

A close-up, high-resolution photograph of a bird's eye, showing the intricate details of the iris and the surrounding feathers. The eye is dark and focused, with a reflection visible on its surface. The feathers are light-colored and have a fine, textured appearance.

BIRDS AND BIODIVERSITY TARGETS

What do birds tell us about progress to the Aichi Targets
and requirements for the post-2020 biodiversity framework?



A STATE OF THE WORLD'S BIRDS REPORT

CONTENTS

Executive summary	3
Forewords	4
The wider context for a focus on birds and biodiversity targets	6
Introduction	7
<p>WHAT BIRDS TELL US For key to progress scores, see p.7</p> 	<p>Strategic Goal A 8</p> <p>Target 1 – Raising awareness of the value of biodiversity 10</p> <p>Target 2 – Mainstreaming biodiversity values 12</p> <p>Target 3 – Reforming incentives 14</p> <p>Target 4 – Achieving sustainable production and consumption 16</p>
	<p>Strategic Goal B 18</p> <p>Target 5 – Reducing habitat loss and degradation 20</p> <p>Target 6 – Sustainable fisheries 22</p> <p>Target 7 – Ensuring sustainable agriculture, aquaculture and forestry 24</p> <p>Target 8 – Reducing pollution 26</p> <p>Target 9 – Tackling invasive species 28</p> <p>Target 10 – Minimizing pressures on coral reefs and other vulnerable ecosystems impacted by climate change 30</p>
	<p>Strategic Goal C 32</p> <p>Target 11 – Protecting and conserving biodiversity 34</p> <p>Target 12 – Preventing extinctions 36</p> <p>Target 13 – Maintaining genetic diversity in crops, livestock and wild relatives 38</p>
	<p>Strategic Goal D 40</p> <p>Target 14 – Safeguarding and restoring ecosystems that provide essential services 42</p> <p>Target 15 – Enhancing ecosystem resilience and the contribution of biodiversity to carbon stocks 44</p>
	<p>Strategic Goal E 46</p> <p>Target 18 – Traditional knowledge 48</p> <p>Target 19 – Improving and sharing knowledge of biodiversity 50</p> <p>Target 20 – Mobilising resources for implementing the CBD 52</p>
Key implications for the post-2020 Global Biodiversity Framework	54
Indicators for measuring progress	58
Targets are important, but implementation is key	60
References	62

EXECUTIVE SUMMARY

The tenth meeting of the Parties to the Convention on Biological Diversity was held in Nagoya, Aichi Prefecture, Japan, in October 2010.



Photo: © Franz Dejon/IIED

- In 2010, Parties to the Convention on Biological Diversity (CBD) adopted the Strategic Plan, containing 20 'Aichi Biodiversity Targets' to tackle the loss of nature.
- Birds are excellent environmental indicators. In this report, we synthesise data from birds to examine to what degree each Aichi Target was met, and to identify examples of positive trends and successes.
- Data from birds suggest that we have failed to meet in full any of the 18/20 Aichi Targets assessed:
 - The underlying drivers of loss of nature remain, with biodiversity still not yet adequately mainstreamed across all sectors.
 - Agriculture, forestry and fisheries continue to be managed unsustainably, driving habitat loss and degradation.
 - Pollution, invasive alien species and climate change are growing threats to birds and other biodiversity.
 - Protected area networks are yet to provide adequate coverage of Important Bird and Biodiversity Areas (IBAs, Key Biodiversity Areas identified for birds), with 36% of IBAs being entirely unprotected.
 - Species continue to be driven towards extinction, with declines of common species undermining delivery of ecosystem services such as pollination.
- Nevertheless, birds provide hope. For most targets assessed, there are successes and positive trends for some aspects, species or locations:
 - Birds help people to develop an awareness of nature and the biodiversity crisis.
 - Data on birds are being used to mainstream biodiversity across sectors, such as for financial institutions and businesses to screen for biodiversity risks when planning projects and developments.
 - Reformed incentive systems such as agri-environment schemes have helped to slow or reverse bird population declines.
 - Unsustainable hunting practices are being eliminated through community conservation efforts in some locations.
 - Mitigation measures are reducing bycatch of seabirds in fisheries, while action to reduce pollution is benefiting many species.
 - Over 160 native bird species have benefited from successful eradications of invasive species on islands, while biosecurity has saved at least one bird species from extinction.
 - Conservation efforts have prevented up to 18 bird species from going extinct since 2010, and have slowed the effective extinction rate of birds by at least 40%.
- Conservation of Important Bird and Biodiversity Areas typically benefits people as well as biodiversity.
- Important Bird and Biodiversity Areas worldwide contain 300 Gigatonnes of carbon, almost 9% of the world's carbon stocks, so their conservation also contributes to climate change mitigation.
- Citizen scientists are increasingly mobilising and sharing data on the occurrence and abundance of birds, enabling innovative approaches to their conservation.
- These results also provide valuable insights for the development and implementation of goals and targets of the post-2020 Global Biodiversity Framework that is currently under negotiation through the CBD.
- Birds point the way to a more effective and 'smarter' set of goals and targets, and provide a suite of metrics and indicators for measuring progress.
- Birds also inform more effective implementation measures addressing enabling conditions such as reporting, verification, resourcing and international cooperation.

FOREWORD

BRAULIO FERREIRA DE SOUZA DIAS
CHAIR OF BIRDLIFE INTERNATIONAL
GLOBAL COUNCIL



The Strategic Plan on Biodiversity 2011-2020, and the 20 Aichi Biodiversity Targets it contained, was adopted by Parties to the Convention on Biological Diversity in 2010. It represented an unprecedented attempt by world governments to slow the loss of nature and promote its recovery. At the end of the period for implementing actions to meet these targets, the recently launched Fifth Global Biodiversity Outlook summarised what was achieved.

BirdLife's Birds and Biodiversity Targets report dives deeper into some of the findings, focusing on the unique insights and unparalleled datasets that birds provide to underpin such an assessment. It shows that the world has failed to fully meet the ambitious goals it set a decade ago. This failure stems from insufficient implementation of national targets in most countries, a mismatch between the ambition level of most national targets and that of the global targets, a lack of mainstreaming of biodiversity across the social and economic sectors, and insufficient engagement of heads-of-state in the CBD Framework negotiation and implementation. We must recognise, however, the increased efforts by most countries to improve their biodiversity agenda, with almost half of all countries adopting their updated National Biodiversity Strategies and Action Plans as a "whole-of-government" policy, thereby effectively promoting the mainstreaming of biodiversity in all sectors.

But this should not be cause for giving up. As shown in this report, birds also provide reasons for hope: inspiring examples of success, positive trends, and insights into how biodiversity targets can be met. In the last decade, conservation efforts have prevented up to 18 bird extinctions, reduced the accumulation of bird 'extinction debt' by 40%, reduced seabird bycatch in fisheries by up to 99% in some cases, removed the threat of invasive species from numerous islands, significantly increased the coverage of marine protected areas and increased public awareness and engagement. These examples illustrate that we have the necessary tools and knowledge to tackle the biodiversity crisis.

Moving forward, these results provide key insights into what is needed for the design and implementation of the post-2020 Global Biodiversity Framework currently being negotiated between governments. The findings summarised in this report should inspire governments to adopt ambitious, well-crafted goals and targets to put nature on a path to recovery over the coming decade. We must fully succeed this time – our future depends on a healthy planet.

A handwritten signature in blue ink, consisting of a series of fluid, connected strokes.



