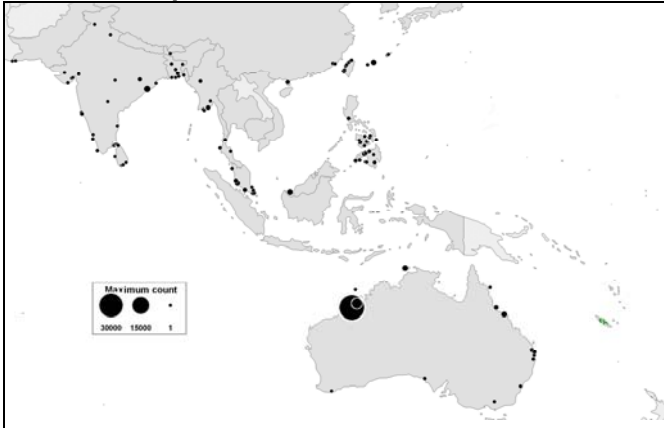
**Malaysian Plover *Charadrius peronii* NT**



**Lesser Sandplover *Charadrius mongolus***



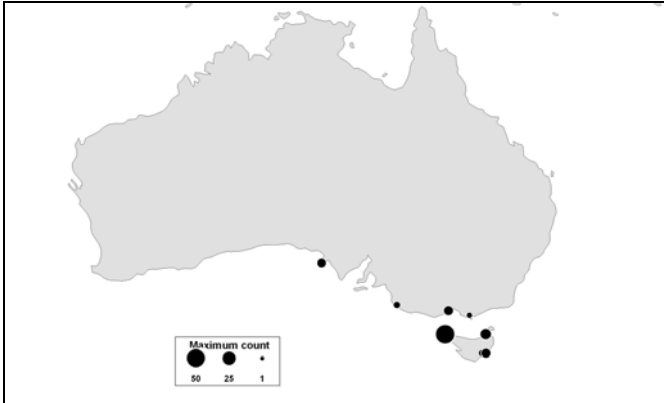
**Greater Sandplover *Charadrius leschenaultii***



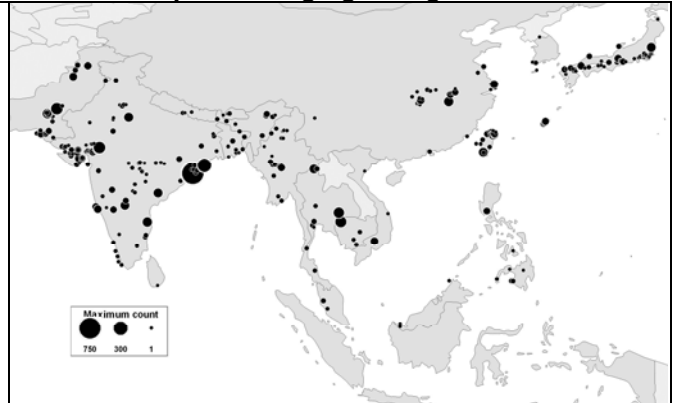
**Oriental Plover *Charadrius veredus***



**Hooded Plover *Charadrius rubricollis* NT**



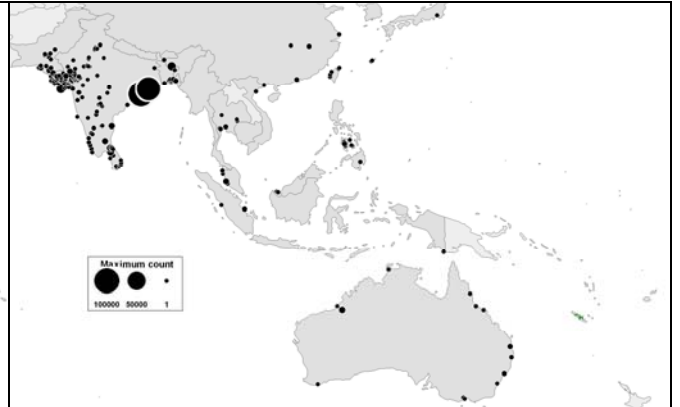
**Common Snipe *Gallinago gallinago***



**Asian Dowitcher *Limnodromus semipalmatus* NT**

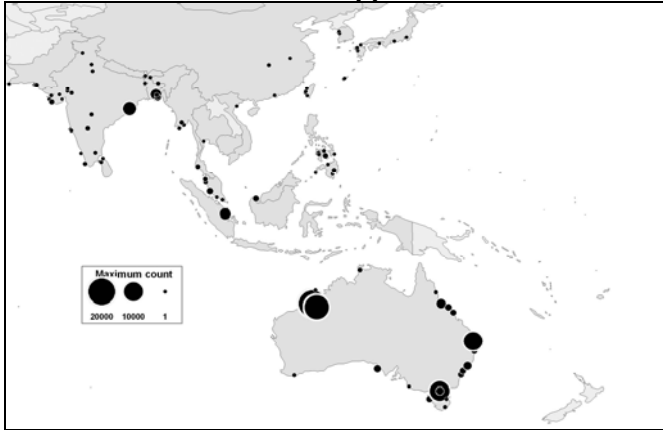


**Black-tailed Godwit *Limosa limosa* NT**

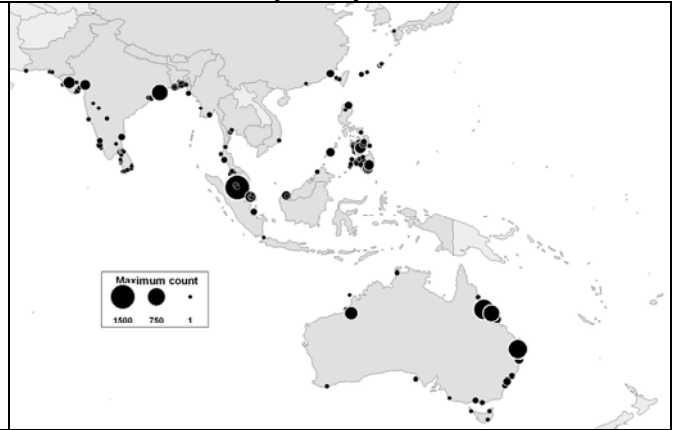




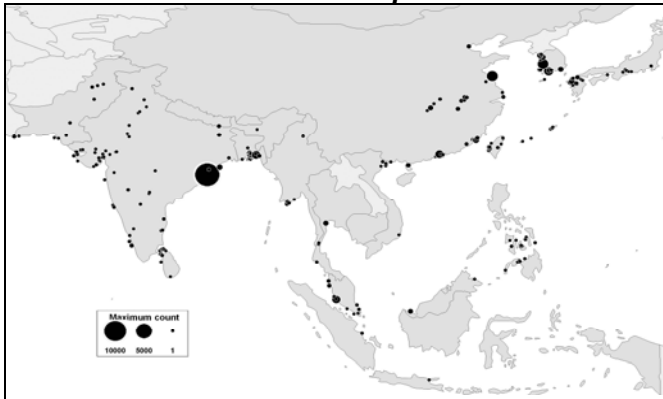
**Bar-tailed Godwit *Limosa lapponica***



**Whimbrel *Numenius phaeopus***



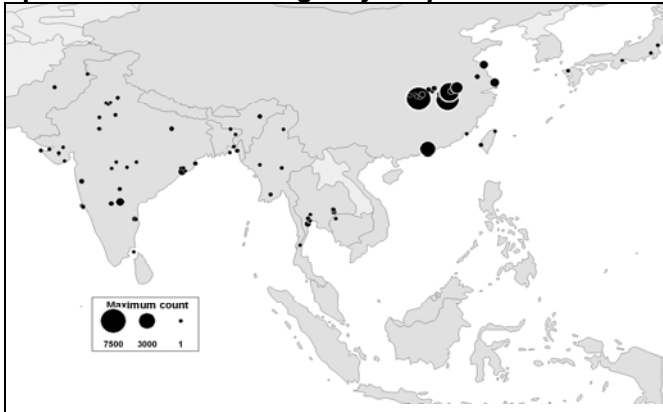
**Eurasian Curlew *Numenius arquata***



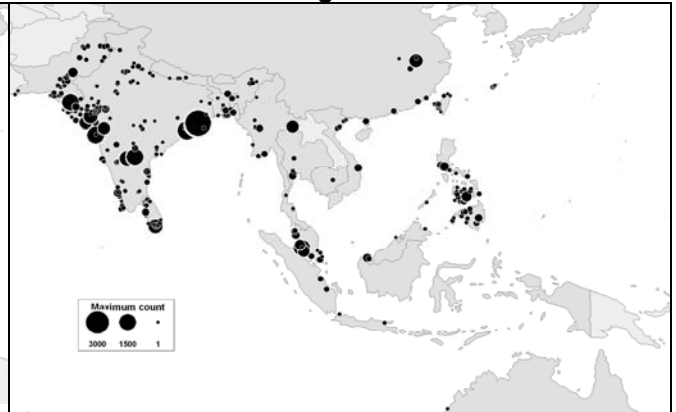
**Far Eastern Curlew *Numenius madagascariensis***



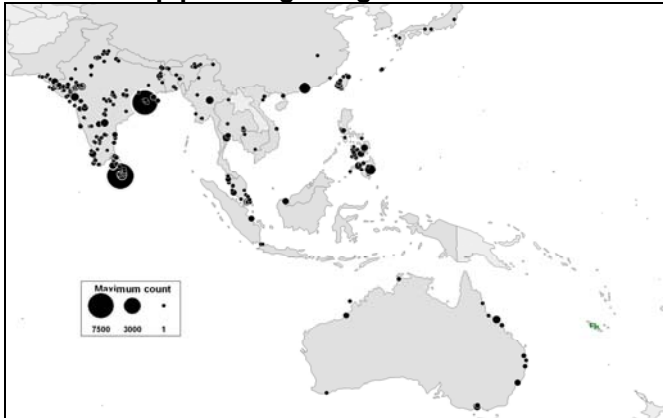
**Spotted Redshank *Tringa erythropus***



