

MEETING THE 2020 BIODIVERSITY TARGETS

Action and monitoring based on birds



Meeting the 2020 biodiversity targets: action and monitoring based on birds

The world's biodiversity is being lost faster than ever. As we destroy it, we lose its capacity to deliver the ecosystem services such as crop pollination, climate regulation and freshwater provision upon which we all depend. Concerted and coordinated action by governments, business and society is urgently needed in order to halt the extinction of species and stem the loss of natural habitats. The world's governments have made commitments through the Convention on Biological Diversity (CBD) to tackle this issue, and the CBD has proposed 20 targets for 2020 in order to frame and focus action.

Birds are better known than any other comparable group of organisms, and we have unparalleled information about which species are the closest to extinction, the threats they face, actions needed and critical sites (Important Bird Areas) that need safeguarding. These data can help to focus and target actions to tackle biodiversity loss. Furthermore, as birds are sensitive to environmental change, popular to watch, and relatively easy to monitor, indicators based on bird data are very useful for tracking progress in addressing the biodiversity crisis.

In this booklet, we provide examples for 12 of the CBD targets of how birds can help to focus actions to meet these targets, and how data from birds can help to monitor success.

BirdLife and the CBD

The CBD is the most comprehensive international agreement on biodiversity conservation and its objectives encompass all the strategic objectives of BirdLife International. Its implementation is primarily undertaken by governments at the national level. The BirdLife International Partnership of 114 national environmental organisations is therefore a valuable partner for the CBD Parties. As the CBD International Thematic Focal Point Clearing-House Mechanism for birds, BirdLife shares widely its detailed information on birds to help national governments, businesses and others to target actions to reduce biodiversity loss and track progress in this, and to implement and monitor the CBD programmes of work.

CBD strategic goal

CBD 2020 target

Summarised from Report of the Ad Hoc Open-Ended Working Group on Review of Implementation of the Convention on the Work of Its Third Meeting; document UNEP/CBD/COP/10/4, June 2010

A. Address underlying causes

1. Everyone is aware of the value of biodiversity and the steps they can take to conserve and use it sustainably
2. Biodiversity is integrated into national and local development and planning processes
3. Harmful incentives are eliminated or reformed and positive incentives are developed and applied
4. Governments and businesses have achieved or implemented plans for sustainable production and consumption

B. Reduce pressures and promote sustainable use

5. Loss, degradation and fragmentation of forest and other habitats is at least halved
6. Overfishing and destructive fishing practices are eliminated
7. Agriculture, aquaculture and forestry are managed sustainably
8. Pollution is reduced to levels that are not detrimental to ecosystem function and biodiversity
9. Invasive alien species are identified, prioritised and controlled or eradicated, and measures are in place to control pathways of introduction
10. Pressures on corals and other vulnerable ecosystems impacted by climate change or ocean acidification are minimised

C. Safeguard ecosystems, species and genes

11. Terrestrial, inland-water, coastal and marine areas, especially those of particular importance for biodiversity, are conserved through comprehensive, representative and well-connected systems of effectively managed protected areas
12. Extinction and decline of threatened species is prevented and their status improved
13. Loss of genetic diversity in crop, livestock and wild relatives is halted

D. Enhance benefits from biodiversity and ecosystems

14. Ecosystems that provide essential services and livelihoods are safeguarded and/or restored, with equitable access
15. Ecosystem resilience and the contribution of biodiversity to carbon stocks is enhanced, through conservation and restoration, including 15% of degraded ecosystems
16. Access to genetic resources is enhanced and benefits shared

E. Enhance implementation through planning, knowledge management and capacity building

17. All parties have implemented effective national biodiversity strategies and action plans
18. Traditional knowledge and practices are protected and their contribution to biodiversity conservation is enhanced
19. Knowledge and technologies relating to status, trends and value of biodiversity are improved and shared
20. Human resources and financing for implementing CBD has increased.

The CBD Strategic Goals, 2020 targets, and how birds can contribute

How birds can help focus action and monitor success

Birds are inspiring, engaging and popular. Tracking the numbers of people engaging in activities that celebrate birds or count them can be used to monitor awareness of biodiversity. **... see page 2**

Data from birds can be used to ensure this is done effectively, and bird population trend indicators are being used by many governments to monitor the degree to which development is sustainable. **... see page 3**

Broad-scale land-use policies need to incorporate biodiversity concerns in order to 'keep common species common'. Birds can help to identify the specific measures needed in particular habitats and to monitor their impact. **... see page 8**

Fisheries bycatch threatens many species, including seabirds, yet simple measures can substantially reduce this problem. The distribution and status of the relevant species can be used to identify the ocean areas where the problem is greatest, and measure progress in tackling it. **... see page 9**

Birds can help identify how to make farming biodiversity-friendly, and their population trends are used by many governments for monitoring the sustainability of agriculture. **... see page 10**

Data from birds can help to set priorities for eradications, and the Red List Index can help to monitor the impacts of invasive species. **... see page 11**

Protected areas will play a key role in helping biodiversity cope with climate change, but will increasingly need to be managed adaptively. Projected and documented climate change effects on birds can help to frame such management and monitor impacts. **... see page 12**

Important Bird Areas (IBAs) form a global network of Key Biodiversity Areas that is being used to target the priority locations for additional or expanded protected areas. IBA monitoring helps to track the condition and management effectiveness of such protected areas. **... see pages 6–7**

The actions required to prevent any more birds from going extinct are well documented. The Red List Index can be used to monitor the scale of the extinction crisis and our success in addressing it. **... see pages 4–5**

Effectively conserving the global network of key sites for bird conservation (IBAs) would also safeguard substantial provision of ecosystem services and local livelihoods. **... see page 13**

Restoring degraded forests can enhance their value for birds and other biodiversity, while improving the ecosystem services and the livelihood values they provide. **... see page 14**

Conservation priorities for birds are better known than for other groups, so they can help target national activities on the most urgent issues, species and places. **... see page 15**

BirdLife manages unparalleled data on the world's birds and IBAs. Monitoring provision of, and access to, this information can help track knowledge-sharing. **... see page 16**

Improving awareness of biodiversity

Birds provide a wonderful window on nature. Being colourful, spectacular and with beautiful songs, it is no surprise that millions of people around the world watch or feed birds.

