

ASIA'S THREATENED BIRDS AND THEIR HABITATS

THE THREATENED BIRDS OF ASIA

BirdLife's Threatened Species Programme

BirdLife International has been analysing and documenting the status of the world's threatened bird species since the 1970s. The results have been published in a series of global checklists and regional Red Data Books. The most recent global checklist was the *Threatened birds of the world* (BirdLife International 2000; see <http://www.birdlife.org>), which includes short accounts for all of the world's 1,186 threatened birds. The *Threatened birds of Asia: the BirdLife International Red Data Book* (BirdLife International 2001; see www.rdb.or.id) is a huge work (two volumes totalling over 3,000 pages), which includes detailed accounts on 323 threatened species which occur in the Asia region.

BirdLife collates information on threatened birds from a global network of experts, including members of the IUCN/SSC Specialist Groups, and from publications and unpublished sources. This information is used to assess each species's IUCN Red List Category (and hence extinction risk) using standard quantitative criteria based on population size, population trends and range size (see Box 1). Most importantly, the wealth of information generated by this programme is also used to focus global conservation efforts and to guide BirdLife's priorities for action. *Threatened birds of Asia* contains numerous proposals for projects, programmes and policies for the conservation of the region's birds, based upon the assembled evidence and the expertise of members of BirdLife's Asia network. A synthesis of these conservation



Box 1. How globally threatened birds are identified.

BirdLife International uses the IUCN Red List Categories and Criteria developed by IUCN (the World Conservation Union) to classify species at high risk of global extinction (see IUCN 2001, <http://www.iucn.org/themes/ssc/redlists/RLcats2001booklet.html>), and is the official Listing Authority for birds for the IUCN Red List. The four main types of criteria used to identify threatened species are:

- A Rapid population reduction
- B Small range and fragmented, declining or fluctuating
- C Small population and declining
- D Very small population or range

Within each of these, more detailed numerical criteria are used to determine whether species should be categorised as one of the following threatened or non-threatened categories:

Threatened categories

- **Critically Endangered** (from now on referred to as 'Critical'): Species faces an extremely high risk of extinction in the wild in the immediate future.
- **Endangered**: Species is not Critical, but faces a very high risk of extinction in the wild in the near future.
- **Vulnerable**: Species is not Critical or Endangered, but faces a high risk of extinction in the wild in the medium-term future.

Non-threatened categories (that are also covered in this publication)

- **Conservation Dependent**¹: Species which are the focus of a continuing species-specific or habitat-specific conservation programme, the cessation of which would result in the species qualifying for one of the threatened categories within five years.
- **Near Threatened**: Species which do not qualify for any threatened categories, but are close to qualifying for or are likely to qualify for a threatened category in the near future.
- **Data Deficient**: Taxa which have inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate.

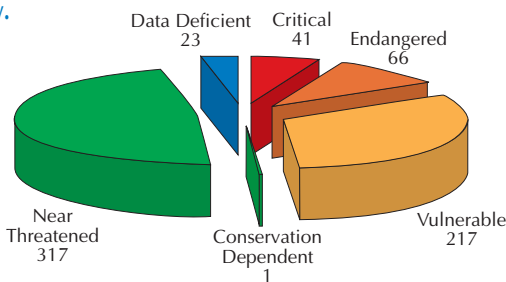
¹ This category was used (for one species in the Asia region) in BirdLife International (2001), following IUCN/SSC (1994), but is not included in the latest IUCN Red List Categories and Criteria (IUCN 2001).

recommendations (together with new proposals provided by reviewers during the current project) is made here, designed to make the main conclusions more accessible and immediate to a much wider audience than those with specialist interests in threatened birds and conservation.

One in eight of all bird species in the Asia region is globally threatened

A total of 324 bird species (or c.12% of the Asian avifauna) is globally threatened with extinction¹, including 41 that are Critical, 66 Endangered and 217 Vulnerable². An additional 317 (Near Threatened) species are close to qualifying as globally threatened. For 23 (Data Deficient) species, there is inadequate information to make a direct, or indirect, assessment of their probability of extinction, but these too may be at risk. All told, 664 (c.25%) species in the Asian avifauna are of conservation concern at the global level.

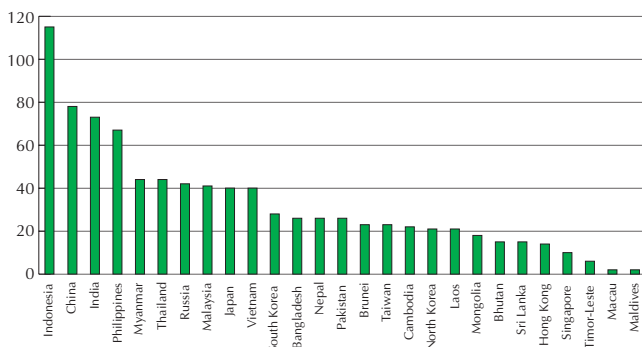
Figure 1. Numbers of bird species in the Asia region by IUCN Red List category.