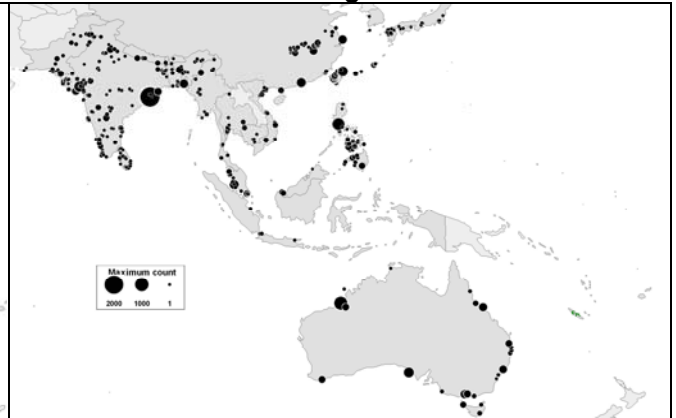
**Common Redshank *Tringa totanus***



**Marsh Sandpiper *Tringa stagnatilis***



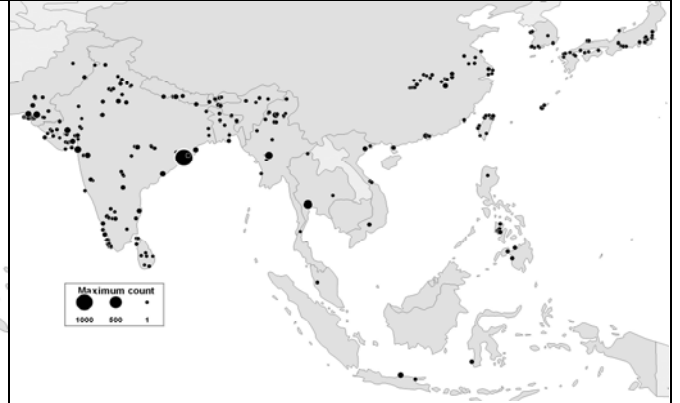
**Common Greenshank *Tringa nebularia***



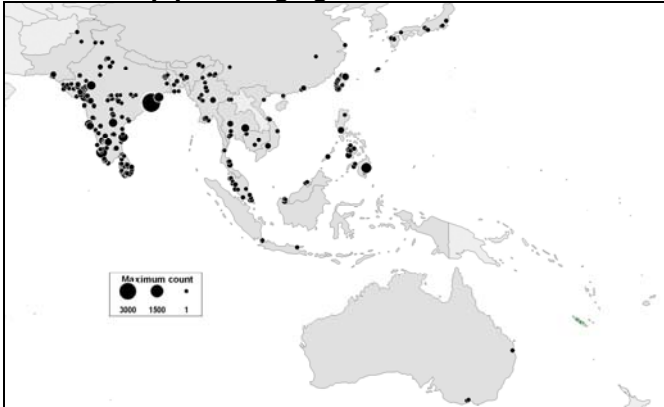
**Nordmann's Greenshank *Tringa guttifer* EN**



**Green Sandpiper *Tringa ochropus***



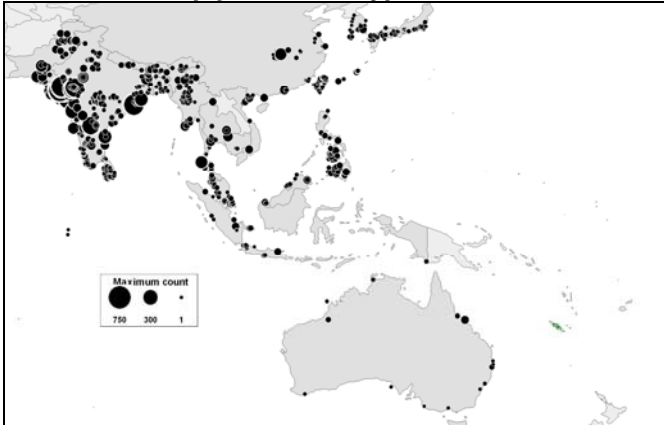
**Wood Sandpiper *Tringa glareola***



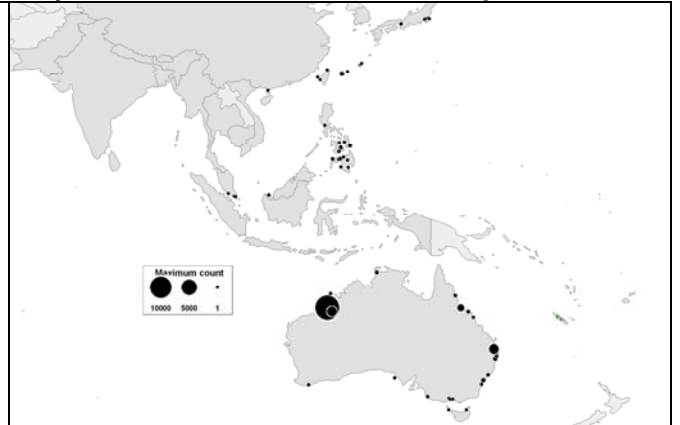
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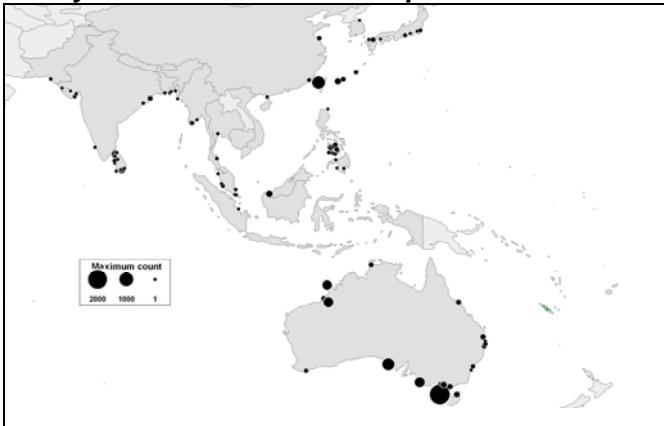
**Common Sandpiper *Actitis hypoleucos***



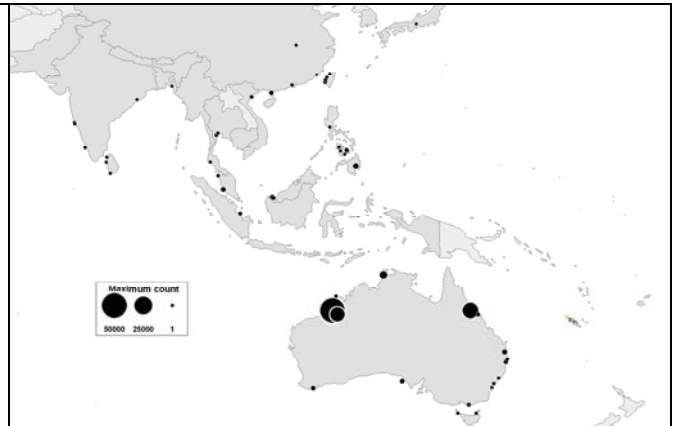
**Grey-tailed Tattler *Heteroscelus brevipes***



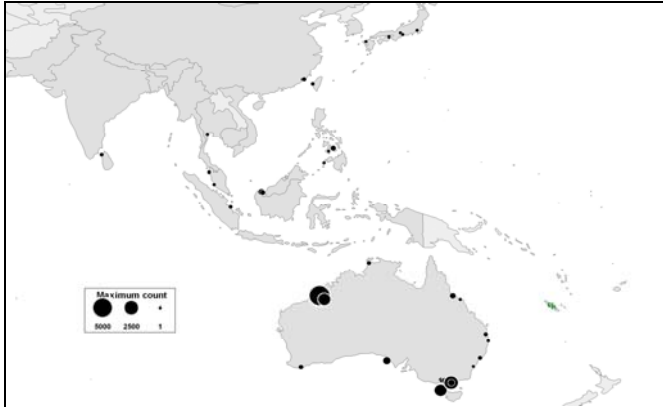
**Ruddy Turnstone *Arenaria interpres***



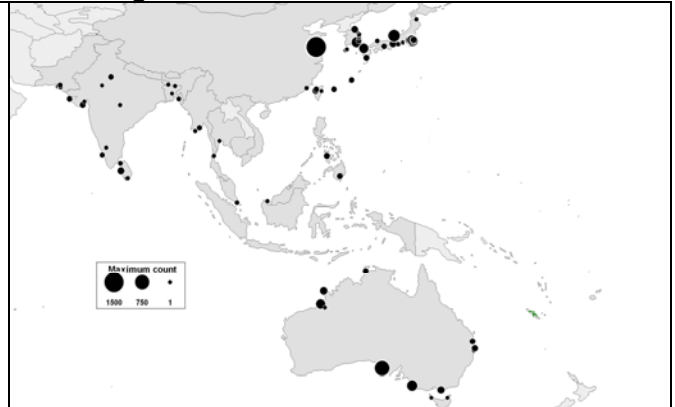
**Great Knot *Calidris tenuirostris***



**Red Knot *Calidris canutus***



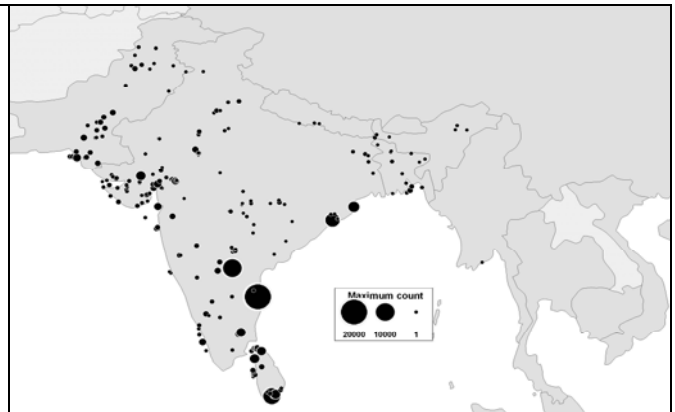
**Sanderling *Calidris alba***



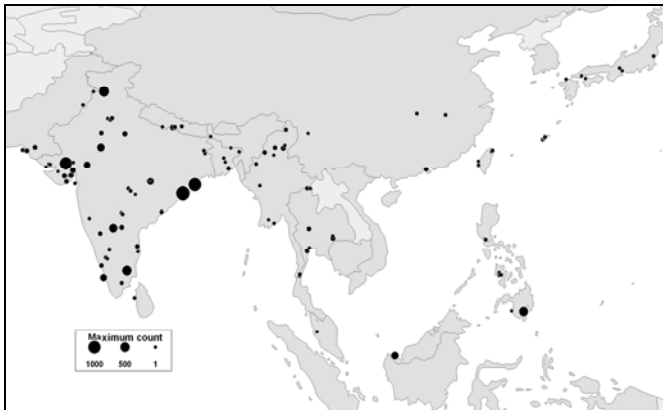
**Red-necked Stint *Calidris ruficollis***