FOREWORD
PATRICIA ZURITA
CHIEF EXECUTIVE OFFICER OF
BIRDLIFE INTERNATIONAL



Birds are more popular and better studied than any other comparable group of organisms, and are consequently excellent barometers for change in the wider environment. This report is the latest in the State of the

World's Birds series, which has been produced with the generous support of the Aage V. Jensen Charity Foundation. The evidence compiled in it shows unequivocally that the state of the natural world continues to deteriorate. Pressures such as habitat loss, over-exploitation, and invasive species continue to drive species towards extinction, disrupting delicately balanced ecosystems and reducing the capacity of our planet to sustain us into the future.

A healthy planet is essential for our own health and well-being. Access to nature has been shown to improve physical health, reduce chronic stress, anxiety, and depression, and boost concentration and self-esteem. Never has the importance of a healthy planet been more evident than this year, as the COVID-19 pandemic continues to affect us all. Studies have shown that 75% of new or emerging diseases that affect humans originated

in animals. If we continue to expand our cities, crops and livestock into previously untouched landscapes, force wildlife to seek refuge near human populations by destroying their natural habitat, and exploit species for illegal wildlife trade and consumption, we are exposing ourselves to deadly risks.

The contents of this report tell us that it is time to wake up. We humans need to stop seeing ourselves as the owners of nature. We are part of nature, and the planet is a system on whose delicate balance our own survival depends. It is time to think beyond human health, and more in terms of the wider planetary health. Birds show us what action is needed: by conserving birds, we address the threats affecting biodiversity more widely, helping to restore and sustain the health of our planet. If we want to prevent further health crises, it is imperative that we listen to the birds.

A handwritten signature in blue ink, appearing to read 'Patricia Zurita'. The signature is stylized and written in a cursive-like font. It is positioned below the main text block on the right side of the page.



THE WIDER CONTEXT FOR A FOCUS ON BIRDS AND BIODIVERSITY TARGETS

Over the last two decades, BirdLife's State of the World's Birds reports have summarised what birds tell us about the state of nature, the pressures upon it, and the solutions needed. Building on these and many other sources, the first Global Assessment from the Intergovernmental Science-Policy Panel on Biodiversity and Ecosystem Services (IPBES) concluded in 2019 that, from genes to species and ecosystems, humanity's common natural heritage, and ultimately its collective safety net, is declining fast. The report included an estimate (drawing on data from the International Union for the Conservation of Nature (IUCN) Red List, including BirdLife's assessments of extinction risk for all birds) that a shocking one million species may be currently threatened with global extinction.

Not only do we risk losing a million unique and wondrous lifeforms, we also risk fundamentally impairing the biological processes that sustain our own existence. A healthy ecosystem is one that has both variety and abundance of life, and it is this richness that underpins ecosystem functions and delivers 'ecosystem services', such as pollination, water purification, carbon sequestration and storage, which in turn provide us with the food, water and clean air we need to live.

Nature underpins the delivery of the Sustainable Development Goals. However, our systematic disregard for the environment is jeopardising progress towards sustainable development. Continued loss of nature threatens over half of global GDP as well as human lives and well-being, with the poorest and most vulnerable the first and hardest hit. This has been brought into sharp focus this year, with the roots of the current, devastating COVID-19 pandemic linked to our mismanagement of nature.

While an economic and societal tragedy, COVID-19 presents an unprecedented opportunity to reset humanity's relationship with nature and to catalyse the transformative change necessary in our political, economic and financial systems.



Photo: © Rachel Gartner

As public awareness and interest in the continuing biodiversity crisis grows, increasing numbers of people from around the world are engaging in climate protests.

The UN-75 Global Dialogue reveals that people around the world overwhelmingly believe that climate and the environment will most affect humanity's future. The UN must recognise the value of nature, not just as the foundation of a healthy and resilient economy, but as the basis for human well-being, peace and security, and put nature at the core of its agenda.

As we end the UN Decade on Biodiversity with nature in a poorer state than when the decade began, governments must reflect on the successes and failures of the last global plan on biodiversity documented in the Fifth Global Biodiversity Outlook. The post-2020 framework must this time succeed in putting nature on a path to recovery and securing a healthy, just and sustainable future for all, for the sake of both current and future generations. Birds can both illuminate the failures of recent targets and inform the requirements of new goals. This report shows us how.

Sources: Díaz et al. (2019), IPBES (2019), UN75 (2020), UNEP (2012), UNEP & ILRI (2020), WEF (2020)

INTRODUCTION

The Aichi Biodiversity Targets

In 2010, Parties to the Convention on Biological Diversity (CBD) adopted a bold Strategic Plan for Biodiversity for 2011-2020. It contained 20 'Aichi Biodiversity Targets' to tackle the loss and degradation of nature, aiming to improve the state of nature, reduce direct pressures, address the underlying drivers of loss, enhance the benefits to people from nature, and enhance implementation of the Convention to achieve these aims. At the end of this period, it is timely to examine the progress made towards achieving these targets, and to learn from successes and failures. In this report, we synthesise data from birds to examine to what degree each target was met, and to identify examples of positive progress and success.

We cover all but two of the Aichi Targets, omitting Target 16 (on implementing the Nagoya Protocol on Access and Benefits Sharing) and Target 17 (on developing and implementing national biodiversity strategies and action plans), as information from birds is less relevant or unavailable for assessing these.

Why birds?

Birds are by far the best known class of organisms on the planet. They are popular and engaging, and as a consequence there is an army of casual birdwatchers as well as professional ornithologists and conservationists collecting data on birds all across the world. Fortunately, birds are also very useful indicators of wider biodiversity: they are found in all countries and nearly all habitats; most species are generally straightforward to detect, identify and count; their taxonomy is well understood and fairly stable; and their populations are responsive to environmental change. This means that there is a plethora of data available on birds, and they can be used as indicators of the health of ecosystems. Birds have also received



Photo: Wandering Albatross *Diomedea exulans* © Henri Weimerskirch

Birds are widespread, engaging, and relatively easy to observe and identify, making them the best studied taxon in the world.

considerable conservation attention, and the solutions identified to safeguard and restore their populations and habitats are typically relevant to wildlife more broadly. To summarise: birds can tell us about the state of the planet, the pressures on nature, and the solutions needed to conserve species and habitats.

Reasons for hope

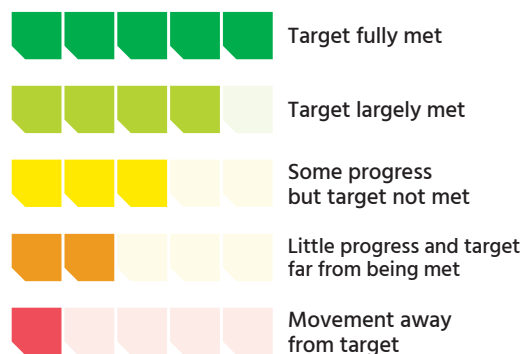
Despite the ongoing loss and degradation of life on earth, there are numerous reasons for hope. In this report, we identify at least one 'good news' story for each target, to illustrate that successes have been achieved and progress made, even if the overall trend is negative owing to the magnitude of growth in the drivers and pressures on nature on our planet.

