

# A CONSERVATION STRATEGY FOR IBAs IN ASIA

Given the scale of threats faced by IBAs in Asia, and, in particular, the fact that 43% of the region's IBAs lie wholly outside of formal protected areas, there is a need for a comprehensive, region-wide programme of coordinated conservation action by governments, donors, civil society and the corporate sector. This section proposes the aim and targets of such a programme, and outlines the priority actions that must be taken to attain them. The conservation strategy for Asia's IBAs proposed here builds on *Saving Asia's Threatened Birds*, a guide for government and civil society prepared by the BirdLife Asia Partnership in 2003 (BirdLife International 2003), which presents detailed analyses of the conservation issues facing the key habitats for Asia's threatened birds, and formulates strategic solutions.

Despite the many challenges to biodiversity conservation in Asia, many of the conditions for successful implementation of a conservation strategy for the region's IBAs are already in place:

- There is solid foundation of accurate, up-to-date information on IBAs, and an objective, scientific basis for their identification.
- Existing conservation policies and protected area networks, including plans to address gaps in these networks, provide a good basis for IBA conservation.
- Government and donor commitments under multilateral environmental agreements provide a framework for the development and conservation of the IBA network.
- EIA legislation and donor environmental safeguard policies provide a framework for mainstreaming IBA conservation into other policy sectors.
- Traditional land-use and natural resource management practices of indigenous communities often provide a sound basis for community-based approaches to IBA conservation.
- There are a growing number of examples from within Asia and other regions of approaches to IBA conservation that work.
- There is growing civil society engagement in conservation in most countries in the region, increasing coverage of conservation issues in the region's media, and a burgeoning interest in birdwatching among the general public.

**OVERALL AIM: The conservation of all IBAs in Asia, as a contribution to the conservation of global biodiversity**

Attaining the overall aim will make a major contribution to the conservation of birds and biodiversity across the region. To this end, a coordinated programme of conservation action will be required. The necessary actions can be grouped under seven targets:

1. The IBA network formally recognised under multilateral environmental agreements, and by national governments, donors, civil society and the corporate sector.
2. Appropriate and effective site-based protection in place at every IBA.
3. The IBA network integrated into broader socio-political agendas by mainstreaming biodiversity into other policy sectors.
4. A constituency for IBA conservation built among a broad spectrum of stakeholders.
5. A cost-effective, stakeholder-based monitoring system in place for the IBA network.
6. A strong foundation of scientific knowledge in place for the development and protection of the IBA network.
7. An adequate, diverse and sustainable funding base in place to support the long-term conservation of the IBA network.

**TARGET 1. The IBA network formally recognised under multilateral environmental agreements, and by national governments, donors, civil society and the corporate sector**

Many Asian IBAs already have some form of recognition as important sites for conservation, through inclusion within protected area networks or national conservation strategies, or designation under multilateral environmental agreements. However, a significant proportion of IBAs lack any form of official recognition, as a result of which they are less likely to be prioritised for conservation investment or safeguarded against incompatible development. There is, therefore, a need for formal recognition of the entire IBA network by key stakeholders and under multilateral environmental agreements, as a foundation for coordinated, region-wide action.

**ACTION 1.1 Formally recognise the contribution of the IBA network to the conservation of global biodiversity**

Many stakeholders, including national governments, donor agencies, civil society organisations and private businesses, are in a position to make positive contributions to IBA conservation in Asia. These stakeholders should formally recognise the IBA network, as an initial step towards integrating it into their plans, policies and programmes. In addition, the protection of the IBA network should be formally recognised as a conservation target under multilateral environmental agreements. There are precedents for such a move; for instance, in 2002, the Sixth Conference of the Parties (COP-6) to the Convention on Biological Diversity (CBD) adopted the Global Strategy for Plant Conservation, which includes a global target to protect 50% of the most important areas for plant diversity by 2010.

**ACTION 1.2 Where they meet the criteria, designate IBAs under multilateral environmental agreements and other mechanisms**

In addition to formal recognition of the IBA network as a whole, individual IBAs that meet the relevant criteria should be designated under multilateral environmental agreements and other mechanisms that promote the conservation of important sites. These include: the Ramsar Convention, which provides for the designation of Ramsar Sites; the World Heritage Convention, which provides for the nomination of World Heritage Sites; the UNESCO Man and the Biosphere Programme, which provides for the designation of Biosphere Reserves; the Association of South-East Asian Nations (ASEAN) Declaration on Heritage Parks and Reserves, which provides for the designation of ASEAN Heritage Parks and Reserves; the Asia-Pacific Migratory Waterbird Conservation Strategy, which provides for the designation of flyway sites for migratory shorebirds, cranes and Anatidae; and the Convention on Migratory Species (CMS), which requires parties to conclude international agreements for migratory species that provide for a network of suitable areas of habitat (see Section on Relevance of IBAs to Multilateral Environmental Agreements and other Mechanisms, pages 5–7).

A major obstacle to designation of IBAs under multilateral environmental agreements and other mechanisms is the incomplete participation in multilateral environmental agreements by countries

in Asia. Most notable in this regard is the CMS, to which only five Asian countries are contracting parties (India, Mongolia, Pakistan, the Philippines and Sri Lanka) but there are also significant gaps in the participation of Asian countries in the Ramsar Convention and the Man and the Biosphere Programme. Where they are not already parties, countries in the Asia region should accede to these multilateral environmental agreements.

### **ACTION 1.3 Incorporate IBAs into NBSAPs and other national conservation plans**

One of the commitments of national governments that are party to the CBD is the preparation of National Biodiversity Strategies and Action Plans (NBSAPs). These documents set out national priorities for biodiversity conservation, and are used to guide conservation investment at the national level, particularly funding from the Global Environment Facility (GEF), one of the largest sources of conservation investment in the region. However, a recent study of 36 NBSAPs worldwide by BirdLife International found that only 28% effectively address the conservation and sustainable use of IBAs (BirdLife International 2004). Incorporation of IBAs into NBSAPs would strengthen them technically, by ensuring that a network of sites of international conservation importance are identified as priorities for conservation action.