Tracking the numbers of people engaging in activities that celebrate birds or count them can be used to monitor awareness of biodiversity.

→ CBD target

Everyone is aware of the value of biodiversity

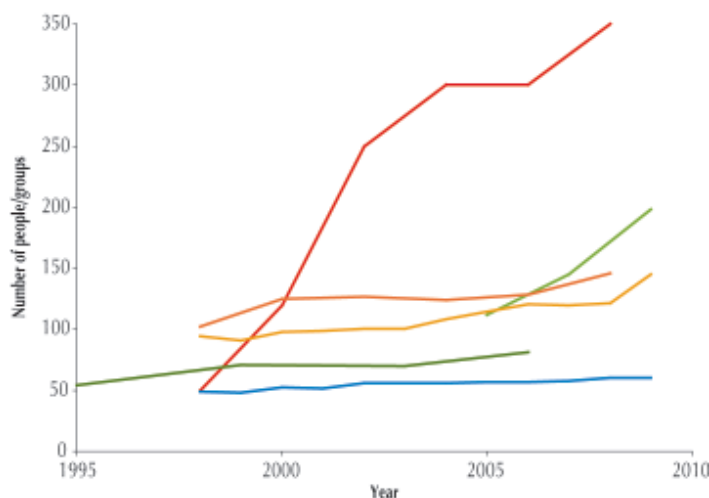
Achieving the target: examples of success

Birds are spectacularly popular. For example, hundreds of thousands of people participate in BirdLife's World Bird Festival, a month-long celebration of birds around the world. Over 2.3 million people are members of the BirdLife Partnership, and over 80 million people in the USA watch or feed birds, while almost one in three people in the UK do so.



Using birds to track progress

Monitoring the numbers of people participating in bird environmental activities provides simple measures of progress in raising awareness about biodiversity. Relevant metrics are diverse, including the numbers of people who watch or feed birds, are members of bird organisations, visit wildlife reserves and environmental events, or contribute to bird monitoring programmes and conservation activities.



Measures of public engagement with biodiversity through birds

Source: BirdLife International unpublished data; USDA Forest Service (2007) *National survey on recreation and the environment: bird watching trends in the United States, 1994–2006*. Athens, Georgia: USDA Forest Service; Birdwatching Fair data kindly provided by Martin Davies/RSPB.

- Membership of Guyra Paraguay (BirdLife in Paraguay)
- Number of IBA Local Conservation Groups in Africa
- Membership of the Netherlands Society for the Protection of Birds (VBN, BirdLife in the Netherlands) (thousands)
- Visitor attendance at the British Birdwatching Fair (hundreds)
- Number of birdwatchers in USA (millions)
- Number of participants in Christmas Bird Counts (thousands)

Image: Birds provide an easy way for people to engage with nature and learn about environmental issues.

(TATTERS)/FLICKR

Mainstreaming biodiversity into all policies

Biodiversity concerns need to be incorporated into land-use planning and across all sectors of government. Data from birds can be used to ensure this is done effectively, and to monitor the degree to which development is sustainable.

→ CBD target

Biodiversity is integrated into national development and planning

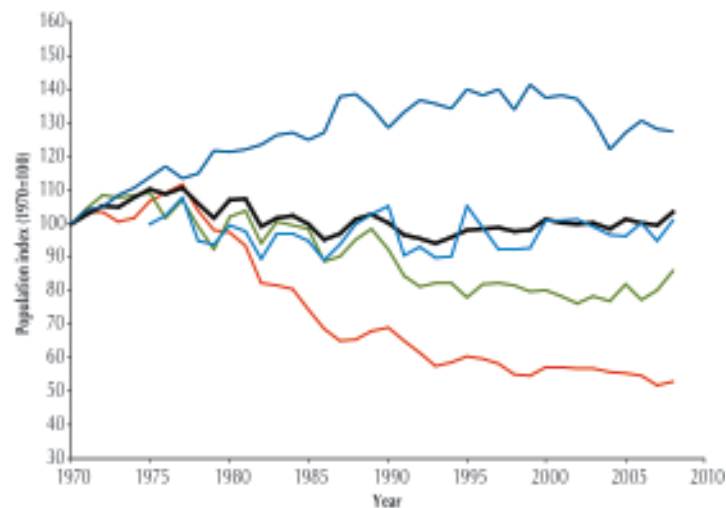
Achieving the target: examples of success

Mongolia has planned its mining, infrastructure and tourism development to ensure that it does not damage the country's critical natural habitats. This has been achieved through incorporating Important Bird Areas (IBAs: key sites for the conservation of the country's birds) into land-use planning. By carefully planning the location of roads, mines and other infrastructure to avoid damaging IBAs, Mongolia can ensure that it develops sustainably.



Using birds to track progress

The population trends of common countryside birds can be used to monitor the state of the environment and as a measure of sustainable development. For example, the UK government has adopted 'Sustainable Development Indicators' that include bird population trends alongside measures of, for example, levels of poverty and healthy lifespans.



The UK Sustainable Development Indicator for wild bird population trends

Source: RSPB/BTO/JNCC/DEFRA.

- Seabird species (19)
- All species (114)
- Water and wetland species (26)
- Woodland species (38)
- Farmland species (19)

Image: Carefully planning industrial and energy developments to minimise further impacts on the wetland habitats of the Critically Endangered Siberian Crane will be essential to ensure its survival. (JAAP SCHELVIS/WWW.RAREBIRDSYEARBOOK.COM)

Preventing extinctions

Over 1,200 bird species are threatened with extinction, with 190 Critically Endangered species close to being lost forever. However, there are numerous inspiring success stories to show that we have the tools and knowledge to help them recover, providing adequate resources and political will are applied. Being better known than any comparable group of organisms, birds provide data for practical, quantitative assessment of our success or failure in preventing extinctions.

→ CBD target

Extinction and decline of threatened species is prevented

Image left: Rimatarā Lorikeet was recently reintroduced from the tiny island of Rimatarā in French Polynesia to Atiu in the southern Cook Islands, where the species had been driven extinct two centuries ago through over-exploitation for feathers.

(PHIL BENDER)

Image right: Birds are relatively easy to survey compared to many other types of wildlife, so indicators based on bird data are useful for tracking biodiversity trends.