Implications for the future

Lastly, we focus on the implications of this review for the post-2020 Global Biodiversity Framework currently being negotiated through the CBD. We consider what the information from birds tells us about the threats that need addressing, the actions that are required, and how to express the outcomes we wish to achieve in order to meet the CBD Vision of living in harmony with nature for the coming decades. We show how birds can point the way to a more effective and 'smarter' set of goals and targets, provide a suite of metrics and indicators for measuring progress and inform more effective implementation measures addressing enabling conditions.

WHAT BIRDS TELL US

Each target in this report is scored as follows:



This assessment is based on information and data on birds, including the case studies presented here, and reflects progress achieved in relation to bird conservation, rather than a comprehensive assessment of all dimensions of each target, which can be found in the Global Biodiversity Outlook-5.

STRATEGIC GOAL A

Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society



PHOTO: Common Starling *Sturnus vulgaris* innumeration © Nicky Kenny / Shutterstock.com

RAISING AWARENESS OF THE VALUE OF BIODIVERSITY

Birds are spectacularly popular and have engaged increasing numbers of people across the world, raising awareness of biodiversity and the pressures it is under.

Alongside growing public awareness of the linked biodiversity and climate crises, this provides hope for more effective actions to tackle biodiversity loss in the coming decade.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

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.

SOME PROGRESS...

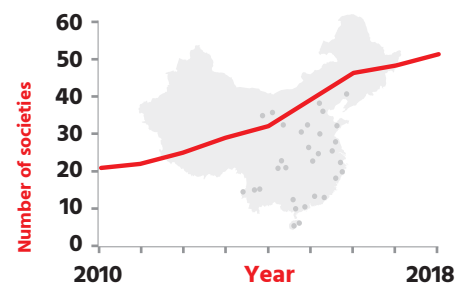
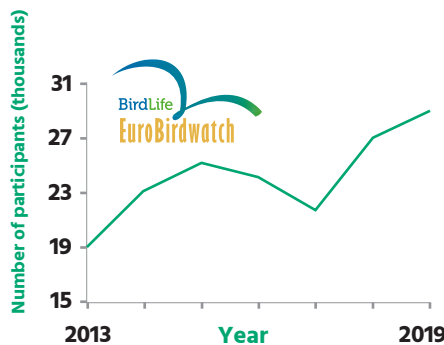
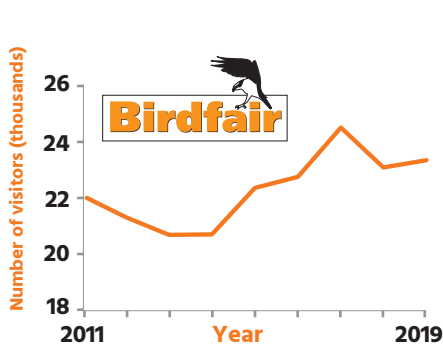
Birds help people to develop an awareness of nature and the biodiversity crisis.

Being conspicuous, colourful and engaging, birds are popular. They are therefore an effective entry point for people to engage with the natural world and develop awareness of biodiversity and understanding of its value. Each October, thousands of people participate in EuroBirdwatch: a series of hundreds of local birdwatching events open to all across Europe and Central Asia. Experienced birders, inquisitive newcomers, the young and old alike join up to observe, identify and count passing birds during autumn migration, when millions of birds make their epic journeys southwards to wintering areas in the Mediterranean and in Africa. The aim of EuroBirdwatch is not only to share the joy of birdwatching but also to educate people by introducing wider audiences to the specific needs of migratory birds and the potential perils they face along their flyways twice a year. Similar numbers of people attend the annual 'Birdfair', in Rutland,



While birdwatching has long been a popular activity in western countries, interest in Asia has grown rapidly in recent years. This has contributed to a greater understanding of bird population trends and increased local support for conservation. PHOTO Vivian Fu

UK, to enjoy birdwatching activities, informative lectures, art and nature-focused shopping. For over 30 years, Birdfair has been managed to raise awareness and funds for conservation, with a different project being the focus each year.



>20,000
visitors to UK Birdfair every year

52%
increase in participation since 2013

30
new Chinese birdwatching societies set up since 2010

Aves Argentinas, Latin America's oldest environmental organisation and BirdLife Partner, organises several education and engagement programmes to raise awareness of birds and biodiversity, including birdwatching courses, a "Guardians of Nature" programme, and Argentina's School of Naturalists.
PHOTO Andrea Filadoro



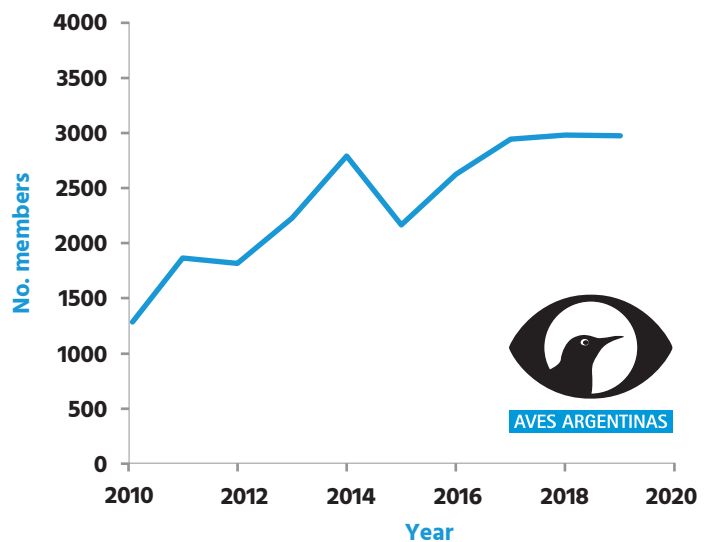
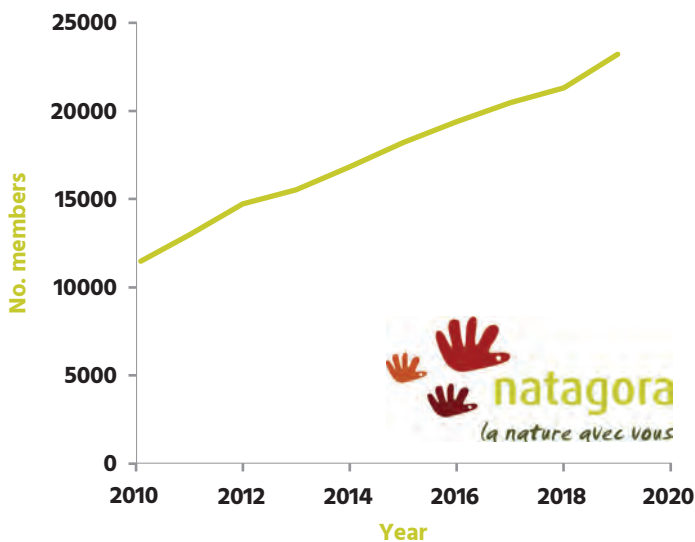
...AND FURTHER POSITIVE TRENDS

Increasing numbers of people are joining civil society organisations as a positive step to conserve nature

As well as engaging people, birds increasingly inspire them to take action to conserve biodiversity. Growing numbers of people are supporting civil society organisations focused on nature conservation. With 115 Partners in 112 countries, BirdLife International is the

largest global partnership of national nature conservation organisations. Registering as a member of a BirdLife Partner provides individuals with the opportunity to support the conservation of nature as well as to receive information and advice on the steps that they can take to conserve nature and

ensure its use is sustainable. The number of members of Natagora (BirdLife in Wallonia, Belgium) and Aves Argentinas (BirdLife in Argentina) have each more than doubled since 2010, reflecting the growing trend of support for nature conservation, and of people taking action to achieve this.