### **TARGET 2. Appropriate and effective site-based protection in place at every IBA**

Once the IBA network has been formally recognised, it can then be used as a tool for conservation planning, to ensure that appropriate and effective site-based protection is put in place at every IBA. At many IBAs, the most appropriate and effective form of site-based protection will be inclusion within a formal protected area. However, at IBAs where formal protected area approaches are inappropriate or unfeasible, they should be complemented by alternative approaches, including management by local communities and voluntary agreements with private land owners.

### **ACTION 2.1 Review and, where appropriate and feasible, expand national protected area systems to address gaps in coverage of the IBA network**

In most countries in the region, formal protected area systems are the principle focus of site-based conservation action. Formal protected areas have proven effectiveness at conserving biodiversity (Bruner *et al.* 2001), and they typically have a high level of support from governments, donors and civil society<sup>1</sup>. Nevertheless, significant gaps remain in national protected area systems with regard to coverage of IBAs; this study shows that 43% of Asia's IBAs are currently unprotected. Therefore, these systems should be reviewed and, where feasible and appropriate, expanded, in order to address gaps in coverage of the IBA network. Such expansion would assist governments to meet commitments under Article 8(a) of the CBD<sup>2</sup>, the COP-7 Decision on Protected Areas<sup>3</sup>, and Millennium Development Goal 7<sup>4</sup>.

### **ACTION 2.2 Strengthen management of formal protected areas that overlap with IBAs**

More than two fifths of IBAs in Asia (as defined in this directory) are fully included within formal protected areas, and, with the

expansion of national protected area systems, this proportion can be expected to increase. In many parts of the region, however, protected area status does not guarantee protection of an IBA. This is because weak protected area management often means that major direct threats to biodiversity are not effectively addressed, and, as a result, a significant proportion of Asia's protected areas are little more than "paper parks". The factors contributing to weak protected area management are well documented, and include:

- Limitations in capacity, training and equipment.
- Insufficient funding for operational management from government budgets.
- Limited political will to enforce management regulations.
- Unclear or inappropriate management regulations.
- Failure to effectively engage key stakeholders, particularly local communities, in management.
- Insufficient integration of protected areas into land-use and development planning.

Consequently, one of the priority actions for the Asian IBA network should be strengthening management of formal protected areas. Over recent decades, national governments, donors and conservation organisations have invested significant resources in this area, and many lessons have been learnt about the approaches that work and the circumstances they work under. While there exists great variation in the needs of protected areas, actions that could be taken to strengthen their management include:

- Recruitment and training of protected area staff.
- Development of management frameworks that engage local communities.
- Demarcation of boundaries with the consent and participation of local communities and other key stakeholders.
- Delineation and intensive management of strictly protected core areas.
- Improvement of coordination among enforcement bodies.
- Preparation of scientifically based management plans focused on biodiversity conservation objectives.
- Management of tourism and recreation to maximise benefits and minimise negative impacts.
- Awareness raising about the values of protected areas among decision makers and the general public.
- Integration of protected area objectives into land-use planning.

Moreover, if formal protected areas are to make a major contribution to reducing the rate of biodiversity loss in the region, there will need to be a massive increase in levels of financing, from both national and international sources (see Target 7).

### **ACTION 2.3 Where appropriate, develop non-formal approaches to site-based protection of IBAs**

In most countries in Asia, it is neither feasible nor appropriate to expand formal protected area systems to cover all IBAs. There is, therefore, a need to develop alternative approaches to site-based protection of IBAs, to complement formal protected area systems. Such approaches could include community-managed conservation areas, private protected areas and voluntary agreements with land-owners<sup>5</sup>. In some Asian countries, alternative approaches to formal protected areas have already been widely adopted, while, in other countries, there are examples of successful approaches that can be replicated. Although the most appropriate approach will vary from site to site, standardised methodologies and "toolkits" of possible approaches could be developed, to assist conservation practitioners to develop non-formal approaches to site protection.

1 Under Article 8, each contracting party to the CBD has a commitment to "establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity".  
 2 Article 8(a) of the CBD commits governments to establish "a system of protected areas or areas where special measures need to be taken to conserve biological diversity".  
 3 The COP-7 Decision on Protected Areas sets a target for governments to establish "a global network of comprehensive, representative and effectively managed national and regional protected area systems".  
 4 One of the indicators for Millennium Development Goal 7 (ensure environmental sustainability) is "land area protected to maintain biological diversity".  
 5 Recognition and support for such approaches were called for by the Fifth World Parks Congress in its message to the CBD in 2003.

**TARGET 3. The IBA network integrated into broader socio-political agendas by mainstreaming biodiversity into other policy sectors**

At many Asian IBAs, site-based protection efforts are being undermined by incompatible development projects and patterns of land use, such as road construction, agricultural intensification, coastal reclamation and aquacultural expansion. Consequently, there is a need to integrate the IBA network into broader socio-political agendas, through “mainstreaming” biodiversity into other policy sectors, particularly agriculture, forestry, fisheries, mining, transport, energy and tourism<sup>6</sup>. By addressing threats to biodiversity at source rather than mitigating impacts, such an approach will complement and support site-based conservation action, and should prove relatively cost effective.

**ACTION 3.1 Integrate IBAs into safeguard policies of national governments and donors**

Several of the major threats to biodiversity at IBAs are related to government and donor policies and programmes. In many instances, these threats do not derive from these policies and programmes *per se* but from a failure to fully mitigate their impacts on biodiversity. Governments and donors have already introduced a number of policies that safeguard sites of high conservation importance from incompatible development, most notably national EIA legislation and donor environmental safeguard policies. However, there remain a number of obstacles to their effective implementation, including a lack of consensus on what constitutes a site of high conservation importance. To support their effective implementation, IBAs should be integrated into these safeguard policies, through, for example, adoption of the IBA network as a standard source of information on sites of high conservation value (see Section on Relevance of IBAs to Donor Safeguard Policies, pages 7–8). There is also a need for monitoring of the application of safeguard policies with regard to IBAs, to ensure that they are applied consistently.