(M. K. POULSEN/BIRDLIFE)

Achieving the target: examples of success

While extinction is a natural process, human activities are driving species extinct at 100–1,000 times the natural rate, with 150 bird species lost since 1500, including 19 in the last 30 years. However, these numbers would have been far higher were it not for successful efforts to prevent extinctions. Without dedicated conservation efforts, at least 33 bird species would have gone extinct in the last century, including 16 during the last 15 years.

Through BirdLife's Preventing Extinctions Programme, over 50 'Species Guardians' have been appointed around the world. These local individuals or organisations each take responsibility for a particular Critically Endangered bird species and implement the suite of urgent actions needed to stave off extinction and help their populations to recover. By tackling threats such as habitat loss, unsustainable hunting and invasive species, plus implementing recovery actions such as translocation, nest-site provision and awareness raising, Species Guardians are playing a major role in averting even more extinctions.

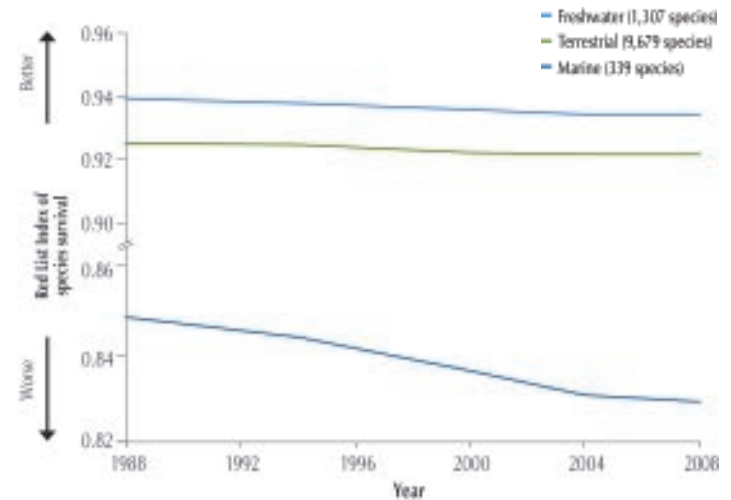


Using birds to track progress

The Red List Index (RLI) shows trends in the status of the world's birds, based on the movement of species through categories of extinction risk on the IUCN Red List. It illustrates the net effect of conservation successes (when species are downlisted to lower categories of extinction risk) and biodiversity losses (when species are uplisted to higher categories owing to increasing threats and declining populations). It shows that the status of bird species globally has declined steadily over the last two decades in freshwater and terrestrial ecosystems, but marine species are most threatened and declining fastest. At the national scale too, RLIs can be used to track trends in species' status, particularly for countries with a high proportion of endemic species (see example of Madagascar) or for which multiple comparable red lists have been produced at the national scale.

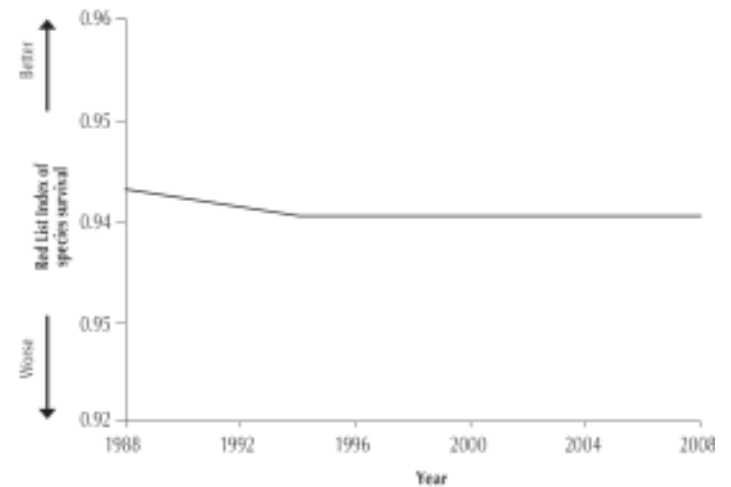
RLI for birds worldwide in different ecosystems

Source: Analysis of data held in BirdLife's World Bird Database (2010).



RLI for birds in Madagascar

Source: Randrianasolo *et al.* (in prep).



Protecting critical sites

Important Bird Areas (IBAs) represent a global network of over 10,000 critical sites for biodiversity conservation, identified nationally using globally standardised criteria.

Effectively protecting and managing such sites would make a major contribution to combating biodiversity loss, with benefits to birds, other biodiversity and local communities. IBA monitoring provides a simple yet powerful way of tracking progress in biodiversity conservation on the ground.

→ CBD target

Terrestrial, inland-water, coastal and marine areas, especially important biodiversity areas, are conserved through effectively managed protected areas

Image left: Data on the distribution of threatened and other priority bird species have been used to identify Important Bird Areas in nearly all countries, from montane forests (pictured here in Timor-Leste) to coastal wetlands.
(COLIN TRAINOR)

Image right: The establishment of Timor-Leste's first national park protected important populations of 26 bird species restricted to Timor and neighbouring islands including Cinnamon-banded Kingfisher.
(PAUL PEARSON)

Achieving the target: examples of success

As IBAs are identified in a standardised way, using the best available data, they can be used to help target efforts to expand and improve the effectiveness of protected area networks. For example, in 2002, all 29 previously unprotected IBAs in Tunisia were declared reserves by the Tunisian Government. Meanwhile, Timor-Leste recently established its first national park (Nino Konis Santana, covering 1,240 km²), linking together three IBAs and protecting both coral reefs and forest, thereby affording protection to threatened bird species including Yellow-crested Cockatoo (Critically Endangered) and Timor Green-pigeon (Endangered).



Location of IBAs of global significance

Source: Analysis of data held in BirdLife's World Bird Database (2010).





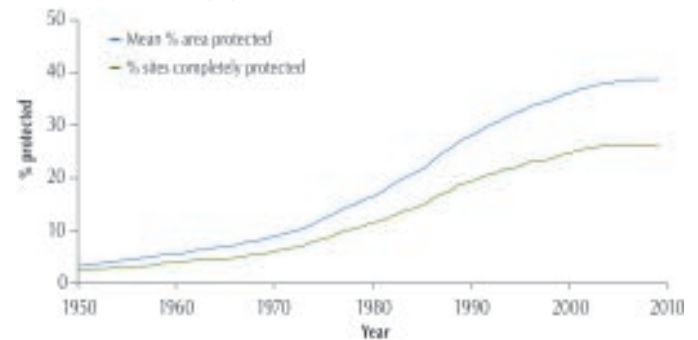
Using birds to track progress

IBAs represent a baseline set of Key Biodiversity Areas (the most important sites for biodiversity conservation) for almost every country in the world. Measuring the degree to which they are covered by protected areas provides a useful metric to judge progress in reducing biodiversity loss. However, only 39% of the area of each IBA is protected on average, and only 26% of sites are completely protected. Considerably greater efforts are therefore needed to target expansion of protected areas at these critical sites for biodiversity.

