

DEVELOPING & IMPLEMENTING NATIONAL BIODIVERSITY STRATEGIES & ACTION PLANS

How to set, meet and track the Aichi Biodiversity Targets




BirdLife
INTERNATIONAL

The CBD Strategic Goals, Aichi Targets, and how birds and BirdLife can contribute

CBD strategic goal	Aichi Target*
A. Address underlying causes	1 By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably
	2 By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems
	3 By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimise or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio-economic conditions
	4 By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits
B. Reduce pressures and promote sustainable use	5 By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced
	6 By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits
	7 By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity
	8 By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity
	9 By 2020, invasive alien species and pathways are identified and prioritised, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment
	10 By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimised, so as to maintain their integrity and functioning
C. Safeguard ecosystems, species and genes	11 By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes
	12 By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained
D. Enhance benefits from biodiversity and ecosystems	14 By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable
	15 By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification
E. Enhance implementation through planning, knowledge management and capacity building	17 By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan
	18 By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels
	19 By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied
	20 By 2020, at the latest, the mobilisation of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011–2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilisation, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties

* Bird information is less directly useful for reporting progress against Aichi Targets 13 (on genetic diversity of cultivated plants and domesticated animals) and 16 (on Access and Benefit-sharing), so these are omitted here

CBD recommended indicators**

Bold = indicator available using bird data from national BirdLife partners or BirdLife globally; Not bold = indicator can be informed by bird data

How to set,
meet & track
the targets

■ Trends in public engagement with biodiversity ■ Trends in awareness and attitudes to biodiversity ■ Trends in communication programmes and actions promoting social corporate responsibility	... see page 4
■ Trends in number of countries incorporating...biodiversity and ecosystem service values into national accounting systems ■ Trends in number of countries that have assessed values of biodiversity ■ Trends in integration of biodiversity and ecosystem service values into sectoral and development policies	... see page 5
■ Trends in the number and value of incentives, including subsidies, harmful to biodiversity, removed, reformed or phased out ■ Trend in identification, assessment and establishment and strengthening of incentives that reward positive contribution to biodiversity and ecosystem services or penalise adverse impacts	... see page 6
■ Trends in...extinction risk of...utilised species, including species in trade ■ Trends in extent to which biodiversity and ecosystem service values are incorporated into organisational accounting and reporting	... see page 7
■ Extinction risk trends of habitat-dependent species in each major habitat type ■ Population trends of habitat-dependent species in each major habitat type ■ Trends in extent of selected habitats	... see page 8
■ Trends in extinction risk of bycatch aquatic species ■ Trends in population of bycatch aquatic species ■ Trends in proportion of depleted bycatch species with recovery plans	... see page 9
■ Trends in population of agriculture dependent species in production systems	... see page 10
■ Impact of pollution on extinction risk trends ■ Trend in levels of contaminants in wildlife	... see page 11
■ Trends in the impact of invasive alien species on extinction risk trends ■ Trends in policy responses, legislation and management plans to control and prevent spread of invasive alien species	... see page 12
■ Trends in climate change impacts on extinction risk ■ Trends in climatic impacts on population trends ■ Trends in climatic impacts on community composition	... see page 13
■ Trends in representative coverage of protected areas including sites of particular importance for biodiversity ■ Trends in protected area condition and management effectiveness ■ Trends in the delivery of ecosystem services and equitable benefits from protected areas ■ Trends in the connectivity of protected areas and other area based approaches integrated into landscapes and seascapes	... see page 14
■ Trends in extinction risk of species ■ Trends in abundance of selected species ■ Trends in distribution of selected species	... see page 16
■ Extinction risk trends of species that provide ecosystem services ■ Trends in the delivery of multiple ecosystem services	... see page 18
■ Population trends of forest-dependent species in forests under restoration ■ Status and trends in extent and condition of habitats that provide carbon storage	... see page 19
■ Trends in implementation of national biodiversity strategies and action plans, including their comprehensiveness	... see page 20
■ Trends in the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan	... see page 21
■ Trends in coverage of comprehensive policy-relevant sub-global assessments, including related knowledge transfer	... see page 22
■ Aggregated financial flows in the amount of biodiversity-related funding, per annum, for achieving the Convention's three mobilised objectives by non-governmental organisations	... see page 23

How birds and BirdLife can help set, meet and track the Aichi Biodiversity Targets

The Strategic Plan for Biodiversity 2011–2020

In October 2010, Parties to the Convention on Biological Diversity—comprising nearly all the world’s Governments—adopted the Strategic Plan for Biodiversity 2011–2020.

The Strategic Plan provides a comprehensive global framework for achieving the vision of ‘Living in Harmony with Nature’, including the 20 headline Aichi Targets for 2015 or 2020.

An essential next step is to translate the Strategic Plan to the national level—through new or revised National Biodiversity Strategies and Action Plans (NBSAPs). CBD Parties have been invited to set their own targets within this flexible framework, taking into account national needs and priorities, while also bearing in mind national contributions to the achievement of the global targets.

How birds can help

For many countries, developing NBSAPs to address the Aichi Targets may not be an easy task. The broad range of actions required must be integrated across economic sectors and coordinated across governments, business and civil society. The information needed for effective planning may often be patchy and incomplete.

In this booklet, we outline and provide examples for 18 of the Aichi Targets* of how birds can help to set targets at the national level, focus actions to meet these targets, and provide data to monitor success. All the examples mentioned, and many more, can be found as detailed case studies in *State of the World’s Birds* at www.birdlife.org/datazone/sowb

Birds are better known than any other comparable group of organisms. There is unparalleled information on which species are the closest to extinction, the threats they face, actions needed, and critical sites that need safeguarding. These data can help to focus and target actions to tackle biodiversity loss.

Birds create a window into the wider environment. As they 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.

Finally, birds are a wonderful focus for engaging and enthusing people to care for nature—and to understand and value its role in underpinning all our lives.

*Bird information is less directly useful for reporting progress against Aichi Targets 13 (on genetic diversity of cultivated plants and domesticated animals) and 16 (on Access and Benefit-sharing), so these are omitted here



Image: Birds have huge popular appeal, and a global network of birdwatchers and ornithologists provide a vast body of information about them.
LEFT: (SPRING ALIVE) RIGHT: (EDITH KOSHKIN)



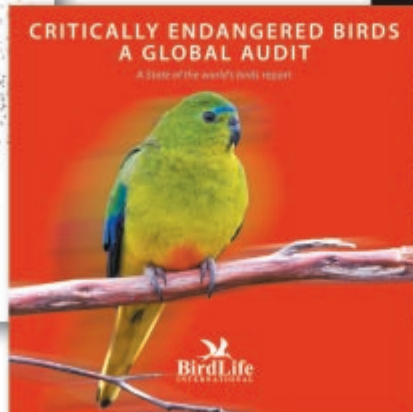
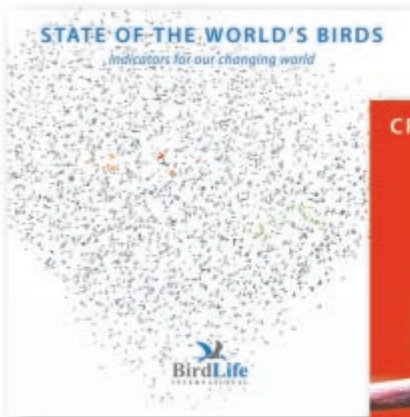
How BirdLife can help

BirdLife is a Partnership of national, membership-based environmental organisations in over 115 countries and territories around the world. BirdLife works for a world rich in biodiversity, with people and nature living equitably, sustainably and in harmony. Through a focus on birds, BirdLife acts for nature and for people, sharing perspectives and solutions that are founded on local experience but connect across borders and barriers. The BirdLife Strategy 2013–2020, built around the pillars of species, sites and habitats, sustainability and people, is directly linked to and fully supportive of the Strategic Plan for Biodiversity.