Growth in the number of members of BirdLife International Partners in Wallonia, Belgium (Natagora) and Argentina (Aves Argentinas) during 2010-2019.

MAINSTREAMING BIODIVERSITY VALUES

Data on birds are increasingly being integrated into development and planning processes, from the use of Important Bird and Biodiversity Areas to screen development finance and corporate footprints to the use of information on sensitive species and locations in renewable energy development planning.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

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.

SOME PROGRESS...

Data on birds and key sites for their conservation are increasingly being used by the private sector to screen for biodiversity risks when planning projects and developments

To minimise negative impacts on biodiversity, companies and financial institutions are increasingly screening potential projects for their biodiversity risk using data on birds and other well-known groups compiled into the Integrated Biodiversity Assessment Tool (IBAT). This is a web-based map and reporting tool that provides fast, easy and integrated access to critical biodiversity information, including from the World Database on Protected Areas, the World Database of Key Biodiversity Areas (incorporating data on >13,000 Important Bird and Biodiversity Areas), and the IUCN Red List of Threatened Species (incorporating assessments of >11,000 bird species). Users of IBAT include large energy and extractive industry companies such as BP, ExxonMobil, Total, Anglo American, Rio Tinto and BHP, utility companies including EDF, Enel and Engie, and financial institutions such as BNP Paribas, J.P. Morgan, Standard Chartered, Asian Development



Wind farms can have a detrimental impact on birds if poorly sited. The renewable energy sector, government agencies and conservation practitioners are increasingly working together to ensure that the expansion of renewable energy does not harm wildlife. PHOTO STRIX

Bank (ADB), the European Investment Bank and the World Bank Group. Francesco Ricciardi, an environmental specialist at ADB, explains that the bank uses IBAT “to identify if a proposed project is located in an area of high biodiversity value, if potentially there are endangered species recorded in proximity, as well as protected areas or natural reserves. If one or more such risks are identified, it triggers additional studies and evaluations required by ADB’s Safeguards Policy Statement.”



22,523

locations in **228** countries assessed by IBAT users



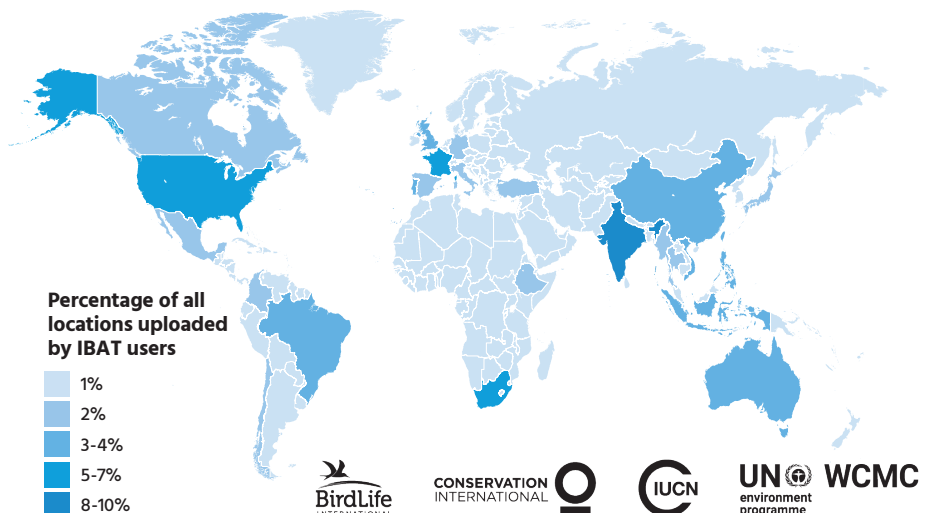
5,341

reports downloaded in 2019



3,502

users on the IBAT platform



The Integrated Biodiversity Assessment Tool is widely used by the private sector to integrate biodiversity values into planning and reporting.



BirdLife's Soaring Bird Sensitivity Mapping Tool is used throughout the Mediterranean, Middle East and north-east Africa to support sustainable wind energy expansion.

...AND FURTHER POSITIVE TRENDS

The renewable energy sector is increasingly using information on birds to avoid sensitive locations

A swift transition from CO₂ emitting fossil fuels to renewable sources of energy is essential. However, renewable energy facilities, such as wind and solar farms, can have a detrimental impact on wildlife if poorly sited. For instance, one of the wildlife groups most directly impacted by wind energy is birds. Not only can inappropriately sited wind farms destroy important bird habitat, birds can also be impacted through collision with turbine blades and

displacement from their key flight paths and migration routes. Fortunately, wind and solar radiation are widespread resources and there is considerable scope to choose locations for development where the impact on birds and other wildlife will be minimal. With careful, strategic and proactive planning, it is possible to meet renewable energy targets without adversely affecting wildlife. To achieve this, the renewable energy sector, government agencies and conservation

practitioners are increasingly working together to ensure that the expansion of renewable energy does not harm wildlife. Central to this ambition is avian sensitivity mapping, a technique whereby spatial bird data is used to identify areas where conflict between renewable energy and birds is likely to occur. The preparation of such maps in advance of wind and solar expansion can significantly reduce the likelihood of conflict with birds and other wildlife.

REFORMING INCENTIVES

Information from birds is informing revisions to subsidy systems, but many incentives remain damaging to biodiversity, driving unsustainable practices in agriculture, fisheries and other sectors that destroy and degrade habitats, and drive declines in nature.

WHAT BIRDS TELL US



Little progress and target far from being met

AICHI TARGET

3

By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize 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.

SOME PROGRESS...

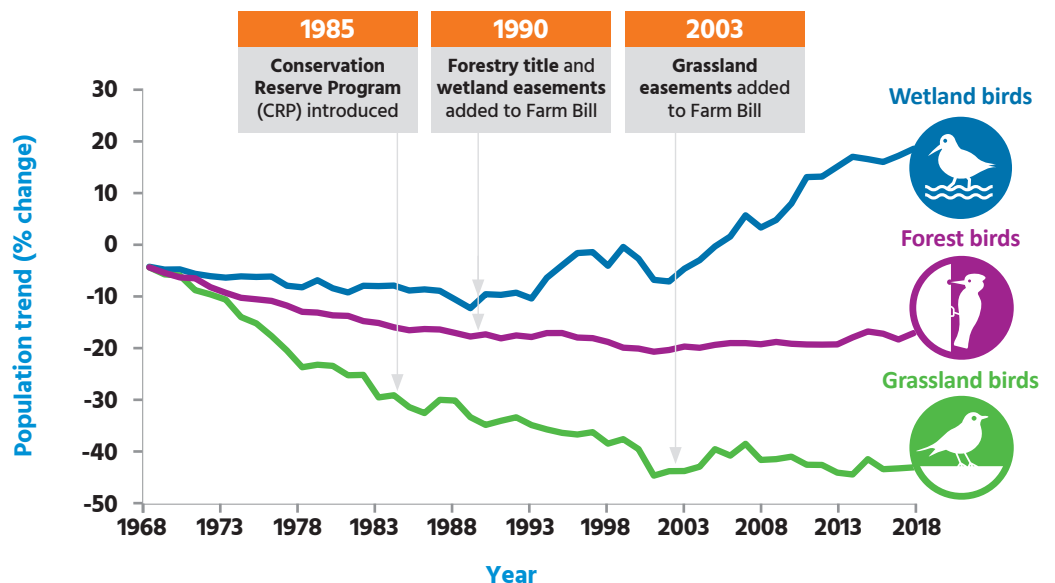
In the USA, environmental measures under the Farm Bill have reversed bird population declines