Designated protected areas require adequate funding and effective management, and again IBA monitoring data can be used to assess this. IBAs across the world are monitored using BirdLife's standardised and simple methods for scoring their condition (based on the key species and habitats within them), the pressures (threats) impacting the site, and the conservation responses in place (such as action plans and management activities). IBA monitoring carried out by local groups, volunteers, government staff and BirdLife Partners generates data for IBA indices that provide powerful tools for quantifying conservation efforts and measuring their impact.

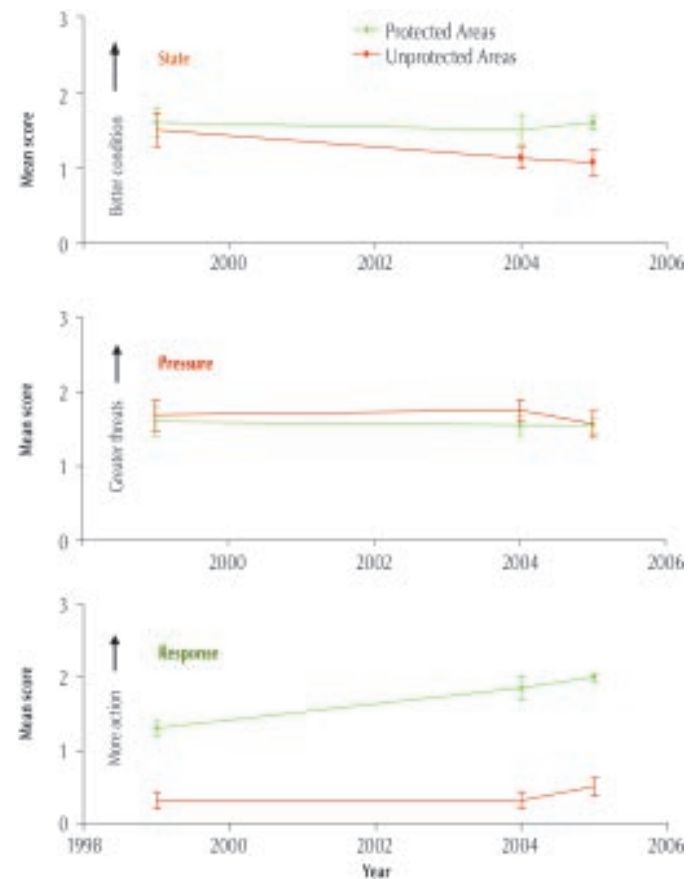
Coverage of IBAs by protected areas

Source: Butchart *et al.* (in prep).



IBA indices for Kenya, showing trends in the state of IBAs, pressures upon them, and responses in place

Source: Mwangi *et al.* (in press) *Bird Conserv. Internat.*



Reducing habitat loss and degradation

Destruction and degradation of natural habitats is one of the major drivers of biodiversity loss. Broad-scale land-use policies should incorporate biodiversity concerns in order to 'keep common species common'. Birds can help to identify the specific measures needed and to monitor their impact.

→ CBD target

Loss, degradation and fragmentation of forest and other habitats is halved

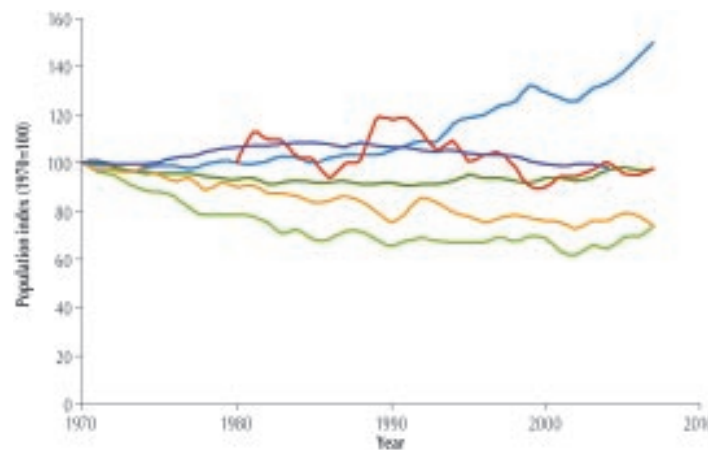
Achieving the target: examples of success

Waterbird populations in North America have increased by over 50% in the last four decades owing to concerted wetland protection, management and restoration (although they still remain below historical levels). Nearly one million km² of wetlands and associated upland habitats are protected in North America, providing benefits to birds and other biodiversity, as well as people.



Using birds to track progress

Wild Bird Indices show that woodland bird populations in Europe have undergone a shallow decline since 1980, grassland and aridland bird populations in North America have declined by over a quarter in the last four decades, and Arctic bird populations have showed shallow declines following increases in the 1970s. By integrating the impacts of multiple pressures on the environment, birds are useful indicators of the overall condition of different habitats.



Wild Bird Indices for forest and other habitats in Europe and North America, and bird population trends in the Arctic

Source: EBCC/RSPB/BirdLife International/Statistics Netherlands; US NABCI Committee (2009); McRae *et al.* (2010) *Arctic Species Trend Index*. CAFF International, Iceland.

- North American wetlands
- North American forests
- North American grasslands
- North American aridlands
- European woodlands
- Arctic habitats

Image: Snow Goose is among a suite of North American waterbirds whose populations have increased, showing that effective habitat management, among other measures, can reverse biodiversity declines.

(RINUSBAAK/DREAMSTIME.COM)

Fishing sustainably

The world's fish stocks are increasingly over-harvested, with some now reduced beyond recovery.

Such unsustainable exploitation also harms other biodiversity. Many seabirds—albatrosses in particular—are threatened with extinction owing to bycatch in fisheries, yet simple and cost-effective measures can substantially reduce this problem.