Putting our Strategy into effect, BirdLife Partners work closely with national Governments, supporting efforts to improve conservation policy and action. BirdLife Partners are ideally placed to involve and engage local communities and the wider public, communicating the importance of nature conservation and promoting awareness. BirdLife activities and projects provide numerous practical examples of how particular Aichi Targets can be achieved. As civil society organisations, BirdLife Partners provide a key component of the concerted action needed to implement NBSAPs successfully.

Globally, BirdLife is the CBD's International Thematic Focal Point for birds for the Clearing House Mechanism (for more information, see p.24). BirdLife Partners and the BirdLife Secretariat hold detailed information on birds and make this widely accessible to help national governments, businesses and others to implement and monitor the CBD and its programmes of work.

BirdLife publications provide guidance on how information from birds can be used to set targets, prioritise actions and monitor progress



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.

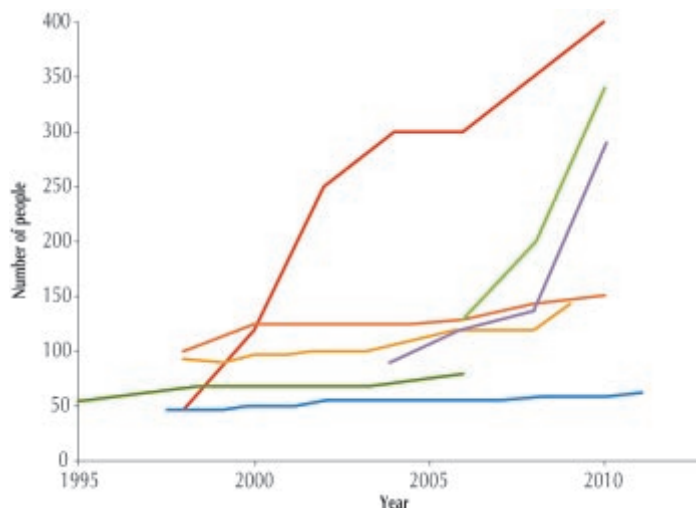
Tracking the numbers of people engaging in activities that celebrate birds or count them or conserve them can be used to monitor awareness of biodiversity.

Aichi Target 1

People are aware of the values of biodiversity

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.



Trends in 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 Gaupa Paraguay (BirdLife in Paraguay)
- Membership of Biodiversity and Nature Conservation Association (BirdLife in Myanmar)
- Membership of the Netherlands Society for the Protection of Birds (BirdLife in Netherlands) (thousands)
- Visitor attendance at the British Birdwatching Fair (hundreds)
- Number of birdwatchers in USA (millions)
- Number of participants in Christmas Bird Counts (thousands)

Achieving the target: examples of success

BirdLife Australia is bringing together residents and land managers to protect beach-nesting birds

The Hong Kong Birdwatching Society is helping local groups raise conservation awareness in schools

BirdLife Partners are helping to establish National Liaison Frameworks as forums for policymaking



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

(VIVIAN FU)

Mainstreaming biodiversity into national policies and plans

Biodiversity concerns need to be incorporated into land-use planning at all levels and integrated into production sectors, sustainable development and poverty reduction plans. Data from birds can be used to ensure this is done effectively, and to monitor the degree to which development is sustainable.

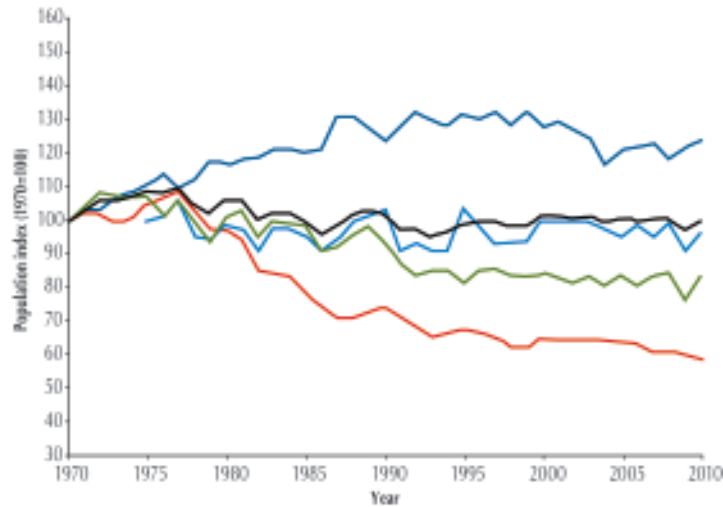
→ Aichi Target 2

Biodiversity is integrated into national and local planning processes, and incorporated into national reporting systems

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)

Using birds to track progress

The UK government uses the population trends of common countryside birds to monitor the state of the environment and as a measure of sustainable development. It has adopted these 'Sustainable Development Indicators', alongside others monitoring, for example, levels of poverty and healthy lifespans.



The UK Sustainable Development Indicator for wild bird population trends

Source: Data on 121 species from RSPB/BTO/JNCC/DEFRA.

- All birds (121)
- Farmland birds (19)
- Woodland birds (38)
- Water and wetland birds (26)
- Seabirds (19)

Achieving the target: examples of success

BirdLife Partners are working to mainstream soaring bird conservation along the Rift Valley/Red Sea flyway

Important Bird Areas are being used to integrate biodiversity and development planning in Mongolia

BirdLife's Rwandan Partner (ACNR) is helping a community to manage wetland resources sustainably



→ For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

Reforming incentives

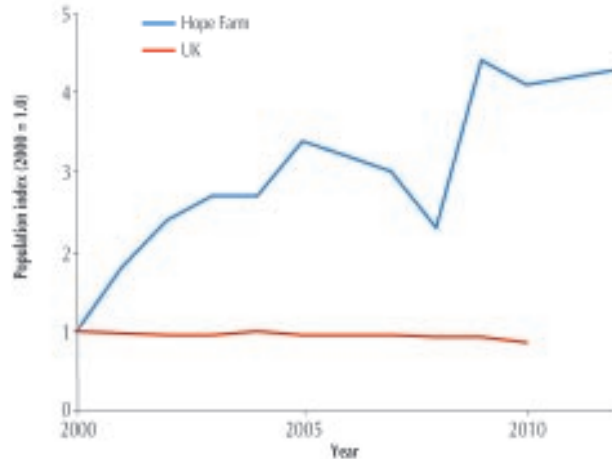
Taxpayers are subsidising deforestation, overfishing, environmentally damaging agricultural practices and our dependence on fossil fuels at a scale of approximately US\$1 trillion per year. Incentives that encourage unsustainable practices must end, with subsidies redirected towards activities that ensure sustainable natural resource use (e.g. sustainable forestry and agriculture, ecosystem restoration, sustainable energy and waste management). Bird data can help track progress in achieving this.

Aichi Target 3

Incentives harmful to biodiversity are eliminated or reformed, and positive incentives for the conservation and sustainable use of biodiversity are developed

Using birds to track progress

Bird populations provide a useful way of tracking the impacts of positive incentives for the conservation of biodiversity. For example, population trends of farmland specialist birds can help to measure the impacts of agri-environment schemes. Trends in Skylark populations at Hope Farm in the UK have improved following the introduction of targeted agri-environment options by the Royal Society for the Protection of Birds, whereas trends for Skylarks across the UK overall have continued to decline.



Population trends of Skylarks at Hope Farm, UK, following the introduction of targeted agri-environment options, compared with national Skylark population trends

Source: RSPB for Hope Farm data; BTO/RSPB/JNCC for UK data.