After two decades of declines, wetland bird populations grew dramatically—and forest and grassland bird populations stabilized—following the introduction of key conservation programmes linked to subsidies under the Farm Bill – the agricultural and food policy tool of the US Government. For example, wetland bird numbers had declined 10% since 1970 when ‘wetland easements’ (voluntary legal agreements that limit certain types of land-uses in perpetuity) were added to the Farm Bill in 1990, but have risen by 51% since then. Forest birds declined by 19% during 1970-1990, but the decline levelled off and then populations rose by 3% since the ‘forestry title’ was added to the Bill in 1990. Finally, long-term declines in grassland bird populations had reached 34% by the time the ‘Conservation Reserve Program’



A new, updated Farm Bill is signed into law approximately every five years. Recent changes have included consolidation of conservation programs to allow greater coordination between them, and increased incentives for organic farming, rotational grazing, and use of cover crops. PHOTO Official White House Photo by Pete Souza

began in 1985, but eventually stabilized, and rose by 3% after ‘grassland easements’ were added to the Farm Bill in 2003. These examples based on bird data show that revisions to subsidy systems can halt and reverse biodiversity trends at a continental scale. Source: NABCI (2017).



Average population trends for suites of bird species dependent on major habitat types. Source: North American Breeding Bird Survey and wetland bird surveys (courtesy of John Sauer USGS Patuxent Wildlife Research Center).

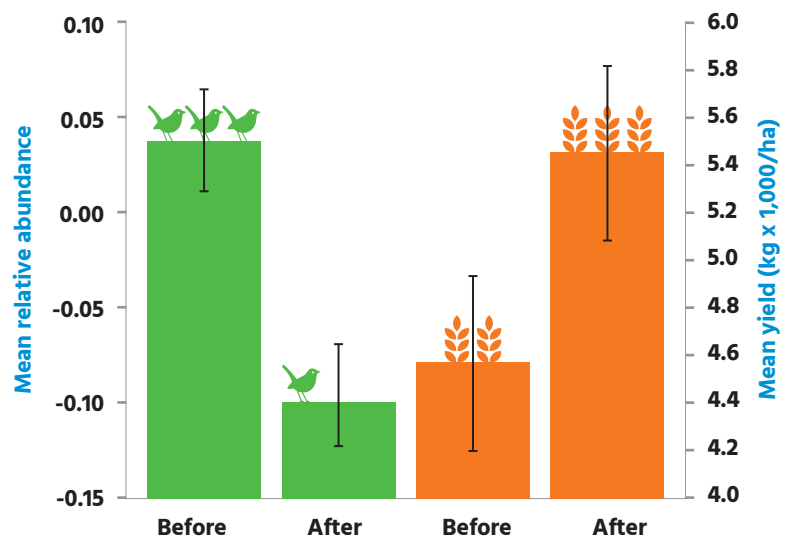
The EU's Common Agricultural Policy (CAP) continues to reward intensively managed farms while offering much poorer deals to wildlife-friendly farming systems. Only 25% of CAP spending goes to rural development, while just 4% is spent on agri-environment schemes. PHOTO Fotokostic/ Shutterstock.com



...BUT TARGET NOT MET

European agricultural policies are driving declines in birds and other biodiversity

The EU's Common Agricultural Policy (CAP) remains heavily biased in favour of intensive farming, and is still driving intensification and hence environmental harm. A 2018 study for the Czech Republic showed that farming intensified and farmland bird populations declined steeply after the country joined the EU in 2004. Similar results have been found in other EU countries: for example in Spain, the CAP has driven the loss of fallow land (which is not used for production), and this is associated with the loss of farmland birds. Finally, a scientific opinion supported by over 3,600 scientists in 2020 confirmed that the CAP "supports a variety of practices contributing to wide-scale biodiversity loss". Incentives for growing biofuels have also led to increased use of land to grow maize, oilseed and other biofuel crops. A 2014 study estimated that the increase of farmland for maize cultivation in Germany could result in a 10% decline of farmland birds by 2050. Sources: Pe'er *et al.* (2019), Reif & Vermouzek (2019), Sauerbrei *et al.* (2014), Traba & Morales (2019).



The abundance of farmland bird populations declined as farmland yields increased following the implementation of the Common Agricultural Policy after the Czech Republic joined the EU. Bars show means with 95% confidence intervals. Abundance is shown relative to 1982 levels, comparing 1993-2004 and 2005-2017. Yield is shown as the mean per hectare yield of wheat, comparing 1993-2004 and 2005-2016. Source: data from Reif & Vermouzek (2019).

ACHIEVING SUSTAINABLE PRODUCTION AND CONSUMPTION

While there have been some successes in reducing the negative impacts of unsustainable use of bird species since 2010, data from birds show that overall human consumption patterns are not yet sustainable.

WHAT BIRDS TELL US



Little progress and target far from being met

AICHI TARGET

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.

SOME PROGRESS...

Unsustainable hunting of Amur Falcons in India ended through community conservation

Amur Falcon *Falco amurensis* is a migratory raptor that undertakes spectacular annual journeys between its breeding grounds in East Asia and wintering areas in southern Africa. In 2012, the Bombay Natural History Society (BNHS, BirdLife in India) was alerted to mass trapping of very large flocks of Amur Falcons at Doyang Reservoir in Nagaland, India. This vital stopover site is used by up to one million falcons every autumn, but an estimated 100,000-140,000 individuals were being trapped each season, mostly for sale at local food markets. In response, BirdLife launched an international appeal, raising funds to support a long-term community outreach project. An innovative PR campaign—"Friends of the Amur Falcon"—was developed to galvanise community action and build awareness of the importance of conserving the species. Local people were employed to patrol the Doyang area and to start eco-clubs through churches, schools and other local groups. This approach proved hugely



Up to a million Amur Falcons *Falco amurensis* use the Doyang Reservoir in Nagaland as a stopover site during their annual 22,000 km migration, forming spectacular flocks which attract thousands of tourists. PHOTO Ramki Sreenivasan/ Conservation India

successful, with many former hunters becoming guardians of the falcons, and there have been no reports of falcon hunting in the area since 2013. Doyang Reservoir was declared an Important Bird and Biodiversity Area in 2016, and is becoming an increasingly popular avitourism destination.