**ACTION 3.2 Reduce subsidies, taxes and other incentives that promote natural resource and land-use practices incompatible with IBA conservation**

Another root cause of biodiversity loss at IBAs in Asia is subsidies, taxes, import duties and other financial incentives that promote natural resource and land-use practices incompatible with IBA conservation. For example, subsidies for the production and export of commodities can promote conversion of natural forest to plantations of oil palm, coffee, rubber and other cash crops. Similarly, subsidies for tree planting can promote conversion of natural habitat into monocultures of exotic tree species, or afforestation of inter-tidal mudflats with mangrove. Such incentives arise because of the inability of existing markets to capture the “true” value of natural resources (Pearce and Moran 1994). Incentives that promote natural resource and land-use practices incompatible with IBA conservation should be removed. In support of this, further research is needed on the impacts of particular incentives on biodiversity, and the development and promotion of appropriate policy responses based on the results.

**ACTION 3.3 Promote natural resource and land-use practices compatible with IBA conservation, through subsidies, incentive schemes, certification and other market mechanisms**

In addition to reducing natural resource and land-use practices incompatible with IBA conservation, there is a need to promote viable alternatives. A number of natural resource and land-use practices compatible with IBA conservation have already been introduced in parts of the region, for example sustainable forest management, agro-forestry, improved livestock management, aquacultural models based on natural productivity, and integrated

pest management. As well as being compatible with IBA conservation, such practices can deliver benefits to local communities and national economies. In order to promote such practices, subsidies, incentive schemes, certification schemes and other market mechanisms should be developed<sup>7</sup>. These mechanisms could include subsidies to upland farmers for maintaining forest cover above specified levels, certification schemes for seafood products from sustainable aquaculture, or low-interest loans to farmers wishing to invest in fewer, better quality livestock.

**ACTION 3.4 Strengthen the legal framework for IBA conservation**

Throughout the region, national legislation, including protected area, wildlife protection and environmental protection legislation, provides the legal framework for IBA conservation. Often, however, there are shortcomings in this legislation, not least the significantly lower protection typically afforded to important sites for conservation outside of formal protected areas. Consequently, the legal framework for IBA conservation should be strengthened<sup>8</sup>.

Within the European Union (EU), the EU Birds<sup>9</sup> and Habitats<sup>10</sup> Directives provide the legal framework for IBA conservation, by providing for the designation and protection of Special Protection Areas and Special Areas of Conservation. A similar framework could be developed in Asia, either at the national level, or by sub-regional inter-governmental organisations, such as ASEAN.

**ACTION 3.5 Use IBAs as anchors for landscape-level conservation**

While securing the integrity of individual IBAs would make a major contribution to the conservation of the IBA network as a whole, individual IBAs are not always sufficient to support long-term viable populations of the bird species they are important for. In addition, isolated IBAs may be more susceptible to the impacts of global climate change, if species are less able to “track” changes in habitat distribution. In many cases, therefore, habitat connectivity should be maintained or established among IBAs through landscape-level conservation. One option, which would make a major contribution to many of the objectives in the IBA conservation strategy, would be to adopt IBAs, along with other existing networks of internationally important sites for biodiversity conservation, as the basis for an Asian Ecological Network (see Box 1).

**TARGET 4. A constituency for IBA conservation built among a broad spectrum of stakeholders**

The entire Asian IBA network can be effectively conserved only with the support of stakeholders at all levels, including government agencies, donor agencies, civil society organisations, private businesses, local people and local authorities. Such support is essential to the success of site-based conservation action, and is also a prerequisite for the policy changes that are needed to address the root causes of biodiversity loss at IBAs.

6 Under Article 6, each contracting party to the CBD has a commitment to “integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.”

7 Under Article 11, each contracting party to the CBD has a commitment to “adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity”.

8 Under Article 8, each contracting party to the CBD has a commitment to “develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations”.

9 Directive 79/409/EEC on the Conservation of Wild Birds, issued on 2 April 1979.

10 Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, issued on 21 May 1992.



**Box 1. Towards an Asian Ecological Network.**

Ecological Networks provide a means of integrating sites into broader land- and seascapes in a way that enables the long-term maintenance of species populations and ecological and evolutionary processes, while reconciling biodiversity conservation with sustainable human use of landscapes. Ecological networks have been developed in several parts of the world (Bennett and Wit 2001), with the most advanced being in Europe, where the Pan-European Ecological Network and a number of national ecological networks are being developed.

There is currently no legislative or institutional basis for an Asian Ecological Network. However, one could be developed within the framework of a pan-regional strategy, which could be adopted by a wide range of parties, including national governments, sub-regional inter-governmental organisations, donor agencies, NGOs and private businesses. Such a strategy would not be a binding agreement but a set of agreed principles that could be adopted on a voluntary basis, with each party deciding how and to what extent they would incorporate the principles into their policies and programmes.

Following the adoption of a strategy, the development of the Asian Ecological Network could take place through a two-phase process. The first phase would involve the recognition and protection of a network of internationally important sites for biodiversity conservation. Initially, this network could comprise existing site networks, such as IBAs, sites in the Asian Wetland Inventory and flyway sites, but, later, it could be expanded by the identification of other internationally important sites for conservation, such as Important Plant Areas (Anderson 2002) or key biodiversity areas (Eken *et al.* in press). The second phase, which would take place over the longer term, would involve the establishment of an ecological network, anchored on the network of important sites for biodiversity conservation, through the definition of corridors, buffer zones and restoration areas. This network could begin as national plans, developed in consultation with stakeholders at all levels, which could gradually be converted into on-the-ground reality, as elements of the network were secured by formal protected area designation or through non-formal approaches to site protection.

**Box 2. The Site Support Group approach.**

“Site Support Group” (SSG) is a generic term used to describe groups of local stakeholders who share a common commitment to the conservation of an IBA. Typically, SSGs are networked together to promote exchange of experience and skills, and are supported by conservation NGOs. There are no strict criteria governing SSG membership but, in many cases, members are volunteers. Stakeholder motivation may be diverse: commitment of SSG members may derive from the economic, cultural, religious, recreational or livelihood-supporting values of the site and its resources. SSG activities vary according to local circumstances and priorities, but often include monitoring of biodiversity and threats, implementing education and awareness programmes, and developing ecotourism or other income-generating activities with benefits for local livelihoods and biodiversity.