Achieving the target: examples of success

BirdLife Partners are supporting reform of the EU's Common Agricultural Policy

Asity Madagascar is using direct payments to local communities as an incentive for IBA conservation

BirdLife Partners are supporting efforts to remove European Union subsidies that support overfishing



Image: Agri-environment schemes in the UK encourage bare patches to be left in cereal crops in order to benefit the declining Skylark. (ANDY HAY/RSPB-IMAGES.COM)

Implementing plans for sustainability

Development needs to happen in harmony with nature, and respect environmental limits. We must recognise the crucial underpinning provided by biodiversity and ecosystem services, and thus the fundamental importance of nature conservation to economic prosperity and poverty eradication. BirdLife has developed a number of tools that provide decision-makers from the public and private sectors with the biodiversity information needed to make sustainable choices.

Aichi Target 4

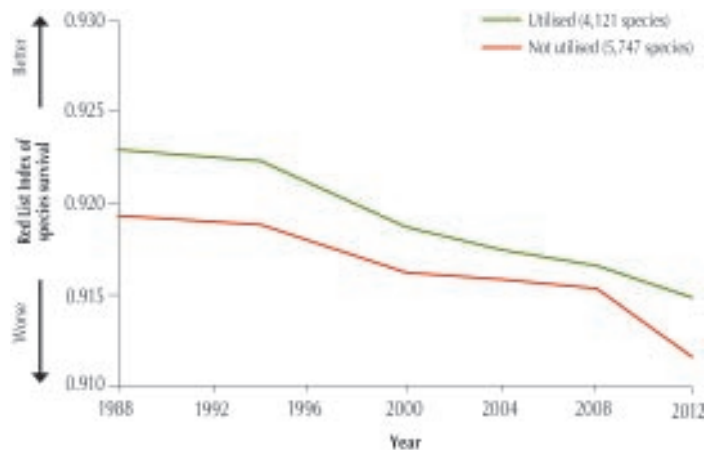
Governments, business and stakeholders at all levels take steps to implement plans for sustainable production and consumption

Image: BirdLife Partners around the world work alongside local communities to promote the sustainable use of wetland resources.

(B. PANDEYA)

Using birds to track progress

The Red List Index for bird species that are utilised by people (as pets, or for food, medicine, or other purposes) shows trends in their overall extinction risk. This can be used to indicate the degree to which consumption is sustainable and the impacts of natural resource use are within safe ecological limits. The overall declines in the index show that the human use of birds remains unsustainable: more species are being driven towards extinction through over-exploitation than are being recovered through measures to control or manage use sustainably. Data on which species are threatened by which types of use and scales of trade can help to focus efforts to manage resource-use sustainably.



Trends in extinction risk of utilised bird species: The Red List Index for bird species used by people

Source: Analysis of data held in BirdLife's World Bird Database (2012).

Achieving the target: examples of success

A strategic partnership between CEMEX and BirdLife is helping to reduce impacts on biodiversity

The sustainable use of wetland resources can benefit both wildlife and local communities

BirdLife has developed a decision-support tool ('IBAT') for business, government and conservation



➔ For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

Reducing habitat loss and degradation

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

Aichi Target 5

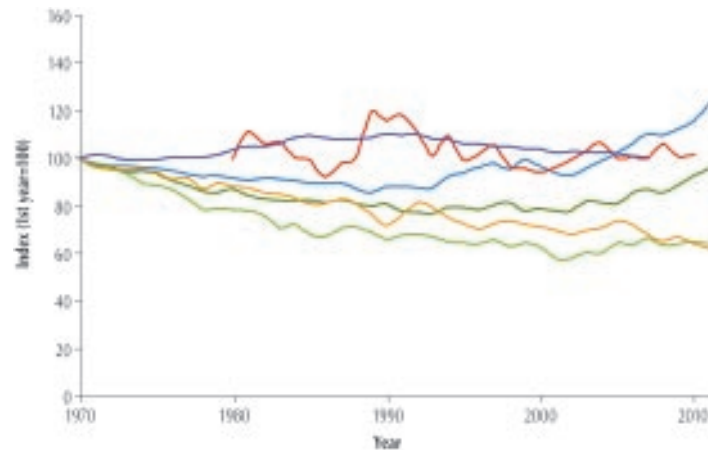
Loss, degradation and fragmentation of forest and other habitats is at least halved and, where feasible, brought close to zero

Image: Nearly two-thirds of bird species are found in forests, chiefly in the tropics, and many can live nowhere else. Yet more than ten million hectares of tropical forest are destroyed each year.

(SZEFEI/DREAMSTIME.COM)

Using birds to track progress

Wild Bird Indices show that woodland bird species in Europe have undergone a shallow decline since 1980, grassland and arid-land species in North America have declined by over a quarter in the last four decades, and Arctic species 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.



Population trends of habitat-dependent species: Wild Bird Indices for habitats in different regions

Source: EBCC/RSPB/BirdLife International/Statistics Netherlands; unpublished analysis by J. R. Sauer, United States Geological Survey; ZSL/CAFF/WWF unpublished data (2012).

- North American wetlands (103 species)
- North American boreal forests (24 species)
- North American grasslands (24 species)
- North American aridlands (17 species)
- European woodlands (33 species)
- Arctic habitats (168 species)

Achieving the target: examples of success

BirdLife's Forests of Hope programme will protect five million hectares of tropical forest

BirdLife Partners are tackling the East Asian coastal wetlands ecological crisis

BirdLife's Polish Partner (OTOP) campaigned to save the Rospuda valley from road development



➔ For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

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.

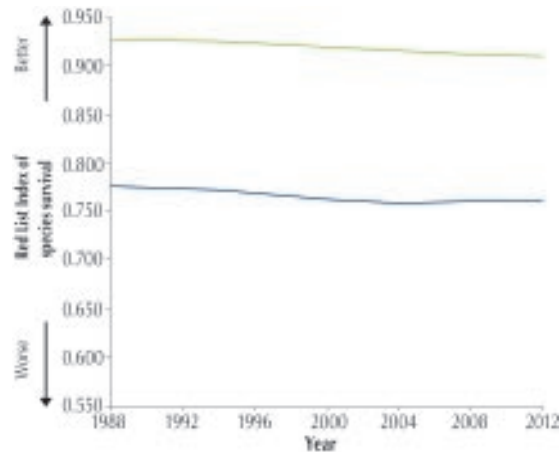
Aichi Target 6

Overfishing and destructive fishing practices are eliminated

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)

Using birds to track progress

The sustainability of fisheries in terms of their impacts on birds can be monitored through tracking seabird population trends, and through the Red List Index for seabirds. The latter illustrates trends in the extinction risk of the world's seabirds. 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.



Trends in extinction risk of bycatch aquatic species: The Red List Index for seabirds

Source: Analysis of data held in BirdLife's World Bird Database (2012)

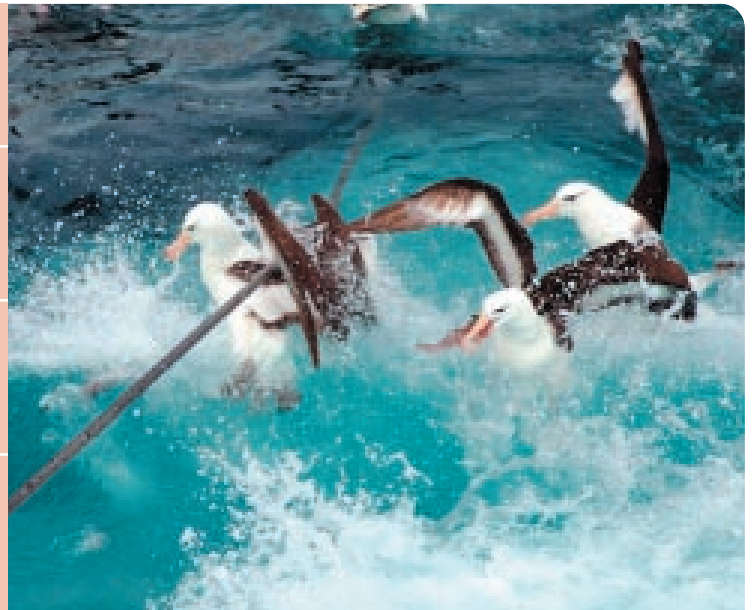
— Coastal seabirds (146 species)
— Pelagic seabirds (193 species)

Achieving the target: examples of success

BirdLife is working with Regional Fisheries Management Organisations to reduce albatross declines

BirdLife's Albatross Task Force is bridging the gap between conservationists and fishermen

Marine IBAs are being used to describe Ecologically or Biologically Significant Areas in the open oceans



For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

Making farming and forestry sustainable

Farming and forestry provide the food we depend upon and many of the materials we need, but unsustainable practices threaten much biodiversity in forests and the wider countryside. Birds are useful indicators for identifying how to make farming and forestry practices sustainable, and for monitoring their impact on wildlife.