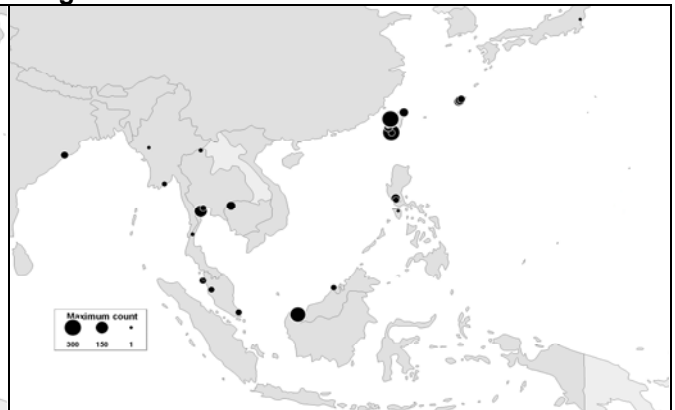
**Little Stint *Calidris minuta***



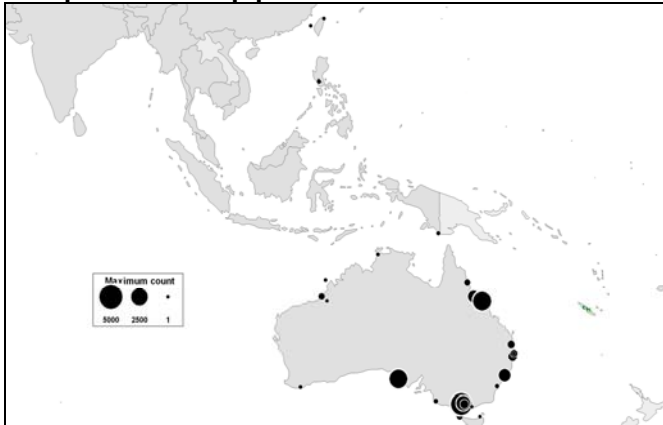
**Temminck's Stint *Calidris temminckii***



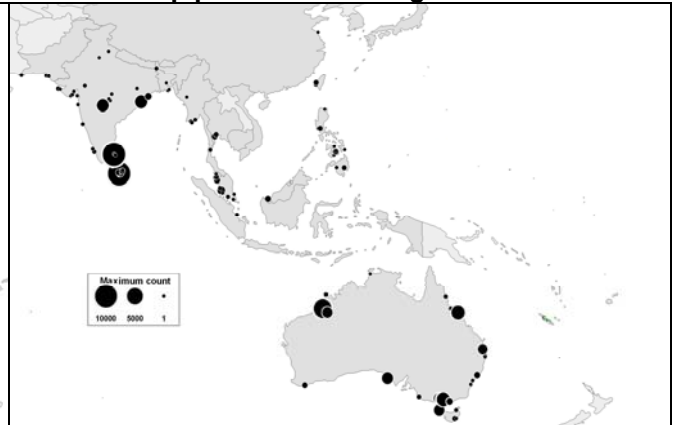
**Long-toed Stint *Calidris subminuta***



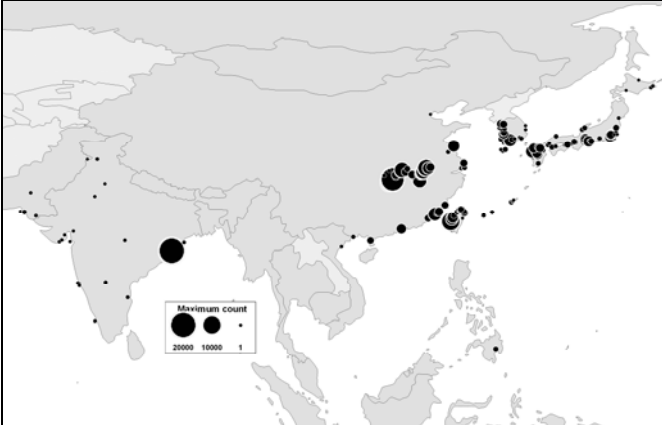
**Sharp-tailed Sandpiper *Calidris acuminata***



**Curlew Sandpiper *Calidris ferruginea***



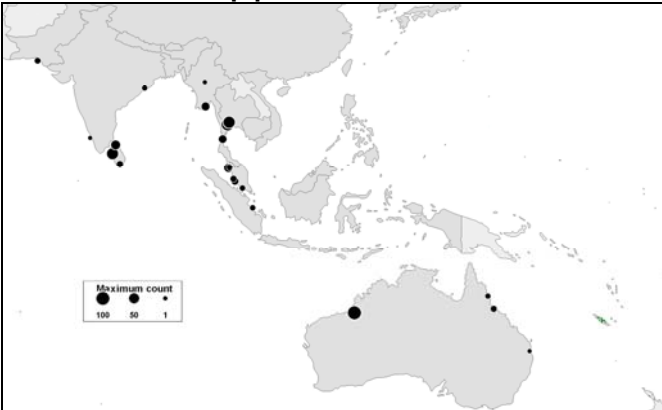
**Dunlin *Calidris alpina***



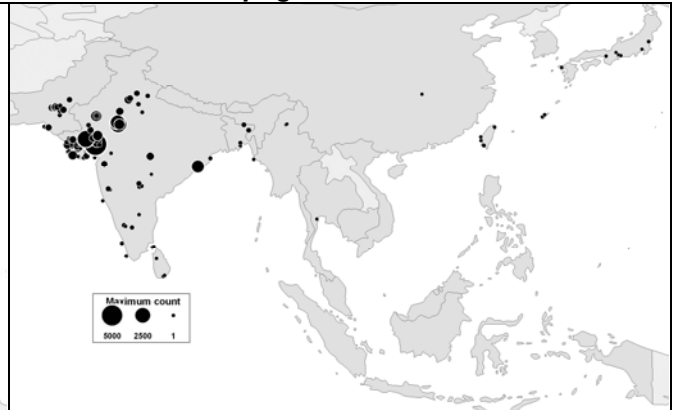
**Spoon-billed Sandpiper *Eurynorhynchus pygmeus* EN**



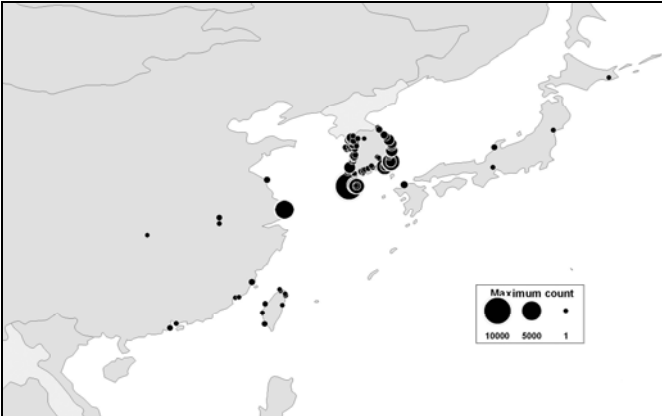
**Broad-billed Sandpiper *Limicola falcinellus***



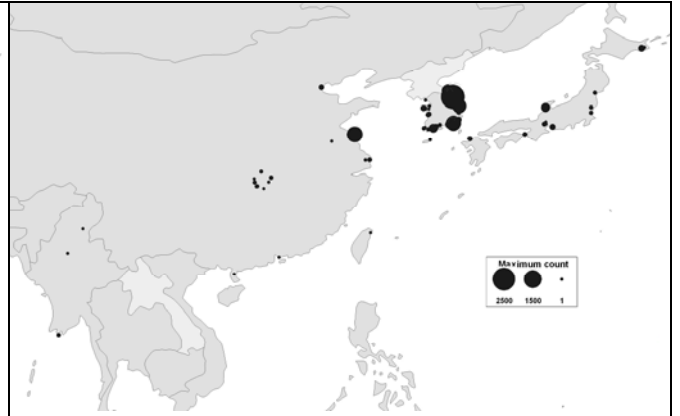
**Ruff *Philomachus pugnax***



**Black-tailed Gull *Larus crassirostris***



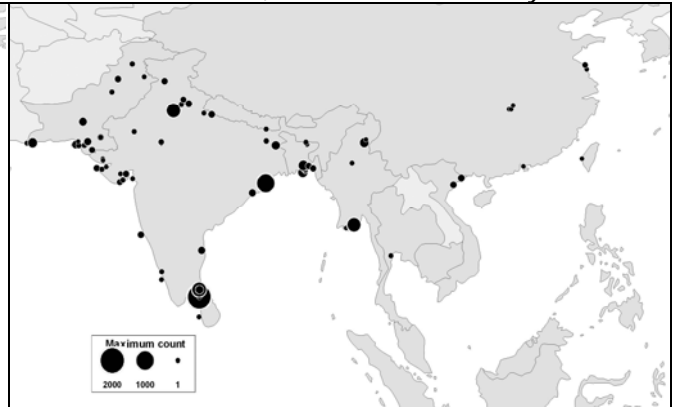
**Common Gull *Larus canus***



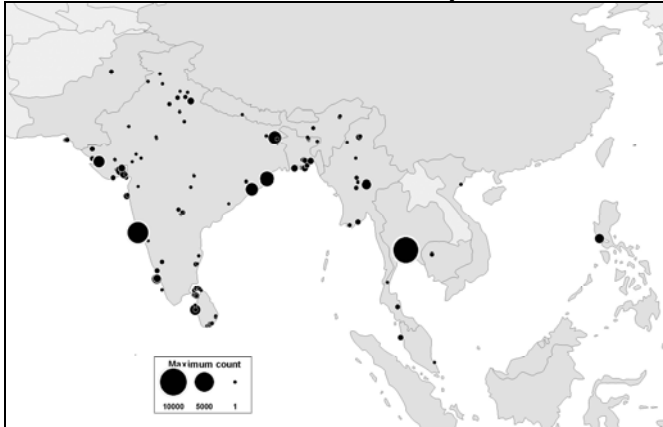
**Slaty-backed Gull *Larus schistisagus***