SSGs can be established at IBAs regardless of their protection status. At formally protected IBAs, SSGs can complement the work of protected area management staff. Where appropriate, this relationship can be formalised, and include participation of the SSG in protected area management. At IBAs that are not designated as formal protected areas, SSGs can support local authorities, local people and/or private land owners to conserve biodiversity, or even take responsibility for site management themselves. In addition to supporting site management, SSGs are frequently well positioned to campaign against immediate threats to biodiversity or to lobby for change in policies that undermine IBA conservation.

SSGs can be an effective way of engaging stakeholders in IBA conservation at the site level but will not always be the only approach adopted nor, in some cases, the most appropriate (for instance, where the socio-political environment is not supportive of the establishment of grassroots organisations). Networking SSGs can also face many practical difficulties, and can require significant resources. However, by remaining flexible and embracing existing community-based natural resource management structures, the SSG approach has great potential for application in Asia.

**ACTION 4.1 Engage stakeholders in IBA conservation at the network and site levels**

Across Asia, governments are committed to mainstreaming biodiversity and environmental sustainability at all levels<sup>11</sup>. At the same time, local civil society is evolving, and taking an increasingly active role in biodiversity conservation. Moreover, the principles of environmental and social responsibility are being adopted by the corporate sector. There exist, therefore, great opportunities to engage a broad spectrum of stakeholders in IBA conservation, at both the network and site levels.

At the network level, there are many ways in which stakeholders could become engaged in IBA conservation, including through membership of national NGOs, participation in national bird conservation networks, or development of site conservation partnerships among government, civil society and private sector organisations. In particular, the IBA network presents an opportunity to increase awareness of and involvement in conservation among expanding urban populations in the region; a key factor in generating public support for conservation.

At the site level, individuals could become engaged in IBA conservation through membership of nature clubs, community-based organisations or local NGOs, while organisations could become engaged through corporate sponsorship of IBAs or NGO-protected area partnerships. One approach to engaging local stakeholders that has proven successful at IBAs in other regions, and has been piloted in parts of Asia, is the Site Support Group approach (see Box 2).

**ACTION 4.2 Establish and strengthen networks of stakeholders engaged in IBA conservation**

The diversity of threats facing the IBA network means that there is a need to pool resources and expertise in order to address them. At the same time, the diversity of approaches to IBA conservation currently being adopted means that there is also a need to document lessons learned, identify and replicate successful approaches, and

develop models of best practice. Consequently, networks of stakeholders engaged in IBA conservation should be established and strengthened.

Such networks could comprise a diversity of individuals and/or groups, including local NGOs, community-based organisations, SSGs, academics and protected area managers, with coordination provided by a national or international NGO or other appropriate organisation. The functions of these networks would depend upon the needs and capacities of their members but could potentially include exchange of information, technical expertise and experience within and between networks, development and replication of best practice approaches to IBA conservation, or coordinated action on campaigning or awareness raising. In addition, by including both grassroots organisations and organisations working at the national level, these networks would be able to feed information about the impacts of government and donor plans and policies at the site level into policy at the national level. One example of an existing IBA stakeholder network in Asia is the Indian Bird Conservation Network (see Box 3).

**Box 3. The Indian Bird Conservation Network (IBCN).**

The development of the IBCN has been coordinated by the Bombay Natural History Society, the BirdLife partner in India. The IBCN currently comprises 800 individual members (mostly academics and conservationists) and 75 NGO members, coordinated at the state and national levels. IBCN members were actively involved in the identification and documentation of the Indian IBAs included in this directory, and are increasingly engaged in local site monitoring and action. IBCN members receive periodic training in IBA survey and monitoring, and fundraising. In addition, small grants are made available to members, to support survey, research and conservation outreach projects. Exchange of experience and information among IBCN members takes place through various channels, including a regular newsletter, *Mistnet*.

<sup>11</sup> Under Article 10, each contracting party to the CBD has a commitment to “integrate consideration of the conservation and sustainable use of biological resources into national decision-making”.

### **ACTION 4.3 Strengthen capacity for IBA conservation at all levels**

In many parts of the region, government agencies mandated to conserve biodiversity and other stakeholders engaged in IBA conservation, such as local NGOs, local authorities, private businesses and community-based organisations, face limitations in their capacity to conserve sites. If the potential of these stakeholders to contribute to IBA conservation is to be fully realised, individual, institutional and systemic capacity for IBA conservation should be strengthened at local, national and regional levels. There are many areas in which capacity for IBA conservation could be strengthened, including site management, research, monitoring, communications, institutional development and fundraising. Capacity strengthening could be provided by national or international NGOs, government conservation agencies or other institutions with experience of effective approaches to IBA conservation from the Asia region or elsewhere.

### **ACTION 4.4 Develop approaches to IBA conservation that deliver significant socio-economic benefits to local communities**

IBAs are not only important for birds and biodiversity but are often also important for the livelihoods of local communities. However, local communities do not always enjoy the potential socio-economic benefits of IBAs, either because their natural resources are exploited by outsiders or because protected area management regimes prohibit potentially sustainable uses. In these cases, not only may the potential for IBAs to contribute to poverty alleviation not be realised but also opportunities to build local community support for their conservation may be lost.

Consequently, approaches to IBA conservation that deliver socio-economic benefits to local communities without compromising conservation objectives should be developed<sup>12</sup>. These approaches could include:

- Protected area regulations that allow sustainable uses of natural resources with low impacts on wildlife populations and natural habitats.
- Community forest management or joint forest management.
- Direct payment schemes that reward local communities for conservation action.
- Ecotourism initiatives that involve and deliver benefits to local communities
- Income generating schemes with direct linkages to reducing threats to biodiversity at IBAs.