Aichi Target 7

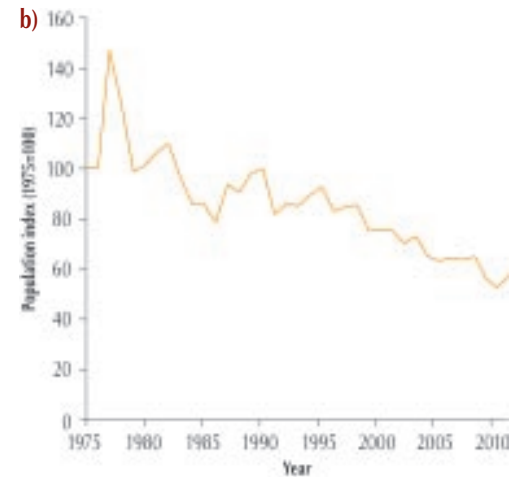
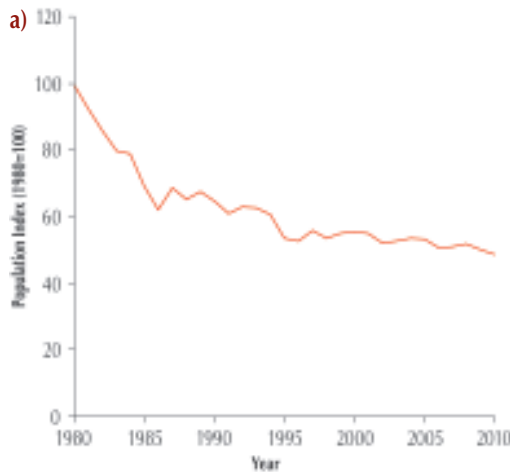
Agriculture, aquaculture and forestry are managed sustainably

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 relatively easy to survey and count. Wild Bird Indices showing the average population trends of species characteristic of farmland are used in a number of countries to monitor the condition of the countryside.

Trends in population of agriculture-dependent species: (a) the Wild Bird Index for farmland birds in the European Union is aggregated from national examples, such as (b) the Wild Bird Index for Sweden

Source: (a) Data on 37 species from EBCC/RSPB/BirdLife International/Statistics Netherlands. (b) Data for 14 species from Lindström *et al.* (2012) Monitoring population changes of birds in Sweden. Annual report for 2011. Lund University, Sweden.



Achieving the target: examples of success

Aves Uruguay is working with local ranchers to establish good management practices for grasslands

Pronatura is supporting local communities in Mexico to establish sustainable forestry practices

Bird Conservation Nepal works with Community Forest Users Groups for sustainable forest management



Image: Local ranchers are helping conservationists in Uruguay to protect threatened grassland birds such as Marsh Seedeater *Sporophila palustris*. (AVES URUGUAY)

Reducing pollution

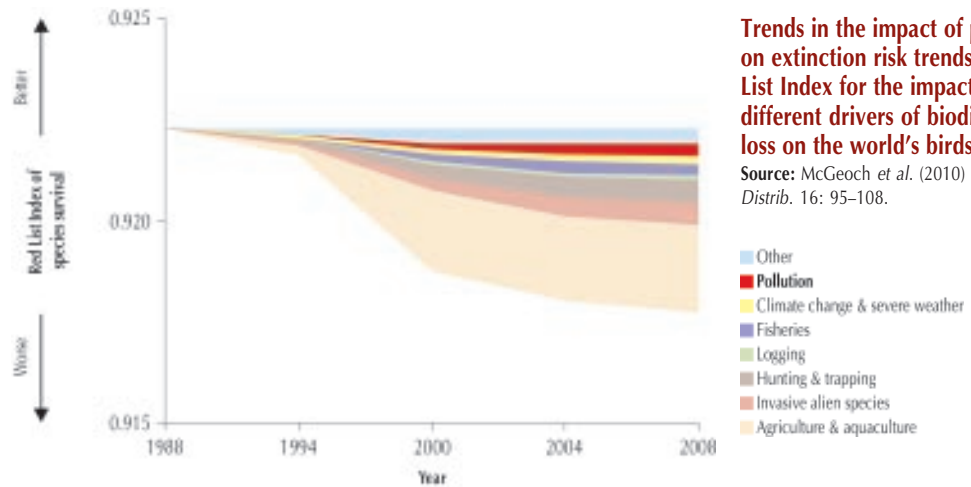
Pollution from agriculture, industry, sewage, oil exploitation, mining and other sources poses a substantial threat to biodiversity. It also often has significant economic costs through impacting ecosystem services, such as provision of clean drinking water. Data on birds can help to identify where pollution impacts occur and to track progress in tackling them.

Aichi Target 8

Pollution is brought to levels not detrimental to biodiversity

Using birds to track progress

The Red List Index shows trends in the overall extinction risk of the world's birds, but it can also be split up to show the contribution of different threats to the overall trend. This shows that in recent years, the number of species deteriorating in status owing to the negative impacts of pollution outweighs the number of species improving in status owing to effective control of pollution. The net impact has therefore been negative, but the contribution of pollution to overall declines has been smaller than for other threatening processes. Data on threats to birds can help to prioritise where to focus actions tackling pollution.



Achieving the target: examples of success

Bird Conservation Nepal is establishing safe 'diclofenac free' feeding sites for vultures

Banning lead shot and captive breeding played a crucial part in bringing the Californian Condor back from the brink

'Nature-friendly' fish-farming techniques in Hungary reduce both costs and pollution



Image: Despite being saved from extinction, California Condor is still threatened by the build-up of toxic lead shot in the environment. (US FISH & WILDLIFE SERVICE)

Tackling invasive aliens

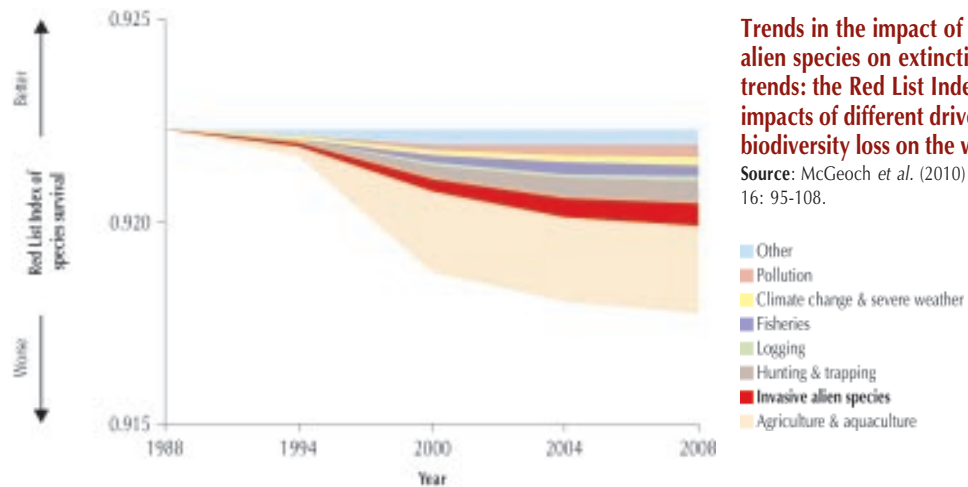
When invasive alien species are deliberately or accidentally introduced by humans, they can be highly damaging to native biodiversity and have substantial economic costs. However, the technology and tools now exist to control or eradicate them, often with impressive results. Data from birds can help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

Aichi Target 9

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

Using birds to track progress

The Red List Index shows 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 tackling 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 on where invasive species impact native birds can help to prioritise where to target such actions.