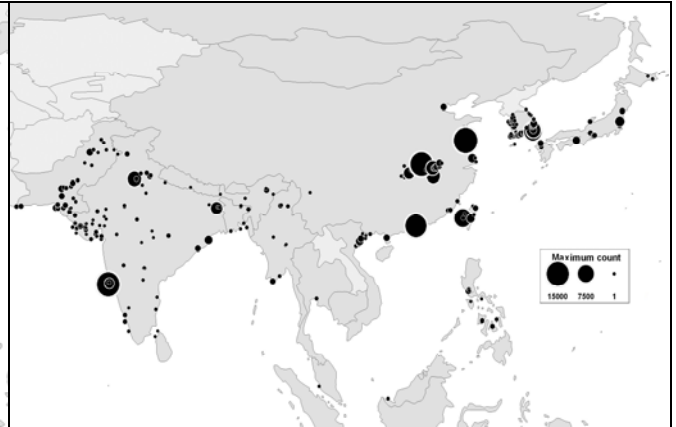
**Great Black-headed Gull, Pallas's Gull *Larus ichthyaetus***



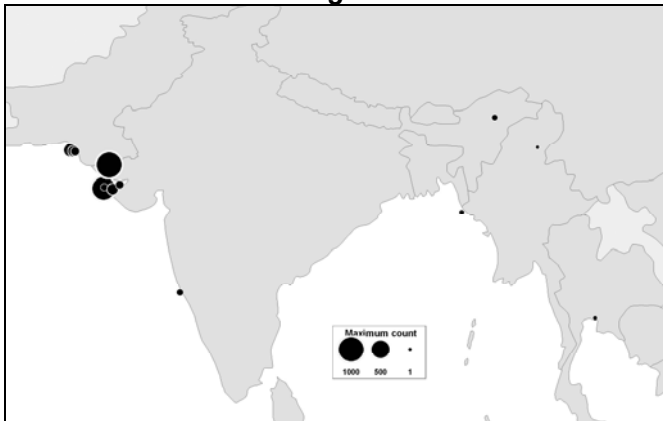
**Brown-headed Gull *Larus brunnicephalus***



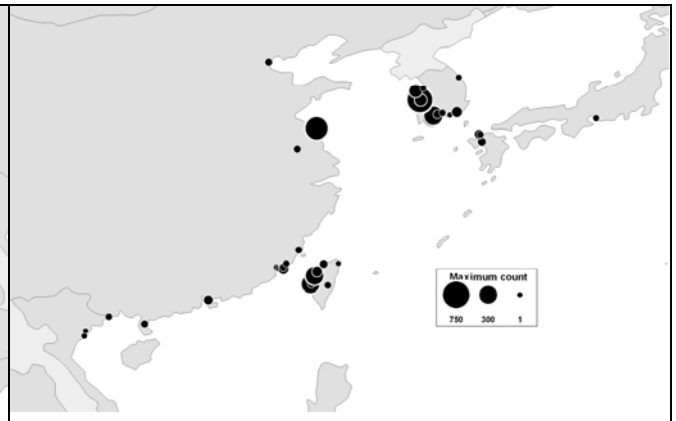
**Common Black-headed Gull *Larus ridibundus***



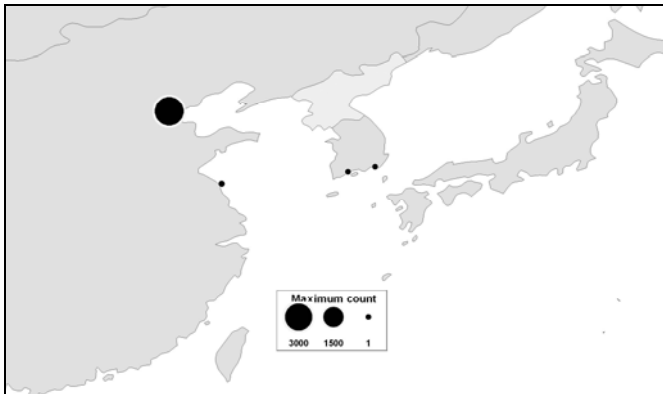
**Slender-billed Gull *Larus genei***



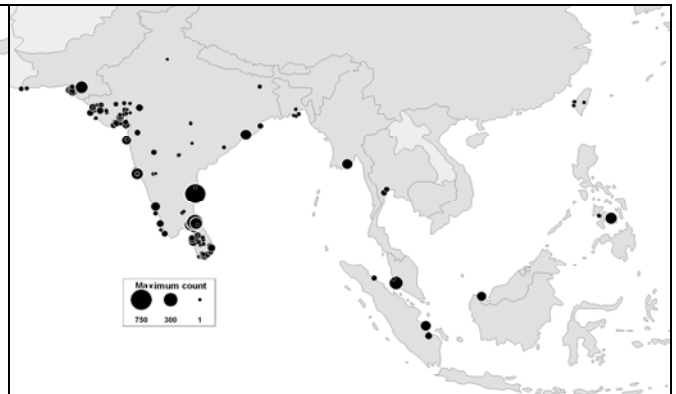
**Saunders's Gull *Larus saundersi* VU**



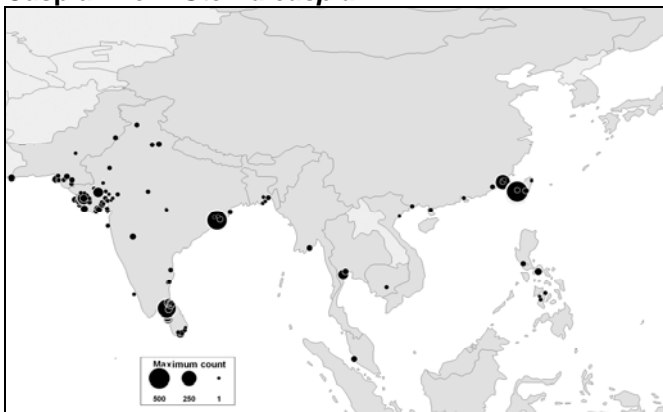
**Relict Gull *Larus relictus* VU**



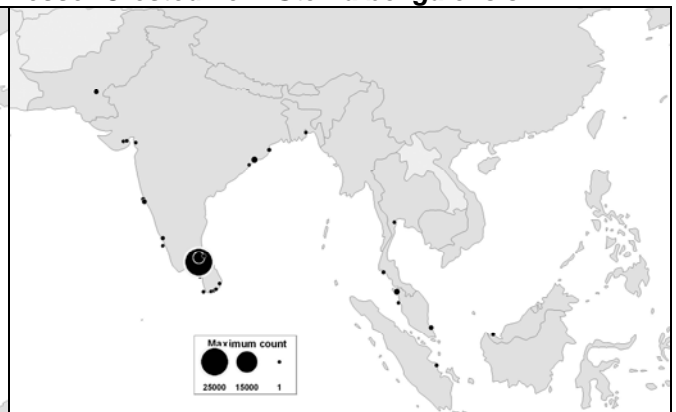
**Gull-billed Tern *Sterna nilotica***



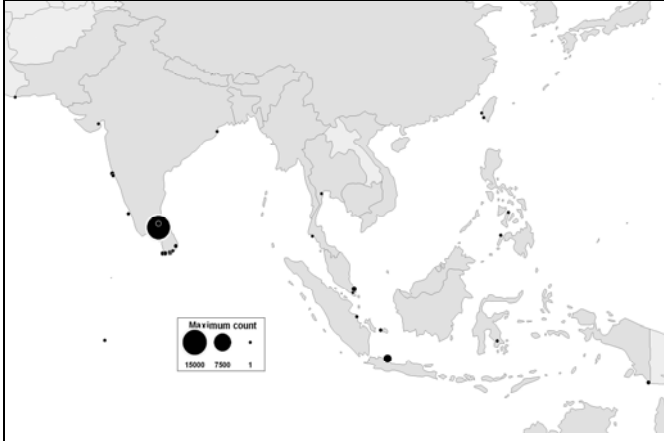
**Caspian Tern *Sterna caspia***



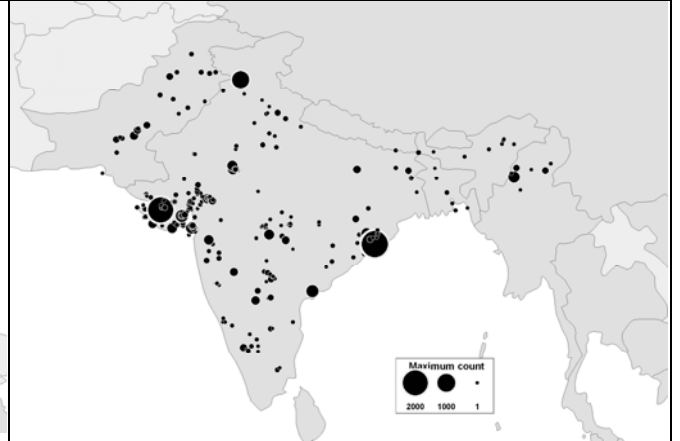
**Lesser Crested Tern *Sterna bengalensis***