>100,000 Amur Falcons

Counted during a transect of Doyang Reservoir by BNHS in 2018



>500 children

Currently take part in eco-clubs run by BNHS across 6 villages in Nagaland



>2,500 tourists

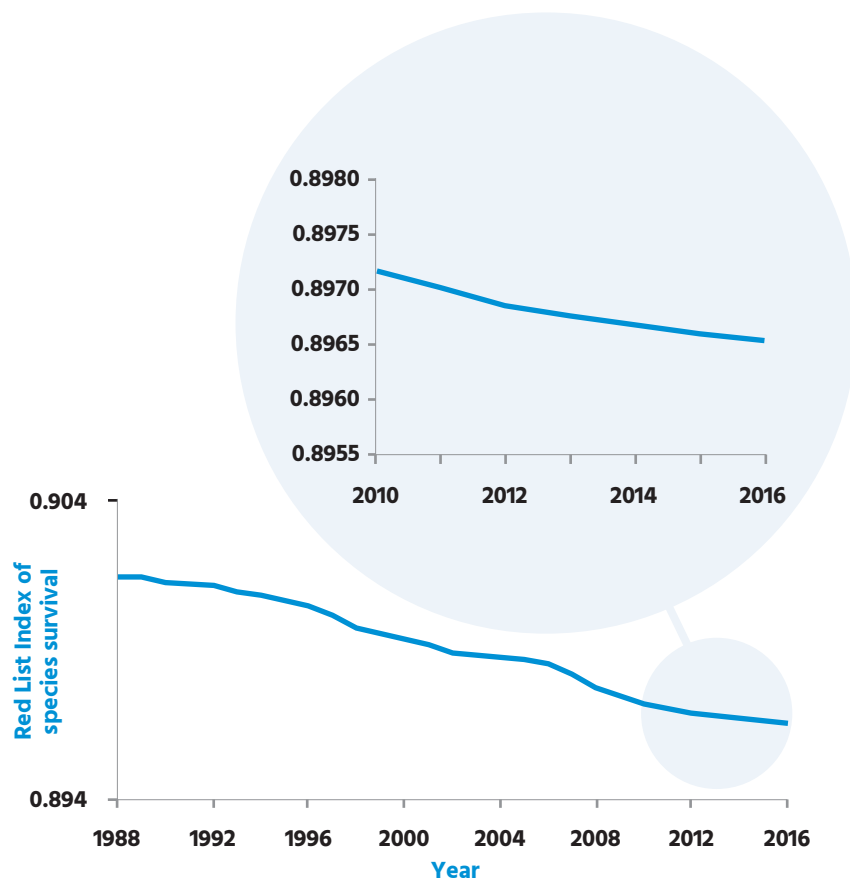
Visited home stays in Nagaland set up for bird tourism since 2015



The Common Hill Myna *Gracula religiosa* is one of the most popular avian pets in Asia. Intensive trade of this species has caused significant population declines – during 2000-2019, over 40,000 wild-caught individuals were exported from countries across South and South-East Asia. PHOTO Aphisit Sailueam/Shutterstock.com

...BUT TARGET NOT MET
The Red List Index shows that human use of the world's birds remains unsustainable

At least 45% of extant bird species (over 4,500 species) are used by humans, principally for pets (37%) and for hunting for food (14%), but other uses include sport hunting, ornamentation and traditional medicine. Much of this use drives trade at an international scale, involving at least a third of bird species, mostly for the pet trade. Unfortunately, however, human use of birds remains unsustainable: 39% of threatened birds are impacted by unsustainable levels of direct exploitation (hunting and trapping), and 75% are threatened by all forms of biological resource use (including effects of logging and fisheries). Much of this is illegal: recent studies estimate that 13-43 million individual birds are killed illegally each year in Europe, North Africa and the Middle East. The Red List Index showing impacts of utilisation shows that although successful control and management of use and trade have led to some species improving in status, this has been outweighed by the number of species deteriorating in status owing to unsustainable exploitation. Sources: Brochet et al. (2016, 2017, 2019), Butchart (2008).



The Red List Index for the world's birds showing trends driven by use indicates that unsustainable levels of hunting and trapping continue to drive them towards extinction. A value of 10 indicates that all species are Least Concern, while a value of 0 indicates that all species have gone extinct.

STRATEGIC GOAL B

Reduce the direct pressures on
biodiversity and promote sustainable use





PHOTO: Indian Roller *Coracias benghalensis* © Swayamsiddha Mohapatra

REDUCING HABITAT LOSS AND DEGRADATION

While there have been encouragingly successful efforts to stem habitat loss and safeguard important locations, deforestation in the most significant sites for bird conservation is symptomatic of wider trends in habitat loss and degradation.

WHAT BIRDS TELL US



Little progress and target far from being met

AICHI TARGET

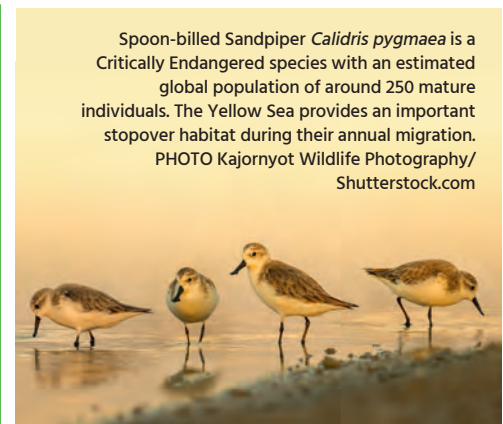
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By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

SOME PROGRESS...

Migratory waterbirds inspire international cooperation to stem habitat loss on the Yellow Sea coast

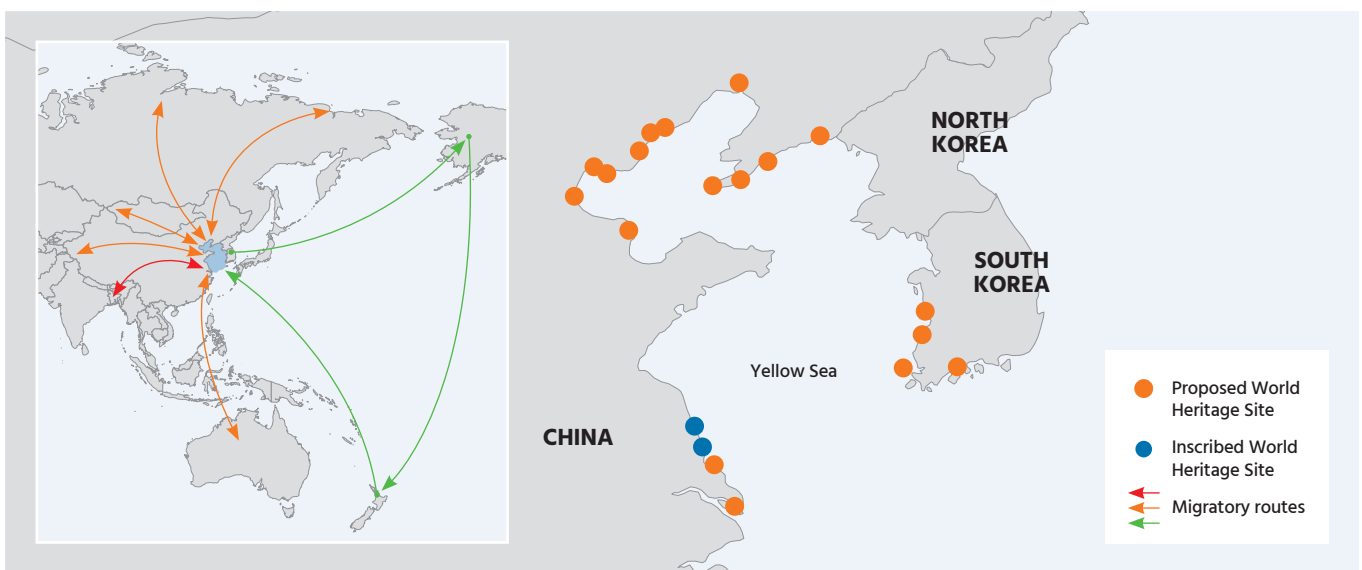
The network of coastal wetlands along the Yellow Sea coast of China and the Koreas are vital staging sites for migratory waterbirds of the East Asian-Australasian flyway, like the Critically Endangered Spoon-billed Sandpiper *Calidris pygmaea*. By 2012, an influential analysis highlighted that rapid economic growth had driven losses averaging 35% of intertidal wetlands across key areas of the Yellow Sea since the early 1980s. This led to the formation of a working group in which the three national governments could collaborate for their shared coastal ecosystem. In 2018, China restricted further coastal wetland reclamation, promoting ecosystem restoration instead. In 2017, China added 16 Yellow Sea coastal wetland sites to its proposed UNESCO World Heritage List, and the largest two were inscribed on the list in 2019, including Tiaozini, an Important Bird and Biodiversity Area and the world's most important stopover site for the Spoon-billed Sandpiper, which only three



Spoon-billed Sandpiper *Calidris pygmaea* is a Critically Endangered species with an estimated global population of around 250 mature individuals. The Yellow Sea provides an important stopover habitat during their annual migration.