Achieving the target: examples of success

BirdLife Partners are helping to restore island ecosystems by eradicating invasive alien species

Rat eradication and captive breeding have helped save the Campbell Islands Teal from extinction

Turning invasive plants into biofuels and fertiliser benefits both biodiversity and local livelihoods



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

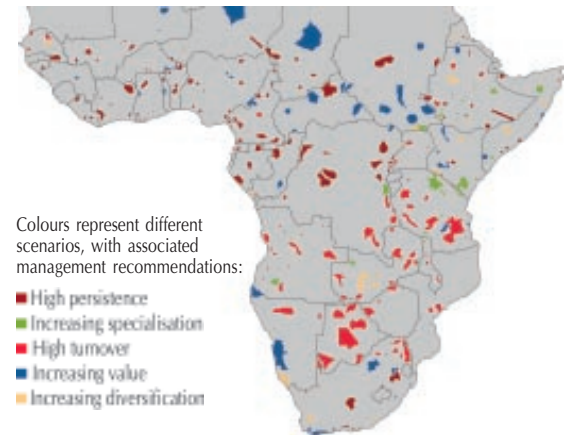
Helping biodiversity to cope with climate change will require robust measures to reduce greenhouse gas emissions coupled with efforts to maximise the resilience and adaptation of ecosystems. The latter will require effective management of protected area networks. Information from projected and documented effects on birds can help to frame adaptive management of sites and monitor impacts on species. Helping ecosystems adapt will also benefit human adaptation efforts.

Using birds to track progress

Combining systematic bird population monitoring with independent projections of climate change effects on bird distributions allows calculation of indicators to illustrate 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 Indicator combines these results and demonstrates an increasing impact of climate change on European birds in the last two decades.

Trends in climatic impacts on population trends: the Climatic Impact Index for European birds, showing the degree to which population trends of 122 species have responded in the direction expected from climate change.

Source: Data for 122 species from 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. (2011) *Conserv. Biol.* 25: 305–315.

Aichi Target 10

Pressures on vulnerable ecosystems impacted by climate change are minimised

Achieving the target: examples of success

BirdLife Partners are safeguarding IBAs in order to mitigate climate change impacts on birds

BirdLife Partners are working with local communities to protect and restore mangrove ecosystems

Managed realignment for coastal wetlands in the UK is helping people and nature adapt



Image: Protecting and restoring mangroves not only benefits wildlife, but also helps defend coastal communities against the impacts of climate change.

(JIM KUSHLAN)

➔ For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

Protecting and managing critical sites

Important Bird Areas (IBA) represent a global network of 11,000 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.

▶ Aichi Target 11

At least 17% of land and 10% of sea, 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)

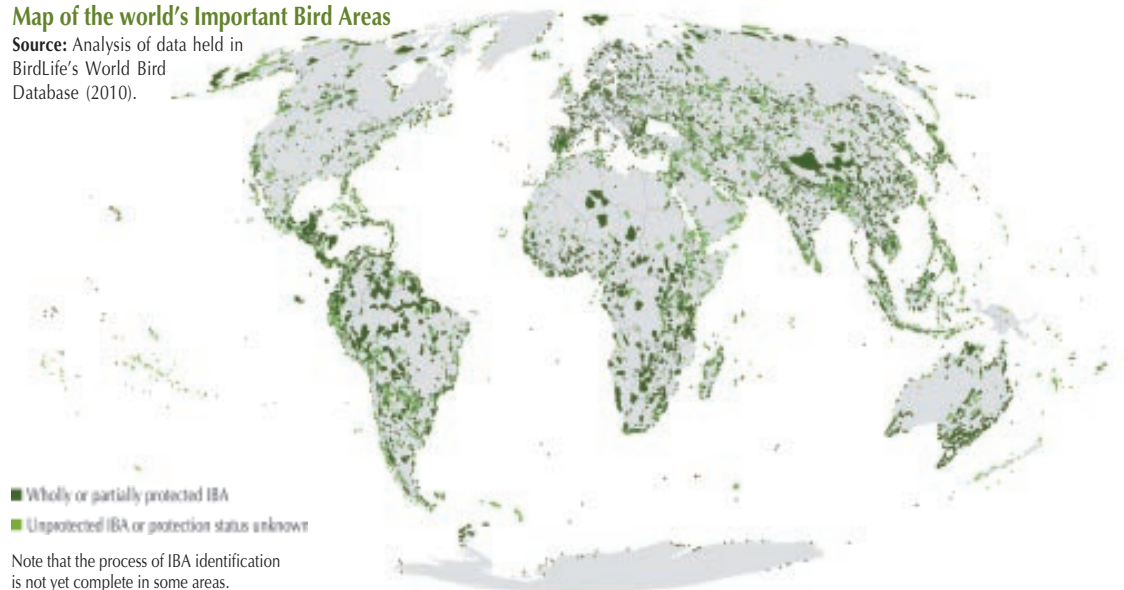
Image right: The establishment of Timor-Leste's first national park protected important populations of 26 bird species restricted to Timor and neighbouring islands including Cinnamon-banded Kingfisher.
(PAUL PEARSON)

Setting the target

IBAs represent the largest systematically identified network of sites of particular importance for biodiversity. Unprotected or partially protected IBAs are therefore among the most urgent priorities for expansion of protected area networks. Recent identification of marine IBAs in the high seas helps describe a global network of Ecologically or Biologically Significant Areas that represent targets for marine protected area designation.

Map of the world's Important Bird Areas

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



Achieving the target: examples of success

BirdLife Partners use IBAs to inform an ecologically representative network of protected areas

BirdLife Partners are helping Sierra Leone and Liberia create a transboundary reserve

BirdLife worked with the Timor-Leste government to create the country's first National Park



▶ For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

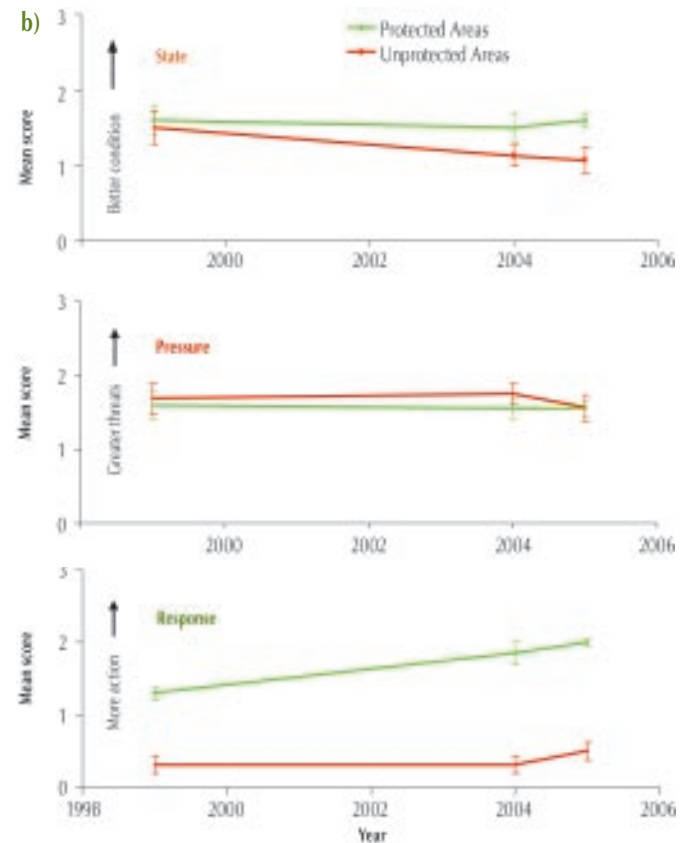
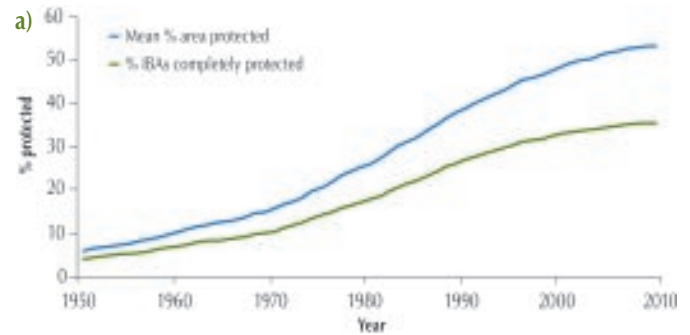
Using birds to track progress