**Greater Crested Tern *Sterna bergii***



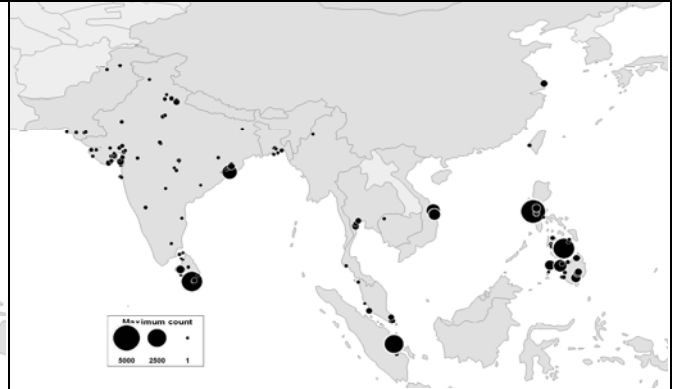
**River Tern *Sterna aurantia***



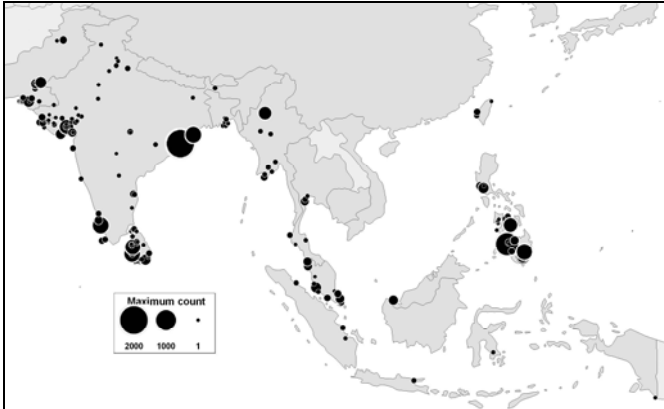
**Black-naped Tern *Sterna sumatrana***



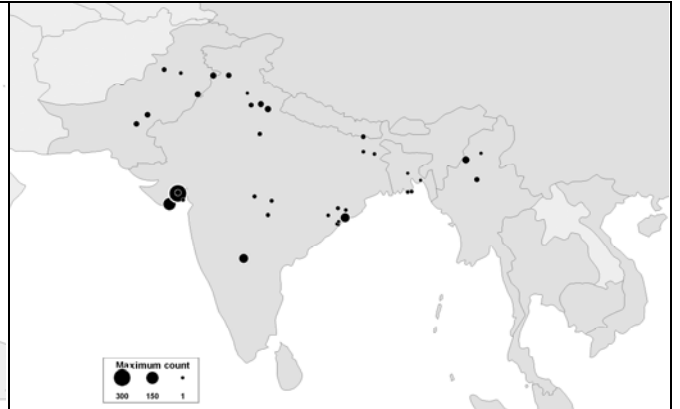
**Common Tern *Sterna hirundo***



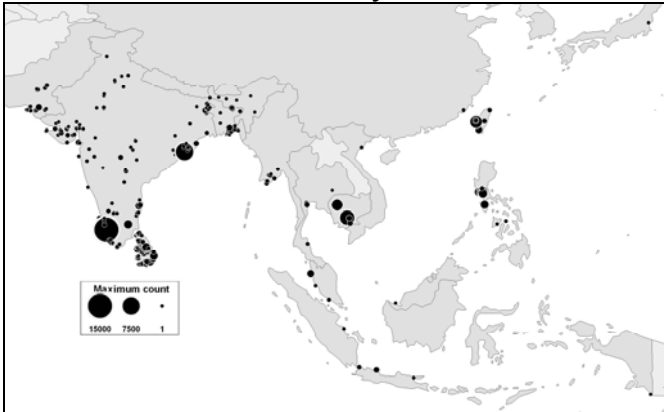
**Little Tern *Sterna albifrons***



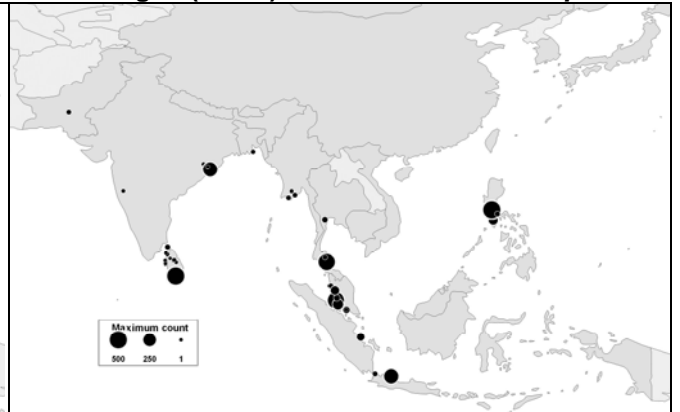
**Black-bellied Tern *Sterna acuticauda* NT**



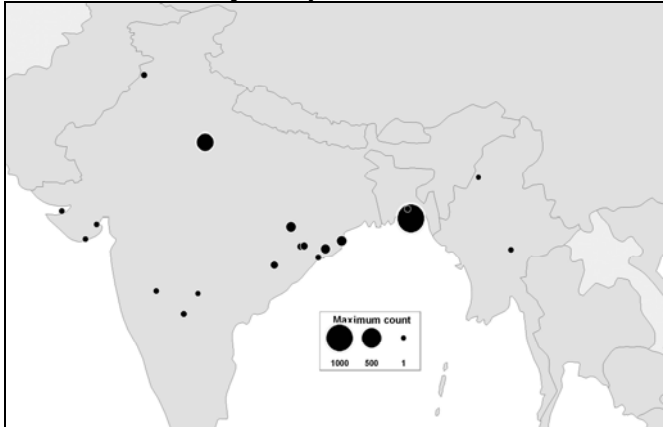
**Whiskered Tern *Chlidonias hybrida***



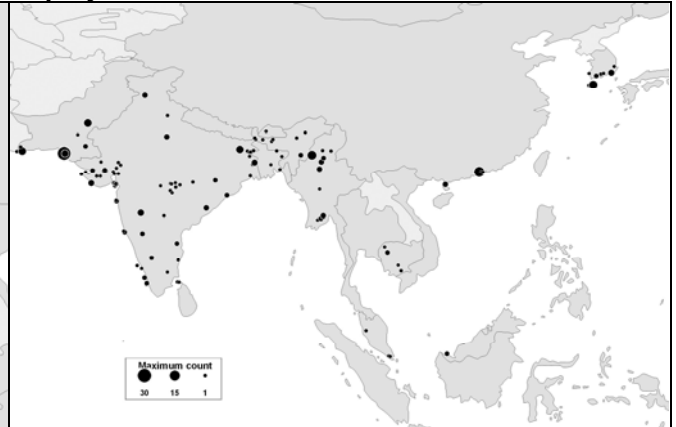
**White-winged (Black) Tern *Chlidonias leucopterus***



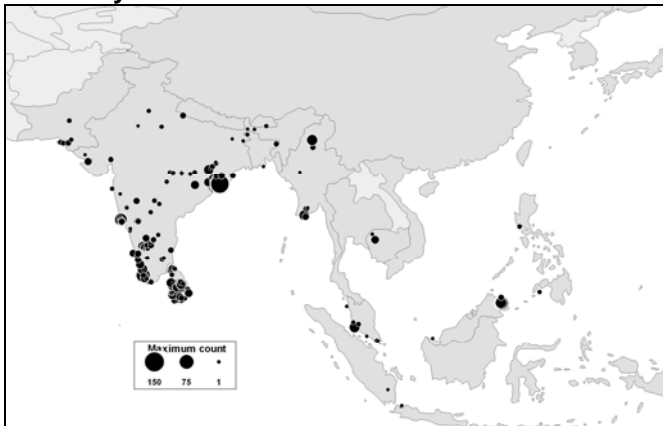
**Indian Skimmer *Rynchops albicollis* VU**



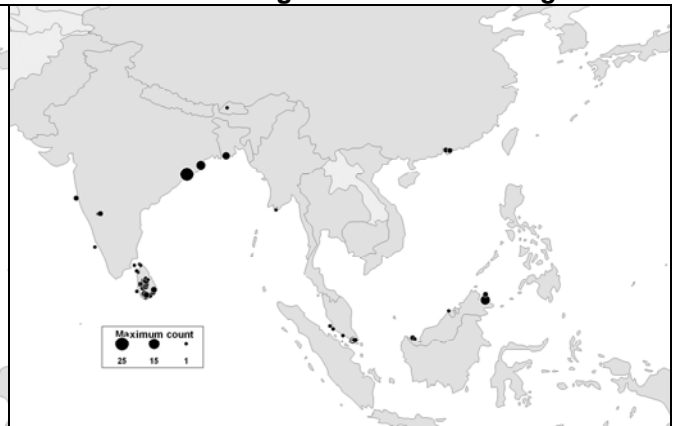
**Osprey *Pandion haliaetus***



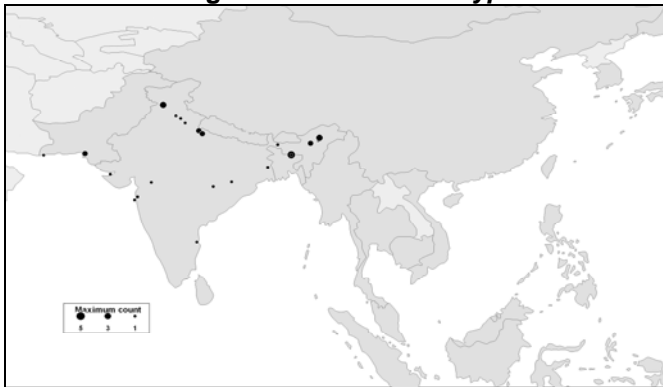
**Brahminy Kite *Haliaeetus indus***



**White-bellied Fish-eagle *Haliaeetus leucogaster***



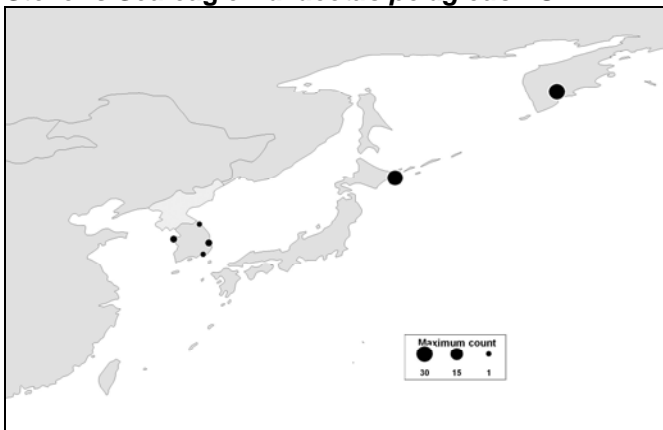
**Pallas's Fish-eagle *Haliaeetus leucoryphus* VU**