### **ACTION 4.5 Raise awareness of the biological and socio-economic values of IBAs, and the threats that they face, among all sections of society**

Too often, decisions about use of a natural resource are based only on a narrow assessment of its cash value, without a full consideration of other values, such as dispersed ecosystem services and existence values. This applies as much to land-use and development planning decisions made by local and national governments as to natural resource use and land-use decisions made by local communities. There is, therefore, a need for a wider realisation of the biological and socio-economic values of IBAs, so that informed decisions can be made about their management<sup>13</sup>. In addition, raising awareness of the biological and socio-economic values of IBAs and the threats that they face is essential to building a constituency for their conservation among a broad spectrum of stakeholders.

At the site level, awareness of the biological and socio-economic values of IBAs could be raised through school-based education programmes, targeted awareness activities for local stakeholders, visitor interpretation centres or local media coverage. Where SSGs have been established, they will often be well positioned to initiate or support such activities. At the network level, appropriate activities could include national media coverage, awareness programmes for the general public, the corporate sector and/or key decision makers, or economic valuation of the ecosystem services performed by IBAs. Some of these activities could support actions aimed at integrating IBAs into policies and plans of governments and donors (see Target 3).

### **TARGET 5. A cost-effective, stakeholder-based monitoring system in place for the IBA network**

As an increasing amount of conservation action is taken for Asia's IBAs by a growing number of stakeholders, there is an increasing need to develop a monitoring system for the IBA network. Such a system could provide early warning of threats, enabling prompt conservation action to be taken in response. It could also provide a means of measuring conservation success, thereby supporting the development and replication of effective approaches to IBA conservation, and providing an objective measure of the impacts of conservation investment.

### **ACTION 5.1 Establish a region-wide IBA monitoring system, and link to policy, site management and site safeguard**

A prerequisite for effective conservation action for the IBA network is accurate, up-to-date data on the nature and severity of threats to biodiversity (pressure), the status of bird populations and habitats (state), and the type and effectiveness of conservation action (response) at IBAs. To this end, a region-wide monitoring system should be established, comprising site-based monitoring at individual IBAs, linked to national and regional mechanisms to manage data on the IBA network as a whole<sup>14</sup>. Such a system could generate information to guide policy development at the national and regional levels, as well as supporting site safeguard policies, by providing early warnings about threats to biodiversity at sites. Furthermore, an IBA monitoring system could facilitate adaptive management of individual IBAs, by identifying priority conservation actions and evaluating their effectiveness.

Given the scale of the IBA network and the finite resources available for its conservation, any monitoring system should be cost effective and engage as broad a spectrum of stakeholders as possible. The growing site-based constituency for IBA conservation presents an opportunity to develop cost-effective approaches to IBA monitoring involving local stakeholders, such as protected area managers, SSGs, local NGOs or community-based organisations (see Target 4). Moreover, IBA monitoring approaches on-going in Africa (Bennun *et al.* in press) and under development for Europe present opportunities to learn from experience elsewhere and replicate best practice.

### **ACTION 5.2 Develop and adopt indicators of conservation success based on IBAs**

Currently, there exist few recognised global indicators of conservation success, as a result of which, it is very difficult to measure progress towards attaining conservation goals, such as the CBD target, endorsed by the World Summit on Sustainable Development, of reducing the current rate of biodiversity loss by

<sup>12</sup> Under Article 10, each contracting party to the CBD has a commitment to “protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements”.

<sup>13</sup> Under Article 13, each contracting party to the CBD has a commitment to “promote and encourage understanding of the importance of, and the measures required for, the conservation of biological diversity, as well as its propagation through media, and the inclusion of these topics in educational programmes”.

<sup>14</sup> A framework for national and regional mechanisms to manage data on the Asian IBA network already exists in the form of the BirdLife World Bird Database, which has been adopted as a standard throughout much of the region.

2010, or Millennium Development Goal 7 of ensuring environmental sustainability by 2015. Indicators of conservation success can also help guide policy and conservation investment, by identifying approaches to conservation that work.

It is widely recognised that, as a group, birds have many features that make them good indicators of overall biodiversity (Burgess *et al.* 2002). Similarly, IBAs can be used to monitor trends in biodiversity at global, regional and national levels. Therefore, IBA-based indicators relevant to targets set by multilateral environmental agreements should be developed and adopted.

#### **TARGET 6. A strong foundation of scientific knowledge in place for the development and protection of the IBA network**

If the utility of the IBA network as a guide to conservation action is to be maximised, it must be based on a strong foundation of scientific knowledge. In particular, it must continue accurately to reflect site-based conservation priorities in the region, and be based upon standard, internationally recognised criteria and credible data. Moreover, it is important to maximise national and local ownership of IBA networks, through increased involvement of national and local researchers and conservationists in their development. The data presented within this directory represent a good starting point of scientific knowledge on IBAs but must be kept up to date and supplemented, in order to increase both the quality and the depth of the information base for IBA conservation<sup>15</sup>.

#### **ACTION 6.1 Conduct surveys to fill gaps in coverage of the IBA network and keep the network up to date**

As described in Overview of Results section (pages 14–25), there remain a number of gaps in the coverage of the Asian IBA network. In order to fill these gaps, the first step should be identification of additional IBAs in those parts of Asia where coverage of the existing network is incomplete. In addition to surveys to fill gaps in coverage of the IBA network, periodic surveys should also be undertaken to keep the network up to date. In particular, surveys should focus on providing additional information on bird diversity, and recording changes in habitats, bird populations and threats at IBAs.

#### **ACTION 6.2 Conduct detailed ecological and socio-economic studies at IBAs**

Evaluation of a site against the IBA criteria only represents the first level of information required to guide site-based conservation action. For IBAs where they are not already available, detailed, site-specific data are required on the ecology and distribution of key bird species, the extent and condition of key bird habitats, the impacts and root causes of threats to biodiversity, and other issues of direct relevance to site protection. At such IBAs, detailed ecological and socio-economic studies should be conducted, and the results should be used to guide site management.