IBAs represent a baseline set of Key Biodiversity Areas 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, on average across the world, only 39% of the area of IBAs is protected, 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 this can be monitored using data from birds. IBAs across the world are monitored using BirdLife's standardised and simple methods for scoring their condition (based on the critical 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.

(a) Trends in coverage of sites of particular importance for biodiversity by protected areas: the Important Bird Area Protection Index. (b) Trends in protected area condition and management effectiveness: Important Bird Area Indices for Kenya comparing the trends in the state of IBAs, pressures upon them, and responses in place, for protected and unprotected IBAs

Source: (a) Butchart *et al.* (2012) PLoS ONE 7(3): e32529 updated with latest BirdLife International data. (b) Data for 365 IBAs from Mwangi *et al.* (2010) *Bird Conserv. Internat.* 20: 215–230.



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 the tools and knowledge now exist to help them recover, providing adequate resources and political will are applied. As birds are better known than any comparable group of organisms, it is practical to use bird data to quantify our success or failure in preventing extinctions.

Aichi Target 12

Extinction of threatened species is prevented, and their conservation status improved

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)

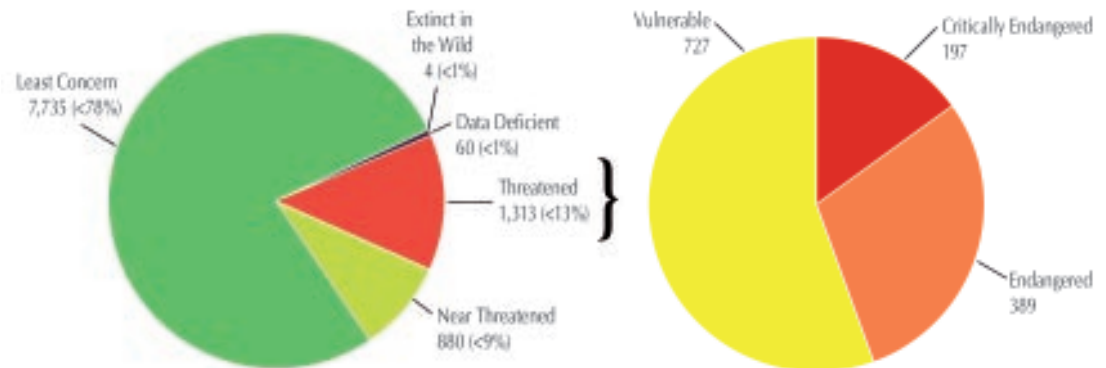
Image right: Birds are relatively easy to survey compared to many other types of wildlife, so indicators based on bird data are useful for tracking biodiversity trends.
(CAROLINE THOMAS/RSPB-IMAGES.COM)

Setting the target

The extinction risk of birds is better documented than for any other class of organisms. BirdLife's assessments for all 10,000 bird species on the IUCN Red List help to identify priorities for action: which species are the most urgent priorities, what actions are needed, and where interventions would make the greatest difference. Such actions typically have benefits to biodiversity beyond birds too.

Proportion of the world's birds in different Red List categories

Source: Analysis of data held in BirdLife's World Bird Database (2012)



Achieving the target: examples of success

Over ten years, action by BirdLife Partners and others prevented the extinction of 16 bird species

BirdLife's Preventing Extinction Programme identifies Guardians and Champions for threatened birds

Habitat restoration has led to the recovery of the Azores Bullfinch



For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

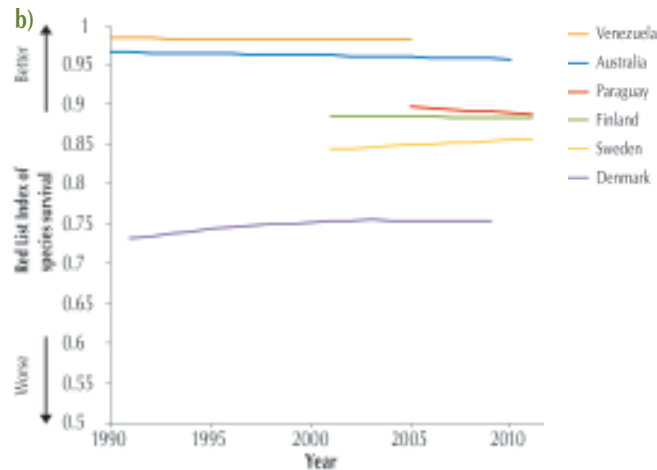
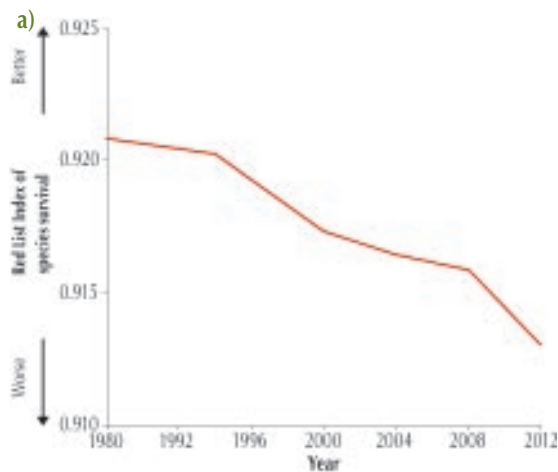
Using birds to track progress

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 of extinction risk owing to increasing threats and declining populations). It shows that the status of bird species has declined steadily over the last two decades in freshwater and terrestrial ecosystems, but marine species are most threatened and declining fastest.



Trends in the extinction risk of species: the Red List Index for (a) the world's birds, and (b) for birds in selected countries, based on national assessments of extinction risk

Source: (a) Analysis of data for 9,868 species held in BirdLife's World Bird Database (2012). (b) A. Juslén unpublished data; Szabo *et al. Biol. Cons.* DOI: 10.1016/j.biocon.2012.01.062; Pihl and Flensted (2011) *Dansk Orn. Foren. Tidsskr.* 105: 211–218; Lopez (2011) *Estado de las Aves del Paraguay*. Asuncion: Guyra Paraguay; U. Gärdenfors unpublished data (derived from Gärdenfors, ed. (2010) *Rödlistade arter i Sverige 2010 – The 2010 Red List of Swedish Species*. Uppsala: ArtDatabanken, SLU.



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.