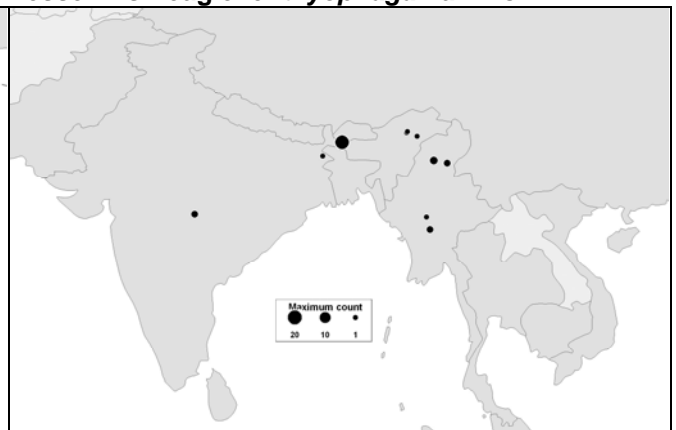
**White-tailed Eagle *Haliaeetus albicilla* NT**



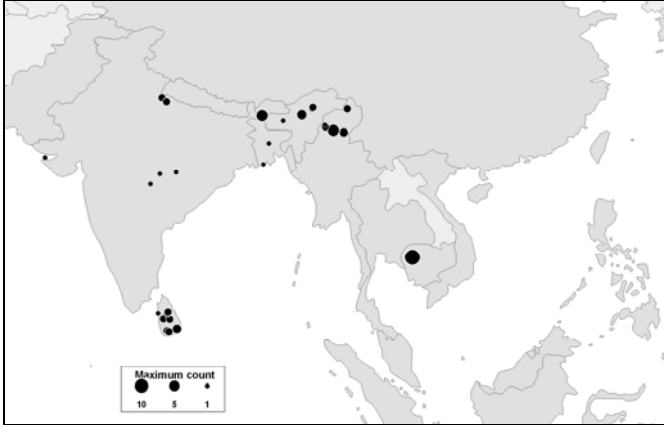
**Steller's Sea-eagle *Haliaeetus pelagicus* VU**



**Lesser Fish-eagle *Ichthyophaga humilis* NT**



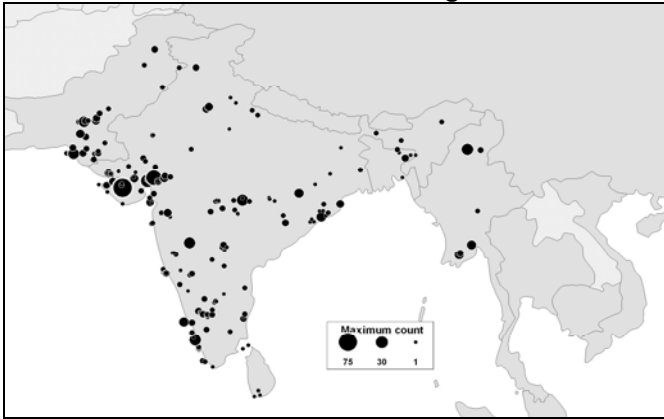
**Grey-headed Fish-eagle *Ichthyophaga ichtyaetus* NT**



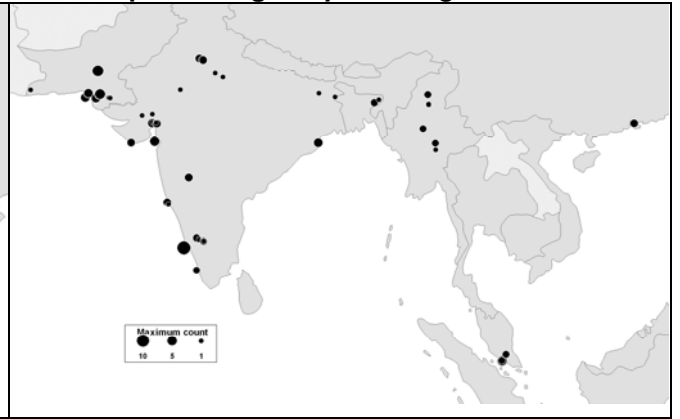
**Pallid Harrier *Circus macrourus* NT**



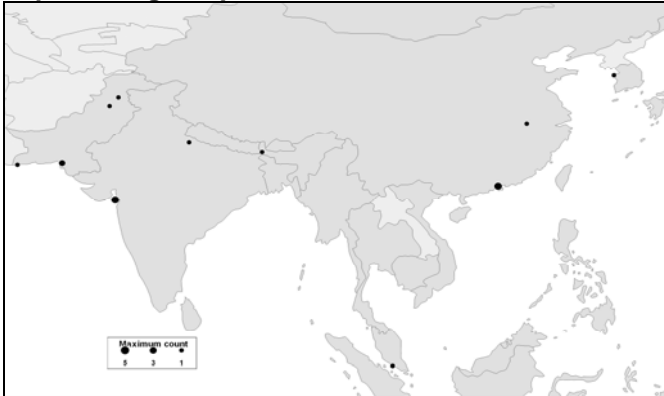
**Western Marsh Harrier *Circus aeruginosus***



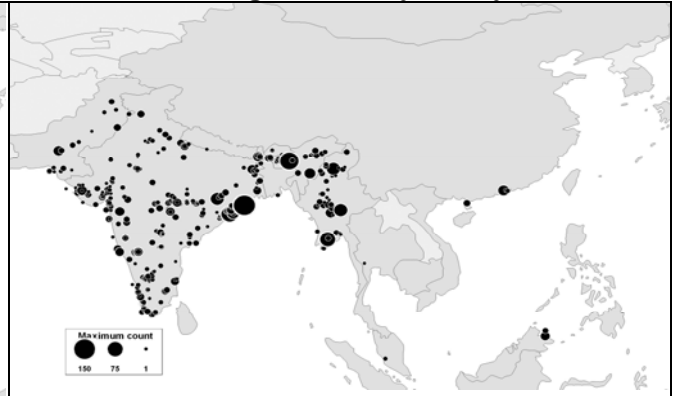
**Greater Spotted Eagle *Aquila clanga* VU**



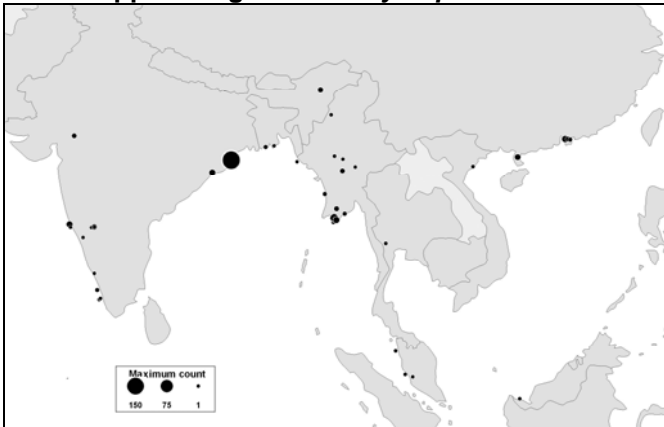
**Imperial Eagle *Aquila heliaca* VU**



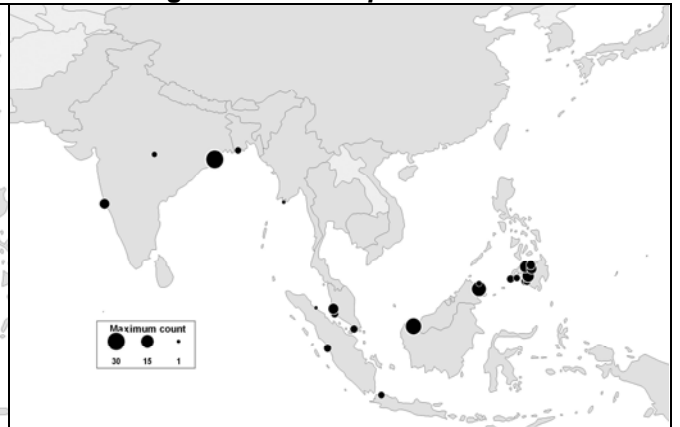
**White-throated Kingfisher *Halcyon smyrnens***



**Black-capped Kingfisher *Halcyon pileata***

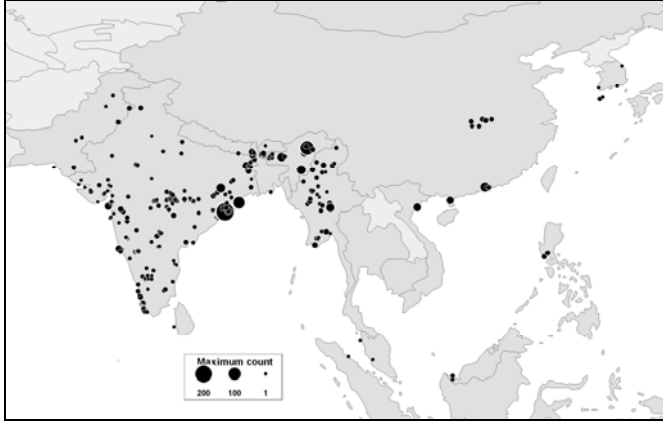


**Collared Kingfisher *Todiramphus chloris***

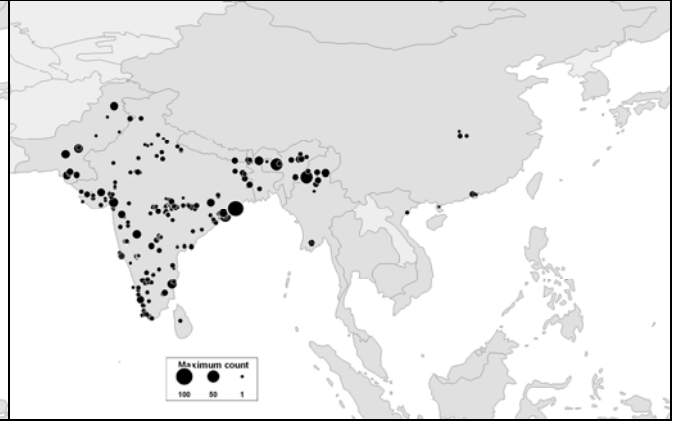




**Common Kingfisher *Alcedo atthis***



**Pied Kingfisher *Ceryle rudis***



## 4. Forward Planning

The *Strategy for the Development of the Asian Waterbird Census: 2004–2006* (Wetlands International 2003), one of the major outcomes of the first AWC Coordinators' Meeting in 2003, provided a clear direction for the development of the AWC in the past three years.