CBD target

Overfishing and destructive fishing practices are eliminated

Achieving the target: examples of success

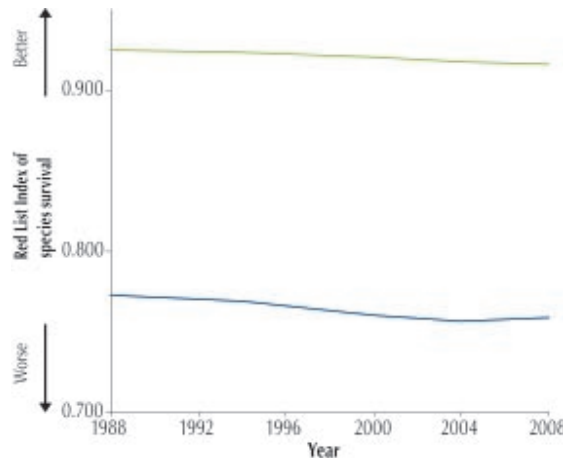
Seabirds may be harmed by fisheries through reduced food supplies, entanglement in nets and, in particular, by being killed on long-line fishing hooks. The latter can be avoided through simple and effective mitigation measures (such as using bird-scaring lines, improving line-weighting or setting lines at night). Priority areas have been identified using data from remotely tracked seabirds together with maps

of longline fishing effort. Some fisheries management organisations are making progress in mitigating seabird bycatch: e.g. four of the five tuna commissions have requirements for vessels to use appropriate measures and have established systems to monitor compliance.



Using birds to track progress

The sustainability of fisheries in terms of their impacts on birds can be monitored through tracking seabird population trends. The Red List Index (RLI) for seabirds shows trends in their extinction risk. It shows significant declines in the status of both coastal and pelagic species over the last 20 years, but the latter are on average much more highly threatened, in large part owing to fisheries impacts.



The RLI for seabirds

Source: Analysis of data held in BirdLife's World Bird Database (2010).

— Coastal seabirds (146 species)
— Pelagic seabirds (193 species)

Image: Simple modifications to fishing techniques can help to prevent the unnecessary bycatch of seabirds such as the Black-browed Albatross, which is threatened by the impacts of commercial longline fisheries in particular.

(PETER EXLEY, RSPB)

Farming sustainably

Farming provides the food we depend upon, but unsustainable practices threaten much biodiversity in the open countryside. Birds are useful indicators for identifying how to make farming practices biodiversity-friendly, and for monitoring the impact of agriculture on wildlife.

→ CBD target

Agriculture, aquaculture and forestry are managed sustainably

Achieving the target: examples of success

Wildlife-friendly farming can be encouraged through 'agri-environment schemes' whereby farmers are paid to implement measures such as planting wildflowers along field margins. These can have a significant positive impact on farmland birds. For example, leaving small patches of bare ground within autumn-sown cereals appears to provide substantial benefits to Eurasian Skylark at very low cost to farmers.

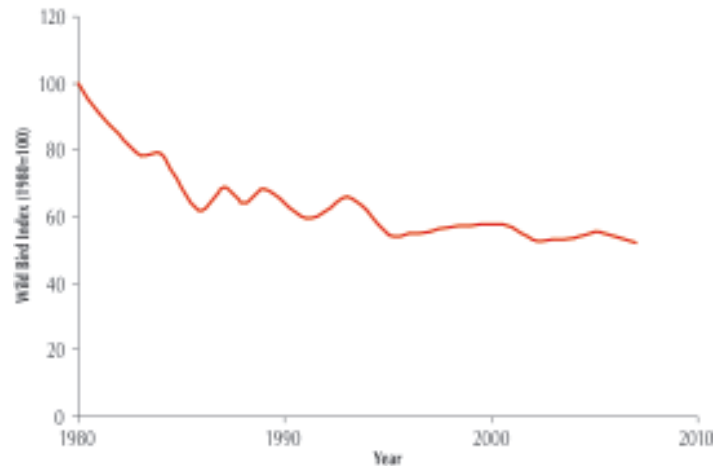


Using birds to track progress

Birds are useful indicators of the state of the environment as they are sensitive to environmental change, their ecology is largely well-known and they are generally practical to survey and count. Wild Bird Indices, showing the average population trends of species characteristic of farmland, are used in a number of individual countries to monitor the condition of the countryside.

Wild Bird Index for 36 farmland bird species (as used by the European Union to monitor agricultural sustainability)

Source: EBCC/RSPB/BirdLife International/Statistics Netherlands.



Wild Bird Index for 14 Swedish farmland bird species (as used by the Swedish government for the same purpose)

Source: Lindström et al. (2010) *Monitoring population changes of birds in Sweden. Annual report for 2009.* Lund University, Sweden.

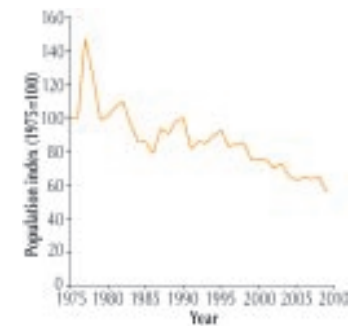


Image: Incorporating simple measures into agricultural practices can have substantial benefits for declining farmland birds such as the Eurasian Skylark. Population trends of such species are a useful indicator of the condition of agricultural habitats for biodiversity. (CHRIS GOMERSALL/RSPB-IMAGES)

Tackling invasive aliens

When invasive alien species are deliberately or accidentally introduced by humans, they can be highly damaging to native biodiversity and have substantial economic costs. However, we have the technology and tools to control or eradicate many of them, often with impressive results. Data from birds can help to set priorities for such actions, and monitor their impacts.