Aichi Target 14

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

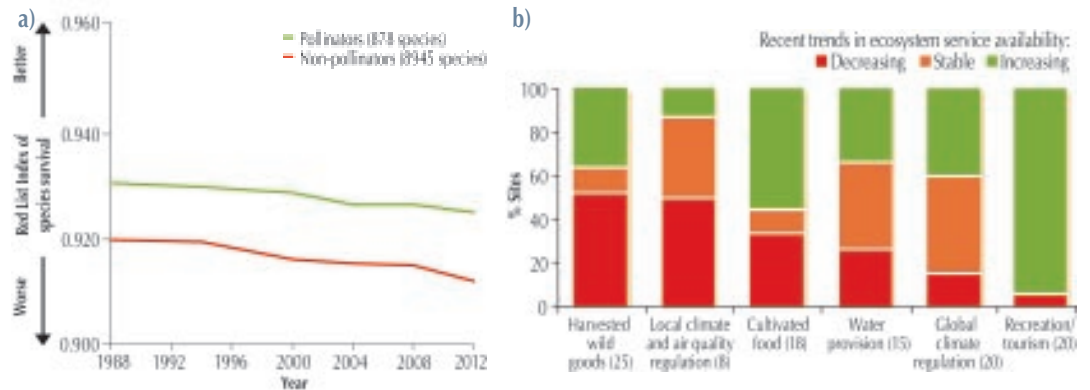
Image: Healthy, bio-diverse wetlands provide numerous ecosystem services upon which local communities depend.
(LOTA MELAMARI)

Using birds to track progress

Birds themselves are important providers of ecosystem services, through their role as pollinators (for which at least 50 crop and medicinal plant species rely on birds), pest control (e.g. rodent-hunting birds of prey), seed dispersal (e.g. frugivores such as hornbills) and scavengers (e.g. vultures). Tracking trends in the status of such species can help to monitor the provision of ecosystem services. In addition, monitoring ecosystem service delivery at IBAs can help to demonstrate the benefits of IBA conservation beyond species, and to monitor progress in safeguarding ecosystem services.

(a) Trends in the extinction risk for species that provide ecosystem services: the Red List Index for pollinating birds.
(b) Trends in the delivery of multiple ecosystem services: proportion of Important Bird Areas in Nepal delivering ecosystem services with increasing, decreasing or stable trends

Source: (a) Analysis of data held in BirdLife's World Bird Database (2012). (b) Data from 27 sites from Bird Conservation Nepal and BirdLife International (2012).



Achieving the target: examples of success

Bird Conservation Nepal is assessing ecosystem services at Important Bird Areas

The Nigerian Conservation Foundation is assisting wetland restoration to safeguard vital ecosystem services

Nature Uganda is empowering local communities to manage natural resources better and to restore ecosystem services



For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

Restoring degraded forest

Large areas of tropical forest have been degraded by logging and resource extraction, but remain important for biodiversity conservation. Restoring such forests can increase their value for birds and other biodiversity, enhance resilience, and increase their contribution to climate change adaptation and local livelihoods. Bird populations can be used as sensitive indicators to monitor the degree of habitat degradation and to track progress in restoration.

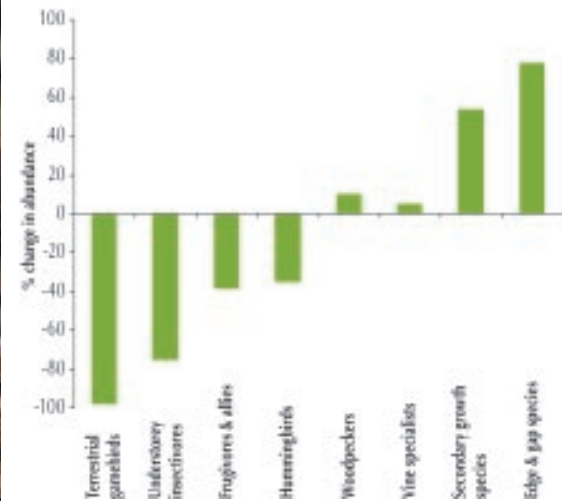


Using birds to track progress

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.



Aichi Target 15

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

Image top: 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)

Image bottom: 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.

(DAVE WATTS/RSPB-IMAGES.COM)

Achieving the target: examples of success

BirdLife Partners in Indonesia and Sierra Leone are developing innovative approaches to save forests

BirdLife Partners are restoring forests that will help buffer communities against climate change

Community management of forest on Mount Oku, Cameroon, has led to significant habitat regeneration



For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

Implementing national strategies for biodiversity

National strategies and associated action plans set the basis for implementing the CBD at the national level, reflecting each country's priorities and mechanisms for achieving the Convention's objectives. 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.

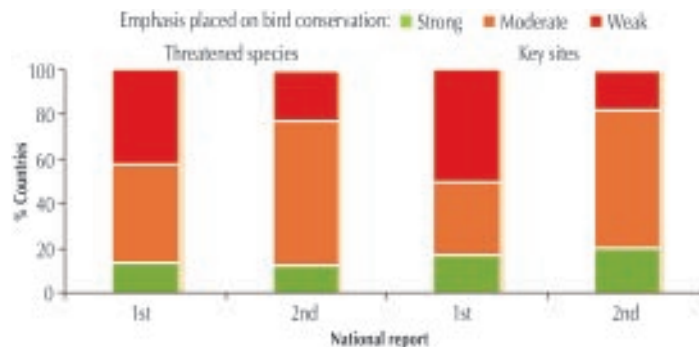
Aichi Target 17

All parties have implemented effective, participatory and updated national biodiversity strategies and action plans

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

Using birds to track progress

An increasing proportion of countries are addressing the conservation of threatened birds and Important Bird Areas, according to their national reports to the Convention on Biological Diversity (CBD). The proportion of countries for which moderate or strong emphasis was placed on these two topics for the first and second reports increased from 58% to 79% respectively for threatened species and 50% to 83% for IBA conservation.



Trends in proportion of countries addressing the conservation of threatened birds and Important Bird Areas as documented in their CBD national reports

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

Achieving the target: examples of success

BirdLife Partners work with governments through environmental agreements to protect biodiversity

BirdLife's detailed datasets are helping governments to focus and implement National Biodiversity Strategies and Action Plans

The Haribon Foundation is helping the Philippines Government to update and implement their NBSAP



For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

Protecting traditional knowledge and practices

Local knowledge and participation enhance the effectiveness, sustainability and relevance of conservation. BirdLife International empowers local communities by strengthening local institutions, developing skills, protecting rights and creating networks which connect local people so that their voices are heard by decision-makers.

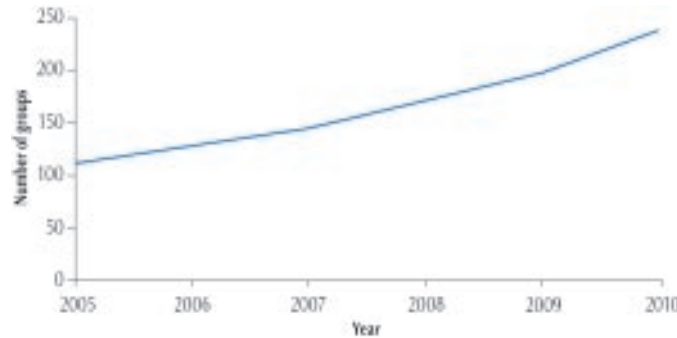
Aichi Target 18

Traditional knowledge and practices relevant to conservation and sustainable use of biodiversity are integrated in the implementation of the Convention

Image: Since the late 1990s, BirdLife has been building a network of grass-roots groups, known as Local Conservation Groups (LGCs) to harness local expertise and enthusiasm.
(DAVID THOMAS, BIRDLIFE)

Using birds to track progress

At thousands of IBAs across the world, BirdLife Partners work to support and empower Local Conservation Groups. These community organisations reflect the diversity of local cultures and traditions. They engage in a variety of activities, including monitoring, conservation action, poverty reduction, resource management, campaigning and advocacy. Tracking the number and engagement of such groups provides one measure of the degree to which traditional practices are integrated into conservation.