All territories are important for threatened species

Indonesia has the highest total of threatened species in the region (117 species), followed by mainland China (78), India (73) and the Philippines (70). In terms of all species of global conservation concern (i.e. those classified as Critical, Endangered, Vulnerable, Conservation Dependent, Near Threatened or Data Deficient), Indonesia again has a very high total of 322 species, followed by Malaysia (142) and Thailand (137). For Critical and Endangered species only, Indonesia has the most (44 species), followed by the Philippines (26) and India (18). For Critical and Endangered national endemics, Indonesia again has the most (32 species), followed by the Philippines (21). Although the majority of Critical and Endangered species are endemic to single territories, 35 species (>30%) occur in two or more territories and therefore the political responsibility for their survival is shared.

Figure 2. Territories ordered by their total number of globally threatened species.



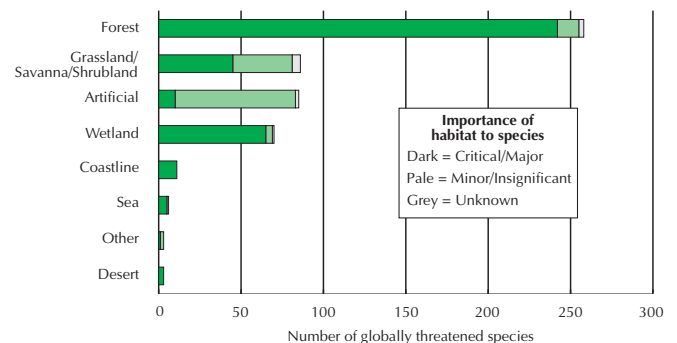
¹ Note that the analysis in this book covers 303 of these species, excluding 21 (two Eurasian, one Pacific and 18 Irian Jaya) that are marginal to the Asia region;

² Since the publication of the *Threatened birds of Asia*, Scaly-sided Merganser has been moved from Vulnerable to Endangered, and the newly-described Chestnut-eared Laughingthrush *Garrulax konkakinhensis* (Eames and Eames 2001) has been evaluated as Vulnerable (IUCN 2002).

The major habitats for threatened species

Forests are by far the most important of all the habitats for threatened bird species in the Asia region, holding the greatest proportion (c.80% in total, for 75% the habitat is essential for their survival). The majority of threatened forest birds occur in the tropics (>90%) and in moist forest types (>80%), and the single most important forest type is tropical lowland moist forest with c.70% of threatened forest species (compared to c.40% globally). Tropical montane moist, tropical dry, mangrove and temperate forests also support some threatened forest birds. Grasslands, savanna and shrublands are used by nearly 30% of threatened species, but for nearly half of these birds these habitats are of only minor importance. Wetlands are under great pressure in the Asia region, with c.20% of threatened bird species found in such habitats (compared to c.10% globally), including freshwater lakes, rivers and marshes, and coastal lagoons and intertidal flats. Many large waterbirds are edging very close to extinction through the disturbance or conversion of their habitats, as well as intense hunting pressure in most areas, involving disproportionately large numbers of storks, herons, ibises, ducks, geese, cranes, gulls, waders and terns. Although artificial habitats (such as plantations, arable land, artificial wetlands etc.) apparently feature quite highly, they are also of minor importance for the great majority (88%) of threatened species occurring in them, meaning that it is unlikely that these species can survive without adjacent natural or semi-natural habitats for feeding and/or breeding.

Figure 3. The habitats upon which threatened Asian birds depend.



KEY FORESTS, GRASSLANDS AND WETLANDS

Most threatened bird species in Asia are specialised in their habitat requirements, and are totally dependent for their survival on a particular type of forest, grassland or wetland. The continuing loss and damage to these habitats is by far the most important threat that they face. *Threatened birds of Asia: the BirdLife International Red Data Book* includes information on every site where the threatened species have been recorded, as well as maps showing their known ranges. An analysis of these distributional data, together with information on the ecological requirements of each species, has been used to define the key forest, grassland and wetland regions for threatened birds throughout Asia. The boundaries of these habitat regions are based upon the combined distributions of all of the species that were used to define them.

Table 1. The relationships between habitat regions, Endemic Bird Areas, CI Hotspots and Global 200 Ecoregions.