In October 2006, the second AWC Coordinators' Meeting was held in Manila to review the implementation of the AWC strategy in 2004–2006 and the development of a long-term AWC strategy for the period 2007–2015. Although the success of the AWC has been achieved through enhanced site coverage and improved communication amongst AWC networks, it is recognised that there is a need to further improve coordination and communication, address variable and non-targeted site coverage, enhance support to networks and improve expertise.

The strategy for the development of the AWC during 2007–2015 focuses on seven objectives and 29 priority actions at the national and international levels.

### **Objective 1: To enhance geographic and site coverage of the AWC.**

**Action 1:** Establish contact with all countries in the Asia-Pacific region to ensure consistent participation in the annual census and regular sharing of information with the AWC.

*Implementation plan 1:* Encourage all countries to establish and maintain an effective national waterbird monitoring programme that can be linked to the AWC for a 'representative set of sites'. Stimulate action through communication, promote training, and, where needed, offer support to strategic fundraising efforts.

*Implementation plan 2:* Formalise data sharing arrangements with all countries to ensure that waterbird count data are submitted annually to the AWC regional database to support regional and international conservation efforts.

**Action 2:** Strengthen national AWC coordination through the establishment of effective sub-national (state/provincial) AWC networks.

*Implementation plan 3:* Encourage countries to establish sub-national (state/provincial) AWC coordination networks.

*Implementation plan 4:* Strengthen communication with sub-national (state/provincial) AWC networks, including through the organisation of national AWC coordinators' meetings.

**Action 3:** Review and prepare an updated list of priority wetlands of national and international importance to be covered each year by the AWC.

*Implementation plan 5:* Endorse the BirdLife International publications on *Important Bird Areas* and *Potential Ramsar Sites in Asia* and internationally important sites as identified by the *AWC 1997–2001* and *AWC 2002–2004* reports as a basis for identifying a list of priority AWC sites for annual coverage, until a comprehensive priority site list for each country is produced (including Ramsar sites, Waterbird Network sites in the East Asian and Central Asian Flyway, World Heritage sites, MAB sites, and protected areas).

*Implementation plan 6:* In addition, encourage national networks to consider a more comprehensive list of sites of national and local importance for coverage by a wider network, which may be more useful for awareness raising and public participation efforts.

**Objective 2: To ensure high quality of AWC data to achieve monitoring of waterbird populations and support for implementation of conservation actions.**

**Action 4:** Review and prepare boundary maps for each site included in the priority list of important wetlands (Action 3) to be covered by the AWC, and make these available to all participants.

*Implementation plan 7:* Encourage preparation of site boundary maps for all priority sites as identified for cover by the census.

*Implementation plan 8:* Develop improved boundary maps for poorly defined sites to enable proper census activities:

- divide large sites or complexes into sub-sites
- combine small count units into clearly defined wetland areas,
- define coastal wetlands with prominent natural boundaries/landmarks, such as rivers.

*Implementation plan 9:* Recognise that the boundaries of some sites will change as a result of natural and man-induced activities. Updating of site maps will need to remain a regular activity, to ensure that up-to-date boundary maps are available for use. Encourage use of GIS-based mapping that allows for changes to be incorporated.

**Action 5:** Ensure that the annual AWC counts are undertaken in January during the suggested period.

*Implementation plan 10:* Continue with January as the priority census period. Data gathered during December to February may still be acceptable from countries where AWC coverage is currently poor.

*Implementation plan 11:* Encourage countries and sites to conduct counts within the narrow timeframe determined for the AWC where possible.

**Action 6:** Undertake adequate planning and make arrangements to ensure annual coverage of all sites in the priority list (Action 3) and other important sites, and ensure that at least one experienced and reliable counter leads the census at each site.

*Implementation plan 12:* Increase recognition nationally of the high value of and need for consistent coverage of important sites for effective functioning of national and international waterbird and wetland monitoring programmes.

*Implementation plan 13:* Undertake detailed planning to involve participants, especially those in the developing countries, to ensure that all priority sites are covered and high quality data are collected.

*Implementation plan 14:* Expand the participation of related agencies, institutions, bird organisations and groups in the AWC.

**Action 7:** Ensure effective mechanisms for national (and sub-national) coordination, including collection of all standardised data forms in a timely manner after the census.

*Implementation plan 15:* Ensure timely data collection from participants and coordinators by the end of February.

*Implementation plan 16:* Develop methods to remind and encourage timely data submission.

**Action 8:** Coordinators to undertake a quality check of the content of count information.

*Implementation plan 17:* A thorough checking system of the national AWC data will be developed to ensure that data quality issues (including identification of duplicate counts, unusually high species counts, unusual records of species and addition of site codes) can be addressed within the national programme.

*Implementation plan 18:* All National Coordinators will review the validity and timeliness of data submitted to the database with Wetlands International.

*Implementation plan 19:* Sub-national Coordinators will perform this primary function before submitting data to National Coordinators.

*Implementation plan 20:* Hold regular meetings among experienced network members (post-counting) to evaluate national implementation of the AWC.

**Action 9:** Promote use of standardised AWC count and site forms and census techniques in all countries.

*Implementation plan 21:* Undertake a review of the regional AWC forms with National Coordinators to ensure that the forms are up to date, especially in relation to taxonomic status of waterbird species.

*Implementation plan 22:* Send updated AWC count and site forms to National Coordinators in November/December to enable them to prepare for the AWC.

*Implementation plan 23:* For non-English speaking countries/territories, the National Coordinator will make forms available in the national language.

**Action 10:** Promote the use of standardised AWC database programmes in all countries and at the international level to ensure timely and efficient transmission of data.

*Implementation plan 24:* Ensure efficient national data analysis and reporting as well as timely and rapid transmission of data through the use of a user-friendly AWC database system in all countries.

*Implementation plan 25:* Provide/facilitate training for national (and sub-national) coordinators in the use of the AWC database system where required.

*Implementation plan 26:* Develop an online data-entry system.

**Action 11:** Ensure that national census data or databases are submitted by National Coordinators to Wetlands International by the end of April each year.

*Implementation plan 27:* National coordinators need to improve data collection and reporting mechanisms to meet this deadline.

**Action 12:** Support volunteers in data collection, including providing participation guidelines and support logistics, identification guides and equipment.

*Implementation plan 28:* Promote the manual on AWC count-method guidelines for national and international application.

*Implementation plan 29:* Conduct regular training and develop more materials with support from developed countries.

*Implementation plan 30:* Develop secure funding resources from local and national sources (including purchase of field guides and equipment) to sustain the efforts of AWC volunteers and bird watching groups.

**Action 13:** Encourage countries to conduct a census at other times of year (for example during the northward migration, summer period or southward migration) or make monthly counts and submit data to Wetlands International to be included in the AWC database.

*Implementation plan 31:* Promote censusing at other seasons or make monthly counts, especially where there is willingness to initiate and sustain these.

*Implementation plan 32:* Wetlands International will develop and distribute guidelines (a protocol) for additional censuses to be implemented by countries according to their capacity.

**Action 14:** Encourage and strengthen IUCN/SSC/WI waterbird specialist groups in the Asia-Pacific through increasing awareness about the groups, identifying potential members, and devising mechanisms to improve data quality.

*Implementation plan 33:* Raise awareness of the existence of the specialist groups at the national/local level.

*Implementation plan 34:* Identify and involve interested individuals in taking the lead on single species/groups of waterbirds at the local/national level.

### **Objective 3: To enhance communication and public awareness on the AWC.**

**Action 15:** Undertake activities to strengthen co-ordination amongst coordinators, review and plan activities through regular communication and through the organisation of regular meetings.

*Implementation plan 35:* Establish an e-forum/list server for discussion and information exchange.

*Implementation plan 36:* Continue to organise the AWC Coordinators' Meeting every three years. Smaller-scale regional meetings with similar interests and issues may be conducted as opportunities arise.

*Implementation plan 37:* National coordinators may recommend a contact person to ensure timely communication.

**Action 16:** Review the effectiveness of current national co-ordination and communication methods to enhance the national networks.

*Implementation plan 38:* International and National Coordinators continue the current effort and improve communication.

*Implementation plan 39:* Communication amongst national networks will be improved through email discussion groups, national reports and newsletters.

**Action 17:** Maintain an up-to-date AWC website and produce the biannual regional newsletters to enhance communication and public awareness.

*Implementation plan 40:* Re-design and improve access to the AWC website.

*Implementation plan 41:* Countries will provide regular updates and input to the AWC regional website and newsletters.

**Action 18:** Develop an awareness programme for the public to improve their knowledge about the value of the census and the importance of conservation of wetlands and their biodiversity, particularly waterbirds.

*Implementation plan 42:* National coordinators need to ensure that they link their websites to AWC information/newsletters (or other websites) to increase the profile.

*Implementation plan 43:* Promote AWC activities and outputs through newspaper articles (in national and English languages), newsletters, TV and other media.

*Implementation plan 44:* Incorporate AWC and waterbird conservation issues into existing education programmes, project activities and World Wetlands Day events to extend outreach, and through regional/national AWC reports.

*Implementation plan 45:* Develop translated versions of the AWC report and awareness materials in countries where English is not widely used.

### **Objective 4: To build the capacity of national networks to monitor waterbirds and wetlands.**

**Action 19:** Develop a training programme to improve knowledge and skills to coordinate the AWC volunteer network and undertake the census. Identify individuals and agencies in the region with the resources and skills to offer help.

*Implementation plan 46:* National and Sub-national Coordinators conduct waterbird census training programmes, and where possible incorporate these within habitat and species conservation training programmes.

*Implementation plan 47:* National coordinators are encouraged to seek funding support for national training.

*Implementation plan 48:* Wetlands International should support/promote national fund-raising efforts and provide strategic support for training activities.