PHOTO Kajornyot Wildlife Photography/Shutterstock.com

years earlier was set to be destroyed by one of the largest ever coastal land-claim projects. The remaining Chinese sites are to be nominated in 2022, while South Korea's Yellow Sea coast World Heritage nomination was due to be inscribed in 2020. Other countries along the Flyway are following suit to help connect critical networks of coastal sites and secure their future. Source: MacKinnon et al. (2012)



Locations in the Yellow Sea proposed as World Heritage Sites, and the bird migratory routes that connect them to other parts of the world.

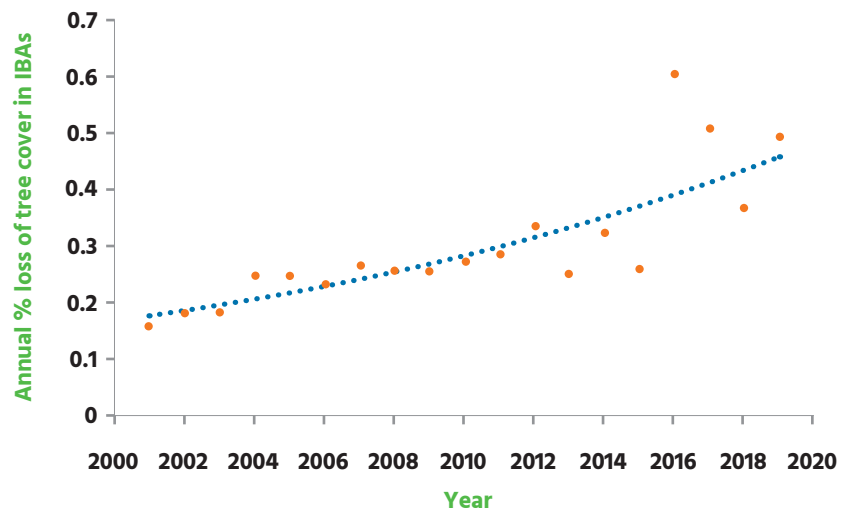


Even in areas where commercial exploitation is prohibited, illegal logging is still rife. In 2018, the Brazilian Environmental and Renewable Natural Resources Institute (IBAMA) seized 7,387 logs illegally harvested in the densely forested Pirititi indigenous Amazon lands. PHOTO Felipe Werneck, IBAMA/ Flickr

...BUT TARGET NOT MET

Forest continues to be lost across the network of Important Bird and Biodiversity Areas

Three-quarters (74%) of Important Bird and Biodiversity Areas (IBAs, Key Biodiversity Areas identified for birds) are threatened by factors that impact habitat extent and condition, including unsustainable agriculture and commercial and residential development. Since 2000, 5.6% of forest cover has been lost from Key Biodiversity Areas identified for forest-dependent birds, and 3.4% has been lost since 2010. Of considerable concern, the rate of loss appears to have continued to increase since 2010, although there is variation between years. Globally, the main drivers of deforestation include forestry, commodity production, wildfire, shifting agriculture and urbanisation. The failure to address these drivers and to safeguard the most important locations for bird conservation from their impacts indicates that this target has not been met. Sources: Global Forest Review (2020).



Total annual percentage tree cover lost between 2000 and 2019 within Important Bird and Biodiversity Areas identified for forest-dependent bird species. Increased losses in 2016 were driven by expanding agriculture, plus forestry and fires. Source: Hansen Global Forest Change v1.7 (2000-2019; <http://earthenginepartners.appspot.com/science-2013-global-forest>).

SUSTAINABLE FISHERIES

Implementation of mitigation measures has spectacularly reduced seabird bycatch in some fisheries. However, extinction risk trends driven by fisheries and their impacts show that overall, many of the world's fisheries remain unsustainable.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

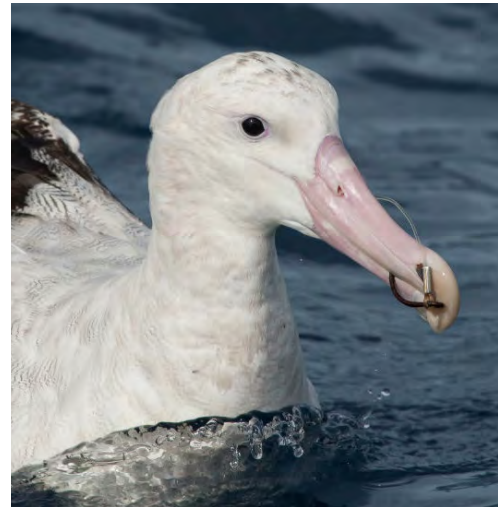
6

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.

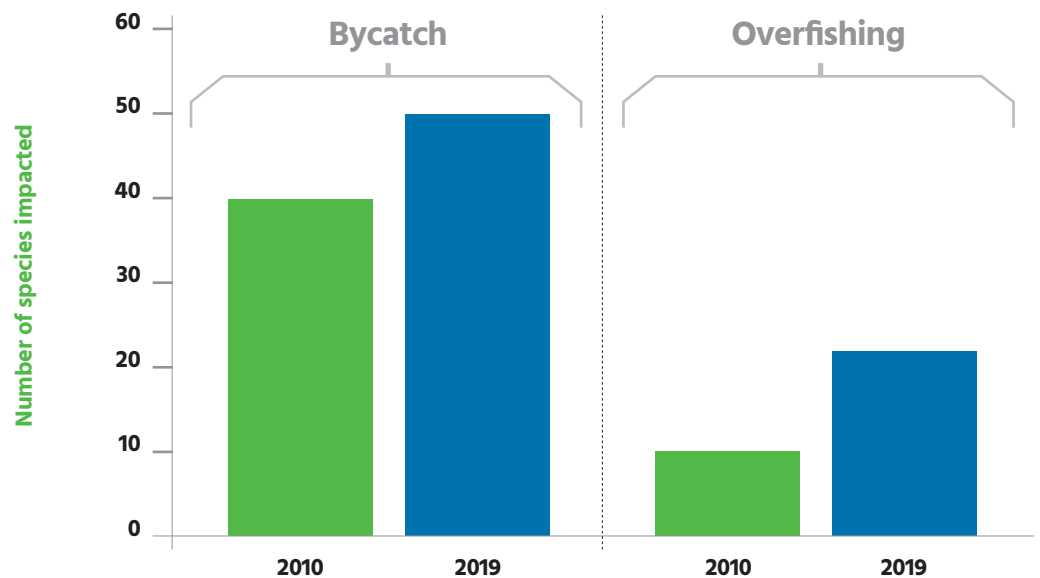
TARGET NOT MET...