Habitat region	RDB species	EBA	CI Hotspot	Global 200 Ecoregions
F01 Boreal and northern temperate forests	6 (4)	—	—	68: Russian Far East temperate forest 82: Central and Western Siberian boreal forests and taiga
F02 Japanese forests	11 (10)	3	—	41: Nansei Shoto archipelago moist forests
F03 South-east Chinese forests	12 (10)	3	—	36.5: South-east China subtropical forests
F04 Sino-Himalayan mountain forests	28 (28)	7	South-central China mountains	36: Northern Indochina subtropical moist forests 37: North-east India and Myanmar hill forests 72: Western Himalayan temperate forests 75: Sichuan and Yunnan temperate forests 76: Eastern Himalayan broadleaf and conifer forests 91: Eastern Himalayan alpine meadows
F05 Indian peninsula and Sri Lankan forests	14 (12)	2	Western Ghats and Sri Lanka	25: Western Ghats moist forest 26: Sri Lanka moist forest
F06 Indo-Burmese forests	24 (18)	6	Indo-Burma	24: Annamite range moist forests 38: Andaman islands moist forests 40: Hainan island moist forests 55: East Indochina monsoon and dry forests
F07 Sundaland forests	47 (38)	5	Sundaland	28: Peninsular Malaysian lowland and montane forests 30: Central and south Sumatran lowland and montane forests 32: North Borneo lowland and montane forests
F08 Wallacea	51 (49)	10	Wallacea	34: Sulawesi moist forests 35: Moluccas moist forests 56: Lesser Sundas dry and monsoon forests
F09 Philippine forests	58 (54)	7	Philippines	33: Philippines moist forests
G01 Eurasian steppe and desert	5 (1)	—	—	93: Daurian steppe
G02 Indo-Gangetic grasslands	11 (9)	1	[Indo-Burma]	103: Terai-duar savannas and grasslands
G03 South Asian arid habitats	12 (10)	—	—	—
W01 Arctic tundra	4 (2)	—	—	87: Chukotsky coastal tundra 88: Taimyr coastal tundra 177: Lena river delta
W02 Sea of Okhotsk and Sea of Japan coasts	15 (2)	—	—	223: Sea of Okhotsk
W03 Amur, Ussuri and Sungari river basins	13 (1)	—	—	144: Russian Far East rivers and wetlands
W04 Japanese wetlands	16	—	—	—
W05 Steppe wetlands	12 (1)	—	—	93: Daurian steppe
W06 Yellow Sea coast	21 (2)	—	—	213: Yellow Sea and East China Sea
W07 Central Chinese wetlands	10 (1)	—	—	—
W08 Lower Yangtze basin	11	—	—	153: Central Yangtze river
W09 Tibetan plateau	2 (1)	—	—	92: Tibetan plateau steppe
W10 China Sea coast	15	—	[Indo-Burma]	—
W11 Indus basin	5	—	—	181: Indus river delta and Rann of Kutch
W12 North Indian wetlands	8	—	—	—
W13 South Indian and Sri Lankan wetlands	3	—	[Western Ghats and Sri Lanka]	—
W14 Assam and Sylhet plains	8	—	Indo-Burma	—
W15 Bay of Bengal coast	5	—	[Indo-Burma]	179: Sundarbans mangroves and Ganges and Brahmaputra deltas
W16 Myanmar plains	8	—	Indo-Burma	—
W17 Thailand wetlands	8 (1)	—	Indo-Burma	—
W18 Lower Mekong basin	9 (1)	—	Indo-Burma	—
W19 Philippine wetlands	5 (1)	—	Philippines	162: Palawan and Mindanao islands streams and lakes
W20 Sundaland wetlands	7 (1)	1	Sundaland	142: Sundaland rivers and swamps
S01 Seabirds	7 (3)	—	—	—

Key: RDB species: the total number of threatened bird species which regularly occur in each habitat region; the figures in brackets are the number of species which are unique (at least as breeding birds) to the region. EBAs: See the relevant habitat accounts for the names of EBAs. CI Hotspot: names in square brackets only overlap with part of the habitat region.

Totals of nine forest regions, three grassland regions and 20 wetland regions have been identified, as well as a small group of threatened seabirds (Table 1, Figures 4–6). All of these habitat regions support groups of threatened birds which occur in the same habitats and share broadly similar distributions. The nine forest regions and three grassland regions support between five and 58 threatened species, a high proportion of which are confined to just one of these regions. All of the forest regions have some relatively widespread threatened birds, but most of them also have groups of species with restricted ranges that are confined to just a small part of the forest region, in the Endemic Bird Areas (EBAs) and Secondary Areas (SAs) described by Stattersfield *et al.* (1998). The 20 wetland regions support between two and 21 threatened waterbirds, few of which are confined to a single wetland region, as Asia's threatened waterbirds tend to have relatively large ranges and many of them are migratory. Some of the habitat regions are entirely confined to a single country, but most are shared between several different countries.