#### **TARGET 7. An adequate, diverse and sustainable funding base in place to support the long-term conservation of the IBA network**

Many of the approaches to IBA conservation proposed in this strategy are cost-effective, because they:

- Engage a diverse spectrum of stakeholders.
- Build upon existing conservation investments, such as protected area systems.
- Address threats to biodiversity at source not only mitigate impacts.
- Empower local stakeholders to develop low-cost, locally appropriate solutions to conservation problems.

However, given the scale of the IBA network in Asia, the funding required for its conservation is significantly greater than that currently committed. Consequently, the development and protection of the IBA network will require an adequate and sustainable funding base, drawn from a greater diversity of sources than at present.

#### **ACTION 7.1 Use IBAs to guide allocation of existing conservation resources**

As existing conservation resources are limited, it is vital that they are allocated in the most effective manner possible. The IBA network provides an excellent tool for ensuring that resources for site-based protection are focused on sites of international importance for biodiversity conservation. The IBA network can be used to guide donor investment priorities or allocation of resources within national protected area systems. For example, qualification as an IBA is one of the criteria used to prioritise Vietnamese protected areas for support from the Vietnam Conservation Fund.

#### **ACTION 7.2 Expand and develop conservation financing mechanisms**

National governments, both within and outside of the Asia region, have commitments to finance biodiversity conservation under the CBD<sup>16</sup>, and these are reiterated in NBSAPs and other national policy documents. While a number of new conservation financing mechanisms have been developed since the CBD was adopted, including the GEF, the Global Conservation Fund (GCF) and the Critical Ecosystem Partnership Fund (CEPF), the need for conservation funding in most countries outstrips supply, often by one or more orders of magnitude. For example, the Fifth World Parks Congress recently estimated that the existing global protected areas system has an estimated annual budget shortfall of US\$25 billion. Consequently, there is a pressing need to expand existing conservation financing mechanisms and, where appropriate, establish new ones. Given the scale of funding required, the principle source will need to be governments (Balmford and Whitten 2003, RSPB 2004). However, civil society, donor agencies and the corporate sector are also in a position to make significant contributions to such mechanisms.

New conservation financing mechanisms that could be developed in the Asia region include trust funds, through which donors make lasting contributions to conservation of a site or in a country with a single investment, for example the Bhutan Trust Fund for Environmental Conservation. New mechanisms could also include debt-for-nature swaps, whereby a country's debts are cancelled in return for the commitment of domestic resources to environmental protection. Conservation taxes are another mechanism with potential application in Asia. Such taxes have been introduced in a number of countries in other regions of the world, including Costa Rica, where taxes on fuel and ecosystem services are invested in the protection of natural forests. New conservation financing mechanisms could also include ecosystem services payments, whereby those who benefit from the dispersed ecosystem services of natural habitats, for example carbon sequestration or water catchment protection, pay for their maintenance. One example with potential application in Asia is the system of carbon offset payments proposed under the Kyoto Protocol.

The main obstacles to expanding existing conservation financing mechanisms and developing new ones are political. These political obstacles are linked to disparities between the financial costs and benefits of exploitation of natural resources, with the stakeholders in the strongest position to fund conservation (governments, the

<sup>15</sup> Under Article 12, each contracting party to the CBD has a commitment to “promote and encourage research which contributes to the conservation and sustainable use of biological diversity, particularly in developing countries”.

<sup>16</sup> Under Article 20 of the CBD, developed country parties undertook to “provide new and additional financial resources to enable developing country parties to meet the agreed full incremental costs to them of implementing measures which fulfil the obligations of this convention”.



corporate sector and citizens of developed countries) also being the principle beneficiaries of exploitation. Therefore, efforts to expand and develop conservation financing mechanisms for IBA conservation should be linked to actions to raise awareness of the full biological and socio-economic value of IBAs, including economic valuation (see Action 4.5).

**ACTION 7.3 Resource IBA conservation via government and donor programmes in the natural resources sector**

While, in many Asian countries, investment in biodiversity conservation is limited, governments and donors are often investing heavily in the natural resources sector, to address other objectives, including poverty alleviation, water catchment protection or flood mitigation. These investments include the Return Slope Farmland to Forests Programme of the government of China, which compensates farmers for releasing farmland for conversion into forest and subsidises tree planting, and the Five Million Hectares Reforestation Programme of the government of Vietnam, which aims to restore forest cover to 1945 levels by 2010. Such programmes present opportunities for providing significant resources for IBA conservation. For instance funds could be directed towards activities that restore habitat at IBAs, establish habitat connectivity between IBAs, or alleviate pressure on the natural resources of IBAs by providing alternative sources of income for local communities.

**ACTION 7.4 Secure corporate support for IBA conservation**

The reputation of the corporate sector with regard to environmental protection is often poor, as many businesses are viewed as pursuing short-term financial gains at the expense of the environment. However, there is a growing realisation among the corporate sector of the business case for paying attention to environmental sustainability. As a result, an increasing number of businesses are developing social and environmental responsibility policies, which provide an increasing number of opportunities to secure corporate support for IBA conservation.

One form of corporate support for IBA conservation could be sponsorship of an IBA by a private company; for instance, where an IBA is linked in some way to a company's business operations,

or where protection of an IBA could be a mitigation measure for the environmental impacts of a corporate investment, such as a mine. Alternatively, corporate support for IBA conservation could take the form of adoption of environmentally sustainable business practices, through, for example, the development of best practice guidelines or voluntary codes of conduct in such sectors as forestry, fisheries, agriculture and tourism. Furthermore, environmentally sensitive investments could be adopted by private financial institutions, or new markets for environmentally friendly products could be developed.