Trends in the number of Local Conservation Groups participating in the conservation of Important Bird Areas in Africa

Source: BirdLife International (2012) *Conserving biodiversity and delivering ecosystem services at Important Bird Areas in Nepal.*

Achieving the target: examples of success

BirdLife's Partner in Lebanon (SPNL) uses a traditional Hima approach in IBA conservation

The traditional knowledge of Cree hunters is helping Nature Canada map changing migration patterns

Empowering local people is helping to protect the Endangered Wattled Curassow



For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

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 they need and the global network of Important Bird Areas that needs safeguarding for conservation. Using innovative tools, BirdLife makes these data widely accessible to inform decision-making and for setting, tracking and monitoring targets.

Aichi Target 19

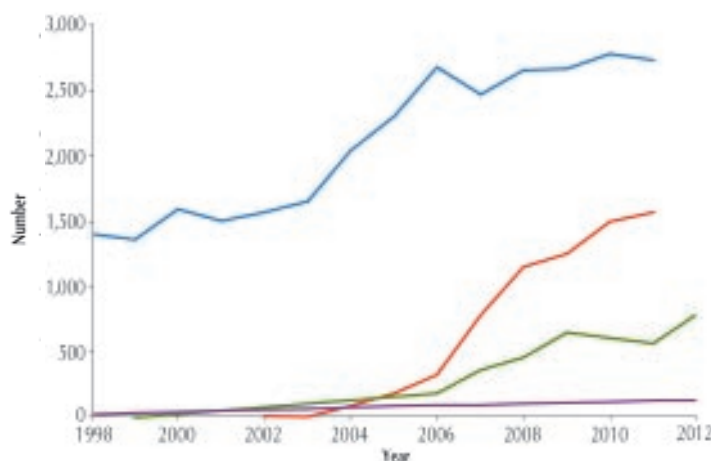
Knowledge, the science base and technologies relating to the status, trends and value of biodiversity are improved and shared

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).

(BIRD LIFE INTERNATIONAL)

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 directories of Important Bird Areas have now 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 for how birds can help guide and monitor action to address biodiversity loss.



Trends in the provision of bird 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 Important Bird Areas undergoing systematic monitoring of condition, threats and responses
- Number of visitors to BirdLife International's website datazone (thousands)
- Cumulative number of Important Bird Area inventories published in national languages

Achieving the target: examples of success

BirdLife has developed a decision-support tool (IBAT) for business, government and conservation

BirdLife Partners have developed a monitoring framework for IBAs worldwide

Synthesising and sharing bird data can help assess the effectiveness of conservation management interventions

For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

Increasing conservation finance

The success of the Strategic Plan will require the full implementation of the Strategy for Resource Mobilization, which includes as a first step assessing conservation costs and setting financial targets. Governments will have to increase domestic biodiversity funding, enhance international financial flows, and develop innovative funding mechanisms. Information on the costs of bird conservation can help in calculating the costs of some targets, setting budgets and mobilising funds for effective action.

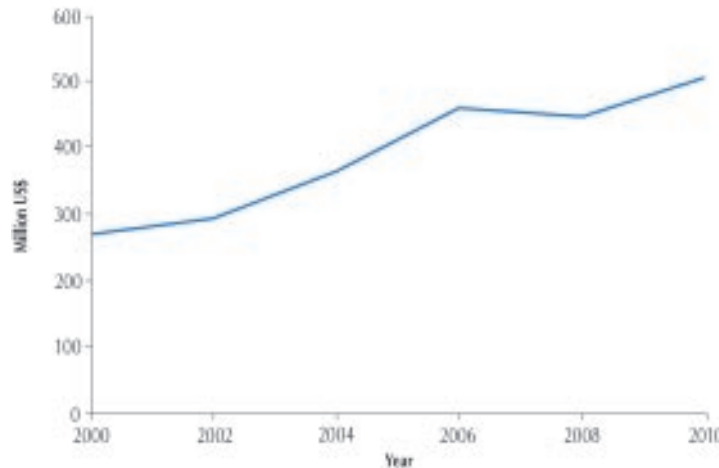
→ Aichi Target 20

Mobilisation of financial resources should increase substantially from current levels

Image: Images of birds appear on many countries' currency bills and coins, but governments need to commit substantially greater resources to biodiversity conservation.
(GEORGIOS KOLLIDES/DREAMSTIME.COM)
COIN: (SPIERS/DREAMSTIME.COM)

Using birds to track progress

Non-governmental organisations make an important contribution to the funding of conservation interventions and policy actions to help achieve the Convention on Biological Diversity's objectives and Strategic Plan on Biodiversity. Trends in the combined budget of the 118 national environmental organisations that comprise the BirdLife International Partnership can be used as a barometer of the contribution of grass-roots organisations to biodiversity finance. This shows substantial growth in recent years, now exceeding half a billion US\$ each year.



Aggregated financial flows in the amount of biodiversity-related funding mobilised by the BirdLife Partnership, per annum, for achieving the Convention's objectives

Source: Analysis of BirdLife International data (2000–2010).

Achieving the target: examples of success

BirdLife has calculated the cost of saving globally threatened species and safeguarding IBAs

BirdLife is mobilising resources from Species Champions for preventing extinctions

Madagascar has developed innovative mechanisms to finance Protected Area conservation



→ For these and other case studies, see *State of the world's birds* online at www.birdlife.org/datazone/sowb

BirdLife as a CBD CHM

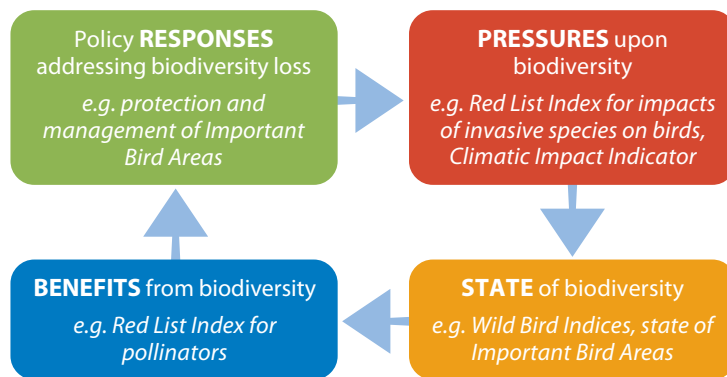
BirdLife International is the CBD's International Thematic Focal Point for birds for the Clearing House Mechanism (CHM), an information service for promoting technical cooperation and knowledge exchange. We manage a wealth of data that can help Parties to set priorities and track success in meeting biodiversity targets—including developing and revising NBSAPs (see opposite).

An overview of BirdLife's online resources

Section	URL	QR code
CBD support 	http://www.birdlife.org/datazone/info/CBDsupport A dedicated section of BirdLife's website, that Parties to the CBD can draw upon when setting priorities, tracking success, developing NBSAPs, preventing extinctions, and designing protected area networks.	
Country profiles 	http://www.birdlife.org/datazone/country Biodiversity statistics, graphs and maps for every country of the world, including information on numbers of bird species and their IUCN Red List status, numbers of terrestrial and marine Important Bird Areas and their protection status, and environmental treaties.	
State of the World's Birds 	http://www.birdlife.org/datazone/sowb An online tool providing access to over 300 Case Studies analysing data from BirdLife and others to help inform decisions, detailed spotlights on BirdLife's key areas of engagement, and a wide range of publications, including national 'State of the birds' reports.	
Species factsheets 	http://www.birdlife.org/datazone/species Detailed factsheets for all the world's birds (>10,000), containing information on IUCN Red List status, distribution, population, ecology, threats, and actions underway and needed.	
Site factsheets 	http://www.birdlife.org/datazone/site Detailed factsheets for >11,000 Important Bird Areas (IBAs) in nearly 200 countries, containing information on location and boundaries, key species and habitats, threats, protection status, conservation actions, local communities, and ecosystem services.	
Marine e-Atlas 	http://www.birdlife.org/datazone/marine A dynamic and interactive map providing information on all the world's seabirds, breeding colonies, important marine sites, their protection status and relationship to EBSAs.	

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 opposite. 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.

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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.