The analysis and documentation of threatened species within habitat regions has a number of advantages:

- Many of the threatened birds in the habitat regions share broadly similar conservation needs, and it is therefore more efficient to consider the conservation of these 33 regions rather than to individually cover the 303 species that they support;
- This approach allows a direct focus on the major land-use issues affecting the habitats of threatened birds, thereby giving greater accessibility to users less immediately concerned with bird or biodiversity conservation issues;
- The habitat regions are accurately mapped, which makes it easier to relate the conservation of threatened birds with land-use planning processes (e.g. EIAs) and other projects (e.g. sustainable development and livelihood projects with a particular geographical scope);
- This analysis provides a clear geographical focus for policy and advocacy approaches to conservation (e.g. for advocacy to promote changes to national forestry policy in Cambodia);
- The habitat regions provide a framework to relate the conservation requirements of threatened birds with those of other taxonomic groups (e.g. threatened primates) and other area-based conservation priority-setting analyses (see below).

Several international conservation organisations have completed analyses to identify priority areas for conservation, which are compared to the forest, grassland and wetland regions in Table 1. BirdLife International's **Endemic Bird Areas**¹ are an integral part of the habitat region analysis of the current review—eight of the nine forest regions contain EBAs, as do single grassland and wetland regions. All six of Conservation International's (CI) **Hotspots**² in Asia overlap with one of the forest regions, the Indo-Burma Hotspot overlaps with part of a grassland region and five wetland regions, and the Western Ghats and

Sri Lanka, Sundaland and Wallacea Hotspots all overlap with a wetland region. All nine forest regions include one or more of the WWF **Global 200 Ecoregions**³, as do two of the three grassland regions, and 11 of the 20 wetland regions. The conservation actions proposed for threatened birds and their habitats in the following sections of this book therefore provide guidance for biodiversity conservation in all CI Hotspots and a high proportion of WWF Global 200 Ecoregions in the Asia region.

KEY SITES FOR THREATENED BIRDS

BirdLife International's Important Bird Areas (IBA) Programme is a world-wide initiative aimed at identifying, documenting and protecting a network of critical sites for birds. A site is recognised as an IBA only if it meets at least one of four internationally agreed, standardised criteria, is amenable to conservation action and management, and is large enough to support populations of the key bird species for which it was identified. One of the IBA criteria focuses on sites that regularly hold significant numbers of one or more globally threatened bird species. For many threatened bird species, especially those with restricted ranges and strict habitat requirements, effective protection and management of the IBAs which have been selected for them are key measures for their survival.

BirdLife's Asia network has already made considerable progress in the identification and documentation of the region's IBAs, and a directory of *Important Bird Areas in Asia* is scheduled for publication early in 2004. The preliminary lists of IBAs for each Asian country have been used in the current review to help identify the most outstanding sites for threatened birds in each forest, grassland and wetland region, and for seabirds. These 311 IBAs were selected (through consultation with regional experts) to ensure that every threatened species is covered by at least one IBA (although it was not possible to select sites for a few of the most poorly known birds). In general, the IBAs with the most extensive and highest quality natural habitats have been chosen, but in areas where natural habitats are fragmented it was sometimes necessary to select several smaller IBAs to provide a minimum level of coverage to the threatened species. In the wetland regions, IBAs have been chosen which regularly support globally outstanding (breeding, passage or wintering) congregations of threatened waterbirds. No account has been taken of the extent to which a site is protected or threatened.

Initiatives are already underway in many Asian countries for the conservation of IBAs. In Indonesia, Vietnam and Cambodia, IBAs have recently been designated as new protected areas. In the Philippines, the Haribon Foundation is working with local governments for the designation and management of IBAs under the Local Government Code legislation (see region F09). The concept of Site Support Groups (SSGs) is being developed by BirdLife's network in the Asia region, e.g. in Vietnam, Cambodia and Indonesia (see p.30).