→ CBD target

Invasive alien species are prioritised and controlled or eradicated, and introduction pathways are controlled

Achieving the target: examples of success

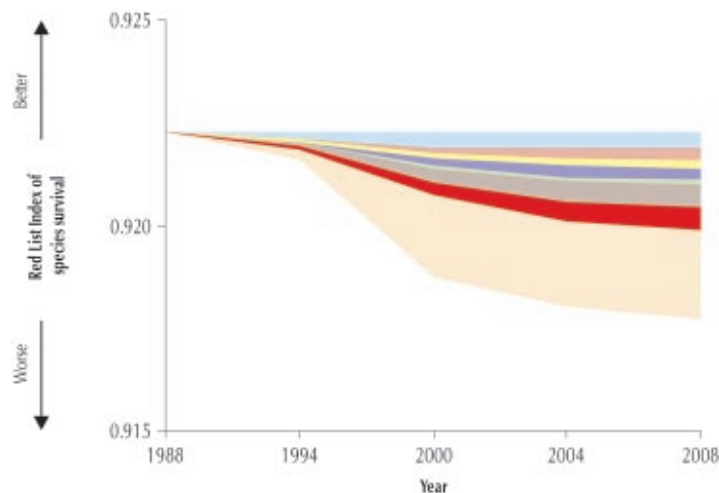
Advances in technology and improved techniques have led to numerous successful eradications of invasive species, particularly from islands, and often with spectacular benefits for native species. For example, Clipperton Island, located c.1,000 km south-west of Mexico, formerly held tens of thousands of nesting seabirds.

Introduced pigs devastated the ecosystem, and all but eliminated the seabirds. Removing the pigs has led to a dramatic recovery, and the island now supports c.40,000 Masked Boobies and 20,000 Brown Boobies. Eradicating rats (which probably became established following shipwrecks in 1999 and 2001) is the next priority.



Using birds to track progress

The Red List Index (RLI) illustrates the net impact of different drivers on the overall extinction risk of the world's birds. It shows that, over the last two decades, invasive alien species have had a net negative impact, despite actions to tackle them benefiting many native bird species. This means there is still an urgent need to eradicate, control and prevent the spread of invasive species. Data from birds on the distribution of threats from invasive species can help prioritise where to focus such actions.



RLI for the impacts of different drivers of biodiversity loss on the world's birds

Source: McGeoch *et al.* (2010) *Divers. Distrib.* 16: 95–108.

Image: Rodents such as House Mouse (shown here) and Black Rat have devastated many island bird populations, but their eradication can lead to spectacular recoveries of native species.
(ROSS WANLESS)

Minimising climate change impacts

Helping biodiversity to cope with climate change will require robust measures to reduce greenhouse gas emissions, coupled with efforts to maximise the resilience of ecosystems and facilitate their adaptation to climate change impacts. Adaptation will require, in particular, effective management of protected area networks. Information from projected and documented effects on birds can help to frame adaptive management of sites and monitor impacts on species.

→ CBD target

Pressures on vulnerable ecosystems impacted by climate change are minimised

Achieving the target: examples of success

Protected areas will remain the cornerstone of conservation efforts, but climate change will result in shifts in the distributions of species of conservation concern, leading to turnover in the occurrence of species within particular parks and reserves. Protected areas will therefore need to be managed adaptively in the face of such dynamics. Modelling of climate change impacts on the distribution of birds within Important Bird Areas (IBAs) is providing critical information for site managers, with an adaptive management framework for Africa based on this approach available (see map below), and more in preparation for other regions.

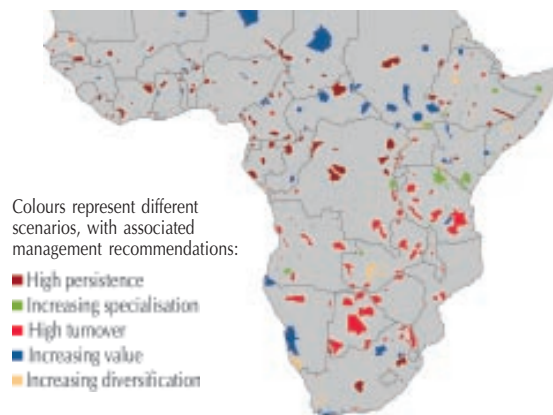
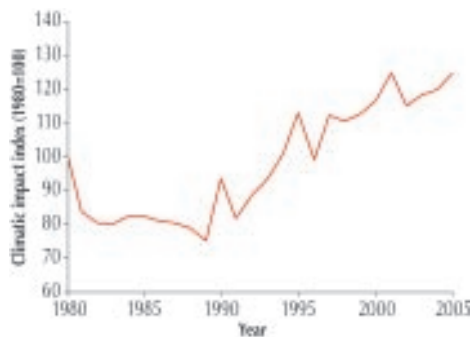


Using birds to track progress

Combining systematic bird population monitoring with independent projections of climate change effects on bird distributions allows indicators to be calculated illustrating the impact of climate change on biodiversity. In Europe since about 1990, species expected to gain range in response to climatic change have shown positive population trends, and those expected to lose range have shown negative trends. The Climatic Impact Index combines these results and demonstrates an increasing impact of climate change on European birds in the last two decades.

The Climatic Impact Index for European bird populations, showing the degree to which population trends of 122 species have responded in the direction expected from climate change

Source: Gregory *et al.* (2009) *Public Libr. Sci. ONE* 4: e4678.



Management scenarios for African IBAs, based on the turnover of species projected under climate change

Source: Hole *et al.* (in review).

Image: Modelling climate change impacts on bird species such as Black-faced Apalis helps inform how protected area networks can best be managed in a changing climate.
(GREG AND YVONNE DEAN, WORLDWILDLIFEIMAGES.COM)

Safeguarding ecosystem services

Important Bird Areas (IBAs) are critical sites for biodiversity conservation but also deliver ecosystem services such as carbon sequestration and storage, water supply, food, timber, medicines, crop pollination and pest control. Furthermore, many communities are dependent on IBAs for their livelihoods. Effectively conserving the global IBA network would undoubtedly safeguard substantial provision of ecosystem services and local livelihoods.