**Action 20:** Conduct national training activities for participants to enhance counting and identification capacity and skills.

*Implementation plan 49:* Continue to encourage national training courses/workshops (timing of training linked to the count period).

*Implementation plan 50:* Develop training activities through regional initiatives such as flyway initiatives and large wetland projects.

*Implementation plan 51:* Encourage international support and participation in national training programmes.

*Implementation plan 52:* Translate and distribute IWC manuals for coordinators and participants.

**Objective 5: To develop a fundraising strategy for the AWC and seek funding opportunities to support its development.**

**Action 21:** Develop and implement a fundraising strategy, based on a review of the critical funding requirements for maintenance and development of the AWC.

*Implementation plan 53:* National coordinators should incorporate core funding needs for the AWC into the fund-raising planning of their host organisations.

*Implementation plan 54:* Develop collaborative funding proposals to support census activities in developing countries (NGOs in developed countries to assist developing countries).

*Implementation plan 55:* Maintain and update a list of concept proposals that covers critical funding requirements for the development of the AWC for fund raising at national and international levels.

**Action 22:** Identify funding opportunities and resources for fund-raising for priority actions at the regional/national/local level to strengthen national networks to implement the AWC.

*Implementation plan 56:* National coordinators maintain and update a list of funding resources.

*Implementation plan 57:* Engage broad international support (such as through bilateral sources, regional environmental and flyway programmes) for waterbird conservation/monitoring needs.

*Implementation plan 58:* Build NGO–government relationships to secure long-term government funding for annual/regular counts with a focus on support of national conservation efforts, such as nomination and monitoring of Ramsar sites and other important areas.

*Implementation plan 59:* Develop corporate and private-sector sponsorships through promoting widespread interest in bird watching, counting and photography, through, for example, waterbird festivals.

**Objective 6: To support improved decision making on waterbird and wetland conservation at national and international levels.**

**Action 23:** Provide an effective mechanism to respond to the priorities and needs of environmental conventions, and regional organisations/initiatives (for example, Ramsar Convention, Convention on Migratory Species, Convention on Biological Diversity, East Asian – Australasian Flyway Partnership, Central Asian Flyway initiative, Conservation of Arctic Flora and Fauna, ASEAN and South Asian Cooperative Environmental Programme) in the Asia-Pacific region on monitoring the status of waterbirds and wetlands.

*Implementation plan 60:* Improve the reporting system including making recommendations to international data users to promote the value of the AWC.

*Implementation plan 61:* Integrate AWC reports into the information bases and decision-making processes of international conventions/initiatives.

**Action 24:** National coordinators to report proactively on the status of waterbirds and wetlands in their countries to national conservation and development agencies, national Ramsar committees and other data users.

*Implementation plan 62:* All countries should produce national reports on an annual basis. Reports should also be produced on CD-ROMs or on websites to increase access and publicity.

*Implementation plan 63:* Distribute AWC results, analyses and conservation recommendations to government agencies and institutions.

*Implementation plan 64:* Encourage use of AWC data for

- protected area nominations,
- international designations (including Ramsar, World Heritage and Flyway Site Networks), IBA programmes; other bird conservation network activities;
- National Biodiversity Strategy and Action Plans (NBSAP) prepared by governments for the Convention on Biological Diversity; and
- implementation of resolutions of the Ramsar Convention and CMS and other regional commitments.

*Implementation plan 65:* Promote data sharing mechanisms with national and local organisations to support waterbird and wetland conservation efforts.

*Implementation plan 66:* Hold national workshops to review/assess waterbird counts, data and applicability to conservation involving governments, NGOs, academics, etc.

**Action 25:** Produce AWC regional reports and other products to promote waterbird and wetland conservation initiatives and as feedback for the AWC volunteers.

*Implementation plan 67:* Develop and update a web-based AWC regional reporting system.

*Implementation plan 68:* Publish a list of sites of international importance that have been identified in the 20 years (1987–2006) over which the AWC has been held.

*Implementation plan 69:* Conduct analyses of population trends on waterbird populations.

*Implementation plan 70:* Produce and update flyway atlases based on the AWC and related information.

**Action 26:** Ensure timely provision of AWC data and related information to the development and review of estimates of waterbird populations to feed into the *Waterbird Population Estimates* and Globally Threatened Birds updates.

*Implementation plan 71:* Generate and regularly review national waterbird population estimates.

*Implementation plan 72:* Provide updated data to Waterbird Population Estimates and Globally Threatened Birds updates.

### ***Objective 7: To develop a coordination mechanism for effective operation and targeting of the AWC***

**Action 28:** Establish a mechanism to review the development of the AWC.

*Implementation plan 73:* Use a series of AWC Coordinators' Meetings to review directions and strategies at the international level on a triennial basis.

*Implementation plan 74:* Use the list server and encourage regular national meetings to promote and stimulate the implementation of the AWC Strategy.

*Implementation plan 75:* Encourage countries to develop national implementation plans for the AWC 2007–2009 period.

**Action 29:** Review implementation of the Strategy.

*Implementation plan 76:* The Strategy will run over nine years and is to be reviewed triennially.

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# Appendix

## List of Coordinators, 2002–2004

Country/Region	Name	Organisation
Australia	Ms. Jenny Skewes	Australasian Wader Studies Group
Bangladesh	Mr. Enam Ul Haque	Bangladesh Bird Club
Brunei	Dr. Pushpa Thambipillai Prof. Joe Charles	Brunei Darussalam University
Cambodia	Mr. Hong Chamnan	Wildlife Conservation Society – Cambodia Program
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Indonesia	Mr. Yus Rusila Noor	Wetlands International – Indonesia Office
India	Dr. Asad Rahmani (National Coordinator)	Bombay Natural History Society
	Mr. S. Sridhar (Karnataka)	Institute for Natural Resources Conservation, Education, Research and Training (INCERT)
	Mr. Gurmeet Singh (Punjab)	Wildlife Punjab
	Mr. Siraj A. Taher (Andhra Pradesh)	Birdwatchers Society of Andhra Pradesh
	Mr. Rakesh Vyas (Rajasthan)	
	Mr. Heinz Lainer (Goa)	
	Dr. P.O. Nameer (Kerala)	Kerala Agricultural University
	Dr. U.N. Dev (Orissa)	Bihang Institute for Ornithology and Mass Eco-Development (BIOME)
	Prof. P.C. Bhattacharaya (Assam)	Gauhati University
	Mr. Romesh Ladkedkar (Maharashtra)	Vidharbha Natural History Society
	Dr. Anwaruddin Chowdhury (Assam)	
	Mr. M. Raghuraman (Tamil Nadu)	Madras Naturalists Society
	Lt. Col. (Retd.) Shakti Baneerjee (West Bengal)	WWF – India, Eastern Region
	Dr. S. Subramanya (Karnataka)	University of Agricultural Sciences
	Dr. Rajiv Kalsi (Haryana)	Department of Zoology
	Dr. Arun Kumar (Uttarakhand)	Zoological Survey of India
	Dr. B.M. Parasharya (Gujarat)	Bird Conservation Society, Gujarat
Japan	Mr. Hiroo Amano	Aichi Chapter of Wild Bird Society of Japan
Republic of Korea	Dr. Jin-Han Kim	National Institute of Environmental Research
Malaysia	Mr. Yeap Chin Aik	Malaysian Nature Society
	Ms. Siti Hawa Yatim	Department of Wildlife and National Parks
	Mr. Anthony Sebastian (East Malaysia)	Malaysian Nature Society – Kuching Branch
Myanmar	Mr. Thet Zaw Naing	Myanmar Bird and Nature Society
	Mr. Thein Aung	Nature and Wildlife Conservation Division, Forest Department
Nepal	Dr. Hem Sagar Baral	Bird Conservation Nepal
Pakistan	Dr. Abdul Aleem Chaudhry	Punjab Wildlife Department
	Mr. Munir Awan	Sindh Wildlife Department
The Philippines	Mr. Carlo Custodio	Protected Areas and Wildlife Bureau
Singapore	Mr. Lim Kim Keang	Singapore Nature Society
Sri Lanka	Mr. Udaya Sirivardana Mr. Deepal Warakagoda	Ceylon Bird Club
Thailand	Mr. Petch Manopawitr	Bird Conservation Society of Thailand
Vietnam	Mr. Nguyen Duc Tu	BirdLife International – Vietnam Programme

## Mission:

To sustain and restore wetlands, their resources and biodiversity for future generations.

For further information please visit our website or contact our offices.

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- The Asian Waterbird Census (AWC), conducted each year in January, is a waterbird and wetland monitoring programme initiated in 1987 within the framework of the International Waterbird Census.
- This report summarises the results of the AWC in 2002, 2003 and 2004, comprising counts at 2,032 sites in 22 countries. Of these sites, 459 met the criteria for international importance by recording either more than 20,000 waterbirds or 1% of the population of at least one species.
- Seventy-nine Ramsar Sites, 36 Migratory Waterbird Network Sites in the East Asian - Australasian Flyway and 280 Important Bird Areas were covered.
- Totals of 274 waterbird species and 61 wetland-dependent species were recorded during this period, with nearly 8 million waterbirds recorded each year.
- Brief status accounts, accompanied by 202 maps, are presented for 211 species, including 42 Globally Threatened species and 19 Near Threatened species.

The AWC is supported by a network of volunteers and coordinated by the following organisations in countries which work closely with Wetlands International.



Australasian Wader Studies Group



Bangladesh Bird Club



Panaga Natural History Society, Brunei



Wildlife Conservation Society, Cambodia



Wetlands International, China Office



Hong Kong Bird Watching Society



Wild Bird Federation Taiwan



Wetlands International, Indonesia Office



Bombay Natural History Society, India



Ministry of the Environment, Japan



National Institute of Environmental Research, Republic of Korea



Malaysian Nature Society



Department of Wildlife & National Parks, Malaysia



Myanmar Bird and Nature Society



Nature & Wildlife Conservation Division, Forest Department, MYANMAR



Bird Conservation Nepal



Ornithological Society of New Zealand



Ceylon Bird Club, Sri Lanka



Protected Areas and Wildlife Bureau, the Philippines



Singapore Nature Society



National Council for the Conservation of Wildlife, Ministry of Environment, Pakistan



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