¹ BirdLife's Endemic Bird Areas (EBAs) are defined as areas which encompass the complete ranges of two or more restricted-range species; these are defined as species with a total global breeding range estimated at below 50,000 km² (see ICBP 1992, Stattersfield *et al.* 1998);

² Conservation International's 25 Global Hotspots are regions that harbour a great diversity of endemic species and, at the same time, have been significantly impacted and altered by human activities. Plant diversity is the biological basis for hotspot designation: to qualify as a hotspot, a region must support 1,500 endemic plant species (0.5% of the global total), and have lost more than 70% of its original habitat (see Mittermeier *et al.* 1999);

³ WWF's Global 200 Ecoregions are a subset of the world's 1,000+ ecoregions. Ecoregions are large areas of relatively uniform climate that harbour a characteristic set of species and ecological communities, and the Global 200 includes the most biologically outstanding of these areas, selected to represent all terrestrial, freshwater and marine habitats (see Olson and Dinerstein 1998, Wikramanayake *et al.* 2002).

Figure 4. Key forest regions for threatened birds in Asia.

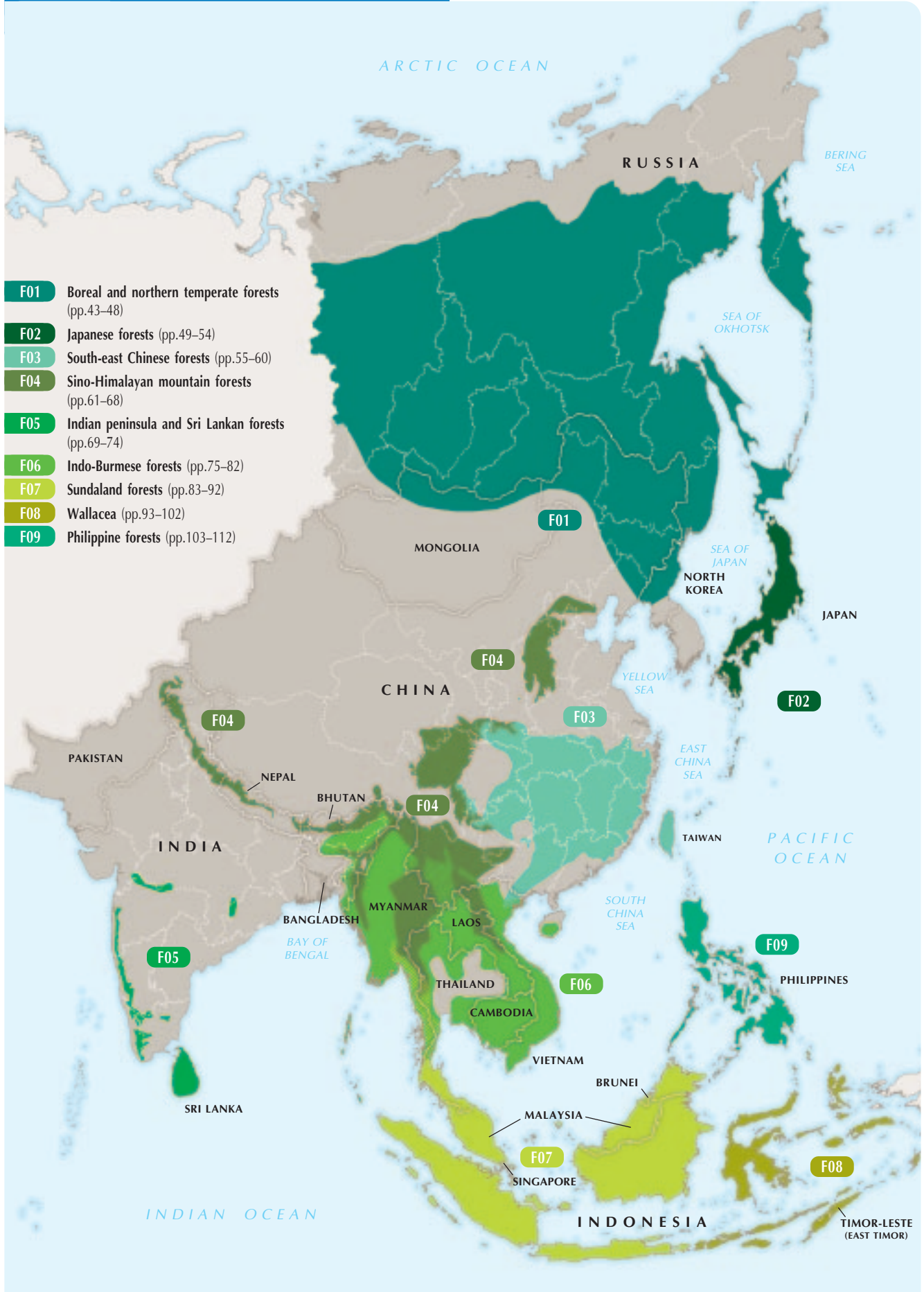


Figure 5. Key grassland regions for threatened birds in Asia.



Figure 6. Key wetland regions for threatened birds in Asia.