→ CBD target

Ecosystems that provide essential services and livelihoods are safeguarded and/or restored, with equitable access

Image: The value of pest control by species such as Canada Warbler in the boreal forests of Canada has been estimated at more than \$CAD 5 billion per year (Anielski & Wilson [2005] *Counting Canada's Natural Capital*. Ottawa: Canadian Boreal Initiative).
(JEREMY MEYER)

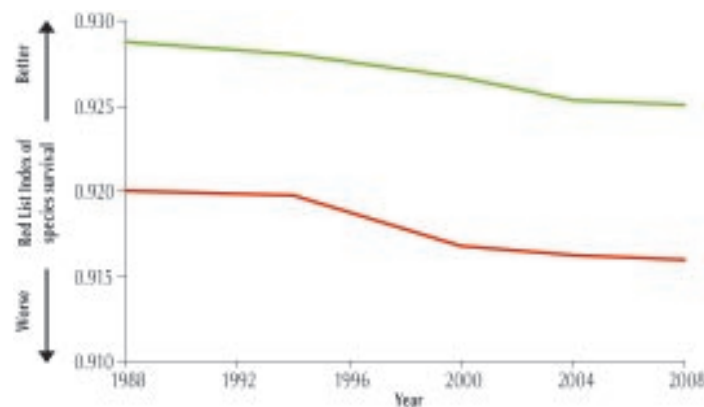
Achieving the target: examples of success

In IBAs in Belarus, such as Belavezhskaja Pushcha National Park, degraded peatlands are being restored by blocking drainage channels that were originally installed to promote agriculture and forestry. As well as benefiting biodiversity such as Eurasian Curlew (Near Threatened), re-wetting the habitat should, in the long term, result in reduced emissions of CO₂ from the degraded (and hence oxidising) peat, a globally significant ecosystem for carbon storage.

Using birds to track progress

Birds themselves are important providers of ecosystem services through their role as scavengers (e.g. vultures, which are important for consuming carrion), pollinators (for which at least 50 crop and medicinal plant species rely on birds), pest control (by rodent-hunting birds of prey and insect-eating species such as warblers) and seed dispersal (by frugivores such as hornbills and parrots).

Tracking trends in the status of such species through the Red List Index (RLI) can help to monitor the provision of ecosystem services.



RLI for pollinators

Source: Analysis of data held in BirdLife's World Bird Database (2010).

— Pollinators (878 species)
— Non-pollinators (8945 species)

Restoring degraded forest

Large areas of tropical forest have been degraded by logging and resource extraction, but remain important for biodiversity conservation. Restoring and rehabilitating such forests can enhance their value for birds and other biodiversity, while improving the ecosystem services they provide and increasing their importance for local communities' livelihoods. Bird populations can be used as sensitive indicators to monitor the degree of habitat degradation and to track progress in restoration.

→ CBD target

Ecosystem resilience and the contribution of biodiversity to carbon stocks is enhanced, including through restoration of 15% of degraded ecosystems

Image top: Restoring forest sites identified for their bird conservation value often enhances the provision of ecosystem services as well as benefiting other biodiversity, such as Sumatran Tiger. (TORBOAZ/DREAMTIME.COM)

Image bottom: Birds such as Ferruginous-backed Antbird are sensitive to forest condition, so monitoring their trends can help to track the success of efforts to restore degraded forest. (NICK ATHANAS)

Achieving the target: examples of success

Harapan Rainforest in Sumatra, Indonesia, is being helped by BirdLife Partners to recover from past logging. In an innovative conservation approach, BirdLife Partners worked with the Indonesian government to change the law, allowing them to acquire the management rights to a logging concession. Restoration

of the degraded forest will enhance ecosystem resilience, provision of ecosystem services such as carbon storage, as well as benefiting Sumatran Tigers, Asian Elephants and almost 300 bird species.



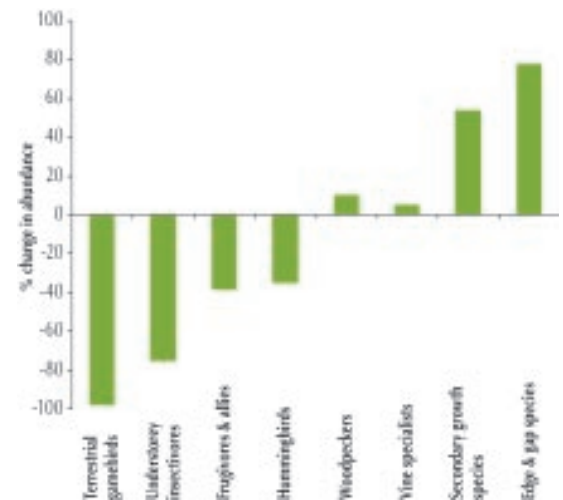
Using birds to track progress

Birds can be useful indicators of forest quality, with some groups of species being particularly sensitive to forest structure and more practical to census than many other animal or plant groups. The population trends of these forest-dependent bird species can be used to monitor the extent of habitat degradation and the degree of recovery of forests being restored.



Change in abundance of different bird species groups ten years after selective logging compared with similar undisturbed primary forest in northern French Guiana

Source: Thiollay (1997) *Biodiv. Conserv.* 6: 1,155–1,173.



Implementing national strategies for biodiversity

National strategies help to prioritise actions to address biodiversity loss. As conservation priorities for birds are better known than for other species groups, they can help to target national activities on the most urgent issues, species and places.

CBD target

All parties have implemented effective national biodiversity strategies and action plans

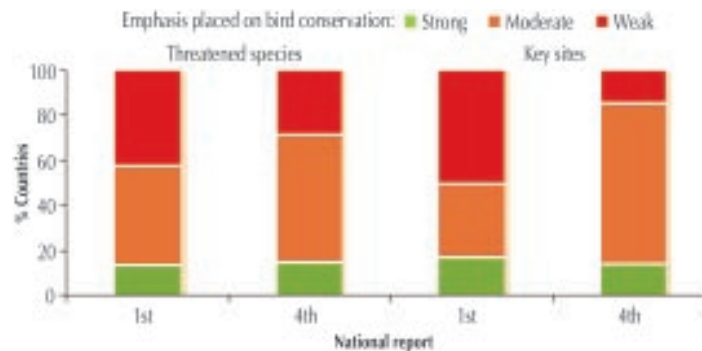
Achieving the target: examples of success

Data on threatened bird species and their critical sites and habitats have been increasingly used by the Kenyan government to report on the status of the country's biodiversity and to focus action to safeguard it. Kenya's national reports to the CBD have given increasing prominence to these elements. The most recent (fourth) report, devotes a section to outlining the importance of Important Bird Areas (IBAs) as priority sites for conserving biodiversity. Another section draws on monitoring data from IBAs to present trends in the conditions of, threats to and conservation responses at critical sites for biodiversity.



Using birds to track progress

An increasing proportion of countries are addressing the conservation of threatened birds and IBAs, according to their national reports to the CBD. The proportion of countries for which moderate to strong emphasis was placed on threatened species increased from 58% to 77% between 1997–98 and 2008–09, while for IBA conservation the corresponding figures were 50% and 92%.