**REFERENCES**

- ANDERSON, S. (2002) *Identifying Important Plant Areas*. London: Plantlife International
- BALMFORD, A. AND WHITTEN, T. (2003) Who should pay for tropical conservation, and how could the costs be met? *Oryx* 37: 238-250.
- BENNETT, G. AND WIT, P. (2001) *The development and application of ecological networks: a review of proposals, plans and programmes*. AIDEnvironment and IUCN.
- BENNUN, L., MATIKU, P., MULWA, R., MWANGI, S. AND BUCKLEY P. (in press) Monitoring Important Bird Areas in Africa: towards a sustainable and scaleable system. *Biodiversity and Conservation*.
- BIRDLIFE INTERNATIONAL (2003) *Saving Asia's threatened birds: a guide for government and civil society*. Cambridge, UK: BirdLife International.
- BIRDLIFE INTERNATIONAL (2004) *State of the world's birds 2004: indicators for our changing world*. Cambridge, UK: BirdLife International.
- BRUNER, A. G., GULLISON, R. E., RICE, R. AND DE FONSECA, G. A. B. (2001) Effectiveness of parks in protecting tropical biodiversity. *Science* 291: 125-128.
- BURGESS, N. D., RAHBK, C., LARSEN, F. W., WILLIAMS, P. AND BALMFORD, A. (2002) How much of the vertebrate diversity of sub-Saharan Africa is catered for by recent conservation proposals? *Biological Conservation* 107: 327-339.
- EKEN, G., BENNUN, L., BROOKS, T., DARWALL, W., FISHPOOL, L., FOSTER, M., KNOX, D., LANGHAMMER, P., MATIKU, P., RADFORD, E., SALAMAN, P., SECHREST, W., SMITH, M. L., SPECTOR, S. AND TORDOFF, A. (in press) Key Biodiversity Areas as site conservation targets. *BioScience*.
- PEARCE, D. AND MORAN, D. (1994) *The economic value of biodiversity*. London: Earthscan Publications.
- RSPB (2004) *Financial resources under the Convention on Biological Diversity (CBD) and protected areas*. Position statement for the Seventh Conference of the Parties to the CBD, 9-20 February 2004, Kuala Lumpur, Malaysia.

# DATA PRESENTATION

The country and territory inventories which form the major part of this book have been prepared in a standardised format, consisting of the sections that are explained and illustrated below, with maps to show the location and relative size of the IBAs. One or more photographs are used to illustrate the chapters, selected to show sites that are typical of the country or territory, or of particular interest or importance to conservation.

## HEADER

Each country and territory account has a header which gives statistics on: land area; human population (with density per km<sup>2</sup>); number of IBAs; total area of IBAs; and the numbers of IBAs officially protected, partially protected and unprotected.

## KEY HABITATS AND BIRDS

This section highlights those species and groups of species for which the country or territory is particularly important and which trigger IBA-selection criteria (see Methodology). Details are given on globally threatened bird species (see Appendix 1), Endemic Bird Areas (EBAs) and Secondary Areas (SAs) (see Appendix 2), and the distribution of biomes (see Appendix 3) within the country or territory.

## CONSERVATION INFRASTRUCTURE AND PROTECTED AREAS SYSTEM

An outline of the most important nature-conservation legislation in the country or territory, particularly laws or programmes relevant to site protection and management, together with the names of the ministries responsible for their implementation. Information is given on the protected areas system within the country or territory, including how much of the land area is officially protected.

## OVERVIEW OF THE INVENTORY

An outline of the IBA network in the country or territory, that gives information of the total area covered by the IBAs (also given as a percentage of national land area) and the numbers of IBAs that qualify under the various criteria. Details are given on the coverage afforded by the IBAs to globally threatened species, restricted-range species in EBAs and SAs, biome-restricted assemblages and congregatory species.

## CONSERVATION ISSUES

This section includes a summary of the main threats to IBAs in the country or territory, with details of any major conservation issues that are relevant to particular sites. In some cases conservation measures are proposed here to address specific threats, but general measures relevant to site protection and management throughout the Asia region are covered in the Conservation Strategy section. The coverage afforded to the IBA network by the protected areas system in the country or territory is evaluated, with proposals for new protected areas to address any significant gaps.

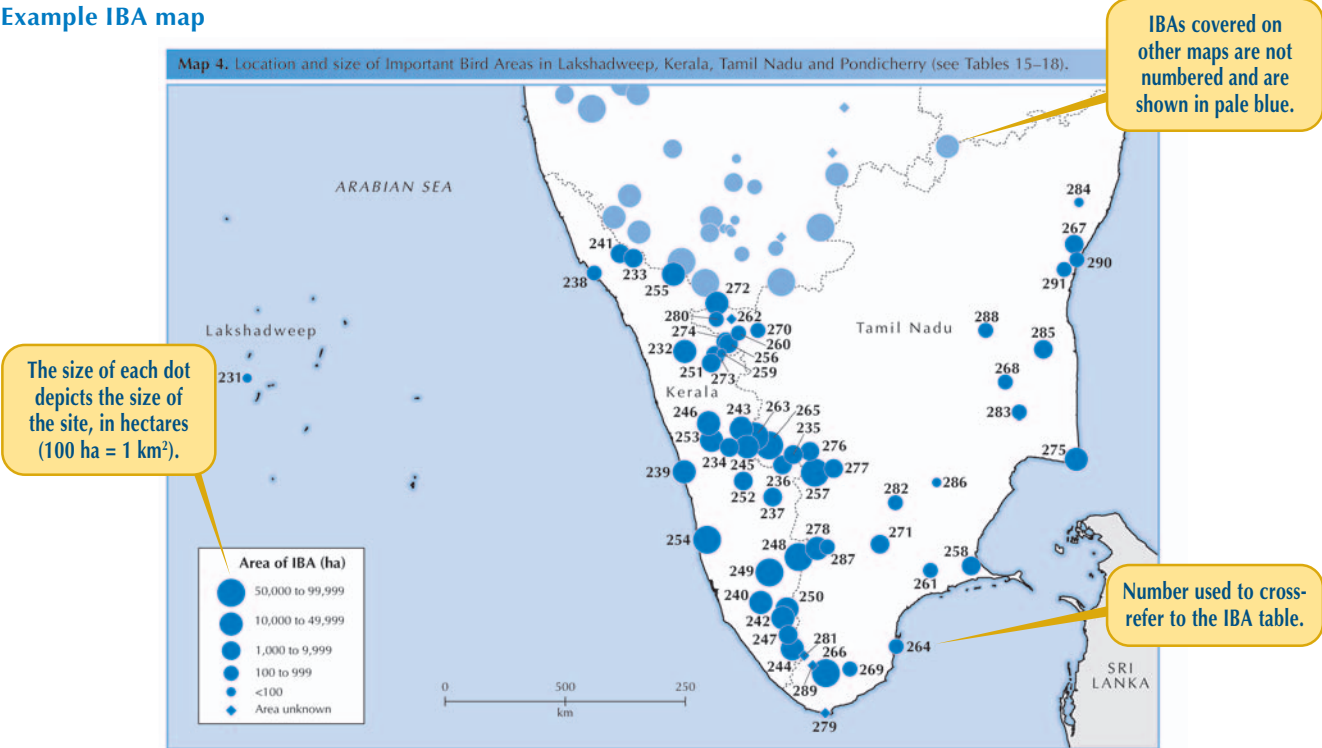
## SOURCES OF IBA DATA

The sources of the information presented in the country or territory chapter are given, including the principal national compilers and data contributors and any IBA publications.