Proportion of countries addressing the conservation of threatened birds and IBAs as documented in their CBD national reports

Source: National CBD reports for a sample of 24 countries analysed by BirdLife International.

Image: National IBA inventories have helped many countries to target their biodiversity conservation efforts at some of the highest priority sites. (BIRDLIFE INTERNATIONAL)

Sharing biodiversity knowledge

Birds are the best-known class of organisms. BirdLife International manages unparalleled data on all the world's birds, the threats they face, the conservation actions required and the global network of Important Bird Areas (IBAs) that needs safeguarding for their conservation. BirdLife makes this essential biodiversity information widely accessible using innovative tools.

→ CBD target

Knowledge and technologies relating to the status, trends and value of biodiversity are improved and shared

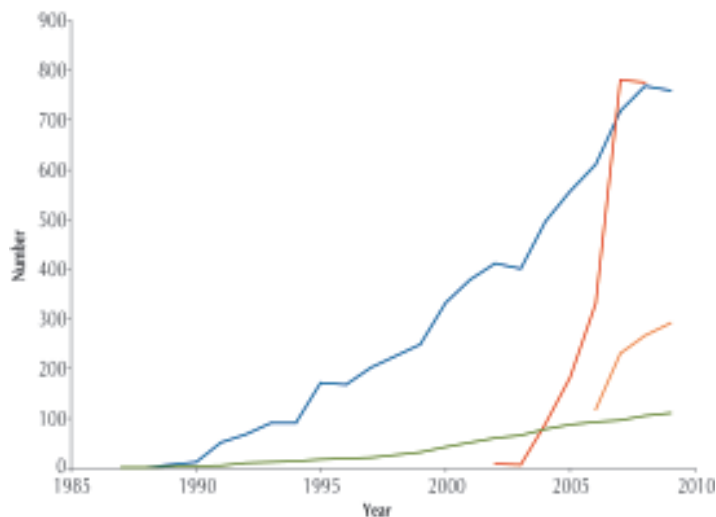
Achieving the target: examples of success

The Integrated Biodiversity Assessment Tool (IBAT) is providing business and decision-makers with critical information that allows companies to integrate biodiversity considerations at the earliest stages of project planning. IBAT provides spatial information on priority conservation targets—including IBAs and threatened species—to help guide environmental impact assessments, management plans and business operations.



Using birds to track progress

Measuring the provision of, and access to, information on birds can provide useful metrics of biodiversity knowledge-sharing. For example, national IBA directories have been published in 111 countries, while more than 1.1 million unique users per year access biodiversity data on the BirdLife website. In addition, BirdLife's *State of the world's birds* website is increasingly being used as an extensive databank of case studies demonstrating how birds can help to guide action to address biodiversity loss and to monitor progress in doing so.



Measures of the provision of biodiversity information

Source: Analysis of data held in BirdLife's World Bird Database (2010); ISI Web of Knowledge.

- Number of scientific publications on bird conservation
- Number of IBAs undergoing systematic monitoring of condition, threats and responses
- Cumulative number of IBA inventories published in national languages
- Number of visits to BirdLife International's website datazone (thousands)

Image: BirdLife makes available its extensive biodiversity information through innovative tools such as the Integrated Biodiversity Assessment Tool (www.ibatforbusiness.org) and the BirdLife datazone (www.birdlife.org/datazone).

(BIRDLIFE INTERNATIONAL)

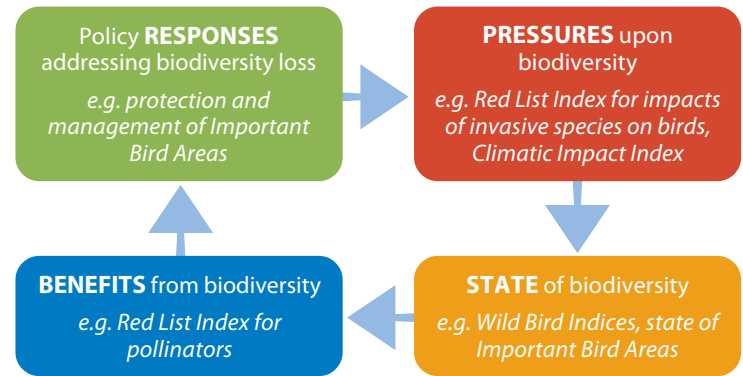
State of the world's birds

BirdLife's *State of the world's birds* database provides further information on how birds can be used to focus action and as indicators to monitor change. Using the most up-to-date analyses presented in an attractive and accessible format, it outlines why birds and biodiversity are important, and examines what we know about the changing state of the world's birds, why birds are declining and what can be done to improve their status. It synthesises current knowledge and provides a benchmark against which to assess future efforts to conserve birds and biodiversity. Find out more at www.birdlife.org/sowb.



Making sense of indicators

Biodiversity indicators are easier to understand, communicate and act upon when linked together in a set that connects policies to outcomes. Four kinds of indicators are needed to make a joined-up set, as shown right. Linking indicators together makes it clear if, and how, policy responses are making a difference, by monitoring their implementation, effects in reducing pressures, consequences for the state of biodiversity, and impacts on the benefits that people derive from nature. Measures based on bird data can contribute to each of these.



BirdLife International is a partnership of people for birds and the environment. As a worldwide community, we are the leading authority on the status of birds and their habitats. Over 10 million people support the BirdLife Partnership of national non-governmental conservation organisations and local networks. Partners, operating in more than 100 territories, work together on shared priorities, programmes, and policies, learning from each other to achieve real conservation results. The BirdLife Partnership promotes sustainable living as a means of conserving birds and all other forms of biodiversity.

For more information, please contact:
BirdLife International, Wellbrook Court, Girton Road,
Cambridge CB3 0NA, UK.
Tel: +44 1223 277318 Fax: +44 1223 277200
Email: birdlife@birdlife.org Internet: www.birdlife.org

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Compilers: Stuart Butchart, Tris Allinson, Leon Bennun and Alison Stattersfield

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BirdLife International is a partnership of 114 national conservation organisations and the world leader in bird conservation. BirdLife's unique local to global approach enables it to deliver high impact and long term conservation for the benefit of nature and people.



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