## REFERENCES

Citations are listed of any publications used in the compilation of the introductory sections outlined above.

### Example IBA map





**Example IBA table**

Summary data on every IBA is given in a table, or, in the case of larger countries, in separate tables for each province.

Number used to cross-refer to the IBA map.	Name of the site, as used internationally.	Central coordinates of the site.	Altitudinal range of the IBA, in metres above sea level.	Area of the site in hectares (100 ha = 1 km <sup>2</sup> ).	The main habitat classes present in the IBA.
Table 16 ... continued. Important Bird Areas in Kerala (see Map 4).					
246	Peechi – Vazhani Wildlife Sanctuary	Coordinates 10°37'N 76°24'E	Altitude 186–922 m	Area 12,500 ha	Habitats Forest
	Admin region Thrissur				
	Threatened species <i>Brachypteryx major</i> , <i>Schoenicola platyura</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				
247	Peppara Wildlife Sanctuary	Coordinates 8°46'N 77°9'E	Altitude 90–1,717 m	Area 5,300 ha	Habitats Forest; Grassland
	Admin region Thiruvananthapuram				
	Threatened species <i>Columba elphinstonii</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				
248	Periyar Wildlife Sanctuary	Coordinates 9°27'N 77°15'E	Altitude 150–2,019 m	Area 77,700 ha	Habitats Forest; Wetlands
	Admin region Idukki				
	Threatened species <i>Gyps bengalensis</i> , <i>Gyps indicus</i> , <i>Aquila clanga</i> , <i>Gallinago nemoricola</i> , <i>Columba elphinstonii</i> , <i>Brachypteryx major</i> , <i>Schoenicola platyura</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				
249	Ranni Reserve Forest	Coordinates 9°19'N 76°59'E	Altitude 46–1,920 m	Area 87,738 ha	Habitats Forest; Grassland
	Admin region Quilon				
	Threatened species <i>Columba elphinstonii</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				
250	Shendurney Wildlife Sanctuary	Coordinates 8°59'N 77°8'E	Altitude 200–1,500 m	Area 10,032 ha	Habitats Forest
	Admin region Quilon				
	Threatened species <i>Falco naumanni</i> , <i>Gallinago nemoricola</i> , <i>Columba elphinstonii</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				
251	Silent Valley National Park	Coordinates 11°8'N 76°26'E	Altitude 658–2,383 m	Area 8,952 ha	Habitats Forest
	Admin region Palakkad				
	Threatened species <i>Columba elphinstonii</i> , <i>Brachypteryx major</i> , <i>Garrulax cachinnans</i> , <i>Schoenicola platyura</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				
252	Thattakkad Wildlife Sanctuary	Coordinates 10°7'N 76°44'E	Altitude 35–523 m	Area 2,516 ha	Habitats Forest
	Admin region Idukki				
	Threatened species <i>Columba elphinstonii</i> , <i>Brachypteryx major</i> , <i>Schoenicola platyura</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				
253	Vazhachal Forest Division	Coordinates 10°28'N 76°26'E	Altitude 200–1,300 m	Area 41,300 ha	Habitats Forest
	Admin region Ernakulam; Thrissur				
	Threatened species <i>Columba elphinstonii</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				
254	Vembanad Lake	Coordinates 9°36'N 76°23'E	Altitude Unknown	Area 79,400 ha	Habitats Coastline; Forest; Grassland; Wetlands
	Admin region Alappuzha; Ernakulam; Kottayam; Pathanamthitta				
	Congregatory waterbirds <i>Phalacrocorax niger</i> , <i>Anas querquedula</i> , <i>Chlidonias hybrida</i>				
255	Waynaad Wildlife Sanctuary	Coordinates 11°54'N 76°5'E	Altitude 640–1,158 m	Area 34,444 ha	Habitats Forest
	Admin region Wayanad				
	Threatened species <i>Gyps bengalensis</i> , <i>Gyps indicus</i> , <i>Falco naumanni</i> , <i>Gallinago nemoricola</i> , <i>Columba elphinstonii</i> , <i>Garrulax cachinnans</i> , <i>Schoenicola platyura</i> , <i>Parus nuchalis</i>				
	Endemic Bird Areas 123: Western Ghats				
	Biomes AS10: Indian peninsula tropical moist forest				

The criteria by which a site qualifies as an IBA (A1 = globally threatened species; A2 = restricted-range species; A3 = biome-restricted assemblages; A4 = globally important congregations of birds; see Methodology for definitions of these criteria).

Scientific names of congregatory waterbird or seabird species are given, in taxonomic order, if the site meets A4i or A4ii respectively (lists of congregatory waterbirds and seabirds that occur in the Asia region are given in Appendices 4a and 4b).

Scientific names of threatened species are given, in taxonomic order, if the site meets A1 (the globally threatened species that occur in the Asia region are listed in Appendix 1).

Name(s) of Endemic Bird Areas or Secondary Areas are given if the site meets A2 (details on Asian EBAs and SAs and lists of restricted-range species are given in Appendix 2).

Protected area status of the IBA. Where the site has one or more international designations (e.g. Ramsar Site), these are also given (using codes).

Name(s) of biomes are given if the site meets A3 (details on Asian biomes and lists of biome-restricted species are given in Appendix 3).