Unsustainable fisheries are continuing to drive declines in the world's birds

Despite the successes in mitigating the impact of fishing gear on seabirds, bycatch is still the major at-sea threat to seabirds, particularly for some of the most threatened groups, including albatrosses and large petrels. Threats related to fisheries (including bycatch, but also overfishing of prey species) are increasing and affecting more threatened seabird species compared with the situation a decade ago. The challenge in solving this problem remains in ensuring practical implementation of measures and effective compliance to monitor uptake, particularly on the high seas. Furthermore, solutions for gillnet bycatch (which particularly affects coastal species such as sea-ducks, some penguins and auks) remain elusive and are an urgent research priority.



It is estimated that an albatross dies in a fishery every five minutes. Incidental capture of Wandering Albatross *Diomedea exulans* significantly reduces adult and juvenile survival, driving global population declines. PHOTO Brook Whyllie



The numbers of globally threatened seabird species impacted by bycatch and overfishing have increased since 2010 by 25% and 120% respectively. Sources: Croxall et al. (2012), Dias et al. (2019).

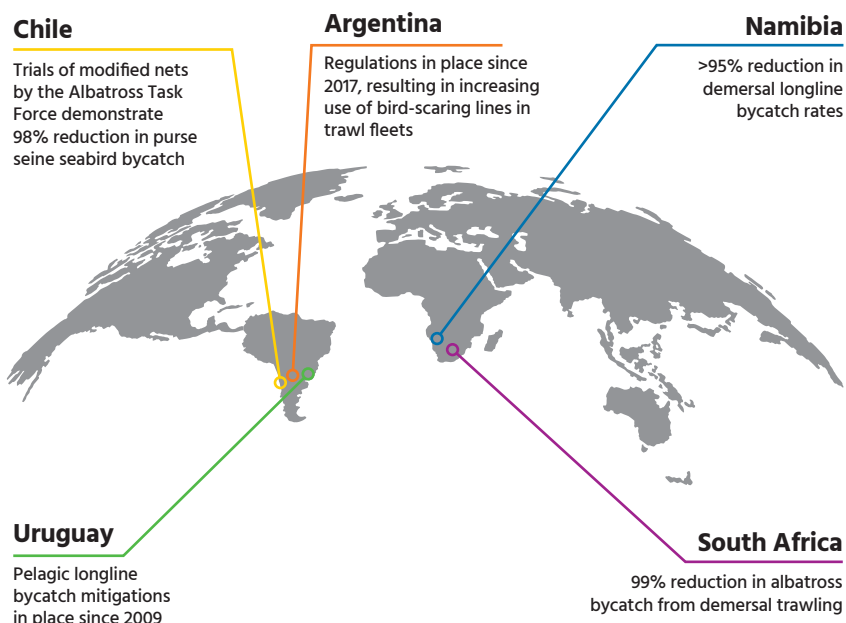


Bird Scaring Lines deter seabirds from trawl cables and hooks, reducing seabird mortality by 90% or more when used alongside other mitigation measures.
PHOTO Nahuel Chavez

...BUT SOME PROGRESS

Mitigation measures are reducing bycatch of seabirds in fisheries

Unintentional capture of non-target species ('bycatch') is a major threat in the marine environment. Encouragingly, however, bycatch mitigation measures are now being implemented in many oceanic areas, within and beyond national jurisdictions. Examples include the requirement for seabird mitigation measures in all tuna fisheries commissions, and the introduction of seabird bycatch regulations in nine out of ten of the fisheries targeted by BirdLife International's Albatross Task Force. This has led to a 99% reduction in albatrosses killed in the South African hake trawl fishery since 2004-2005. The numbers of some well-studied populations of albatrosses, such as Black-browed Albatrosses *Thalassarche melanophris* breeding at Bird Island, South Georgia, seem to now be stabilizing after steep declines in recent decades. These successes were possible thanks to cutting-edge science to identify hotspots of bycatch and develop mitigation solutions, allied with grassroots work on fishing vessels and in ports, as well as intensive advocacy work with industry, governments and the Regional Fisheries Management Organizations. Sources: Maree *et al.* (2014), ATF (2015, 2017, 2019).



Progress in implementing seabird bycatch mitigation and the benefits for seabird populations.

ENSURING SUSTAINABLE AGRICULTURE, AQUACULTURE AND FORESTRY

Some agri-environment measures can deliver impressive benefits for birds and other biodiversity, but declines in farmland bird populations since 2010 show that such measures are insufficient, and overall, agriculture remains unsustainable, representing the largest threat to birds worldwide.

WHAT BIRDS TELL US



Little progress and target far from being met

AICHI TARGET

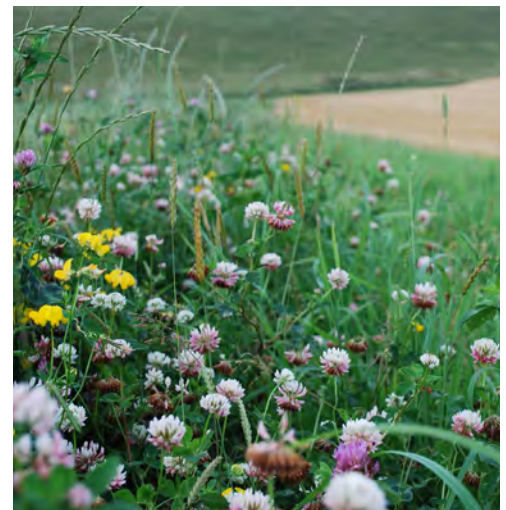
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By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

SOME PROGRESS...

Agri-environment measures are benefiting common farmland birds and moderating their declines

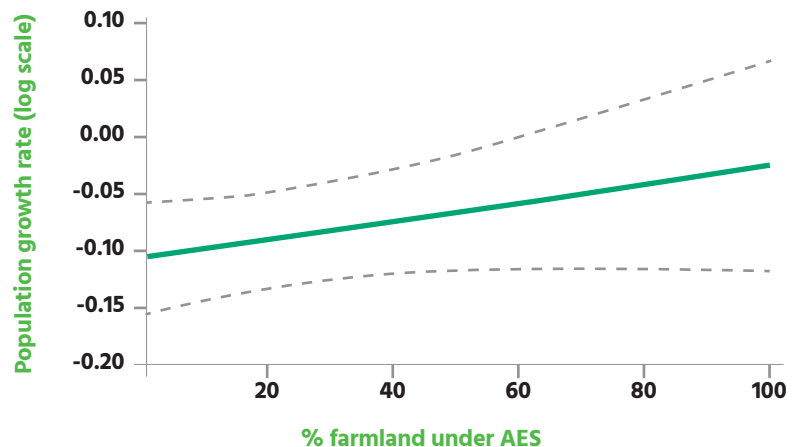
Agri-environment schemes provide funding to farmers and land managers to farm in a way that benefits biodiversity, enhances the landscape, and improves the quality of water, air and soil. Measures include leaving strips unploughed, grass margins, and reducing pesticide and fertiliser inputs. One recent study showed that for resident and short-distance migratory common farmland birds in Europe, population declines were less severe in countries where agricultural areas under agri-environment schemes were more abundant, even though such schemes are usually not designed to protect bird species, but rather to generally improve farmland environmental quality. This suggests that the non-targeted environmental measures within these schemes could be beneficial to some common farmland birds at the EU level. Source: Gamero *et al.* (2017).



Establishing wildflower margins around agricultural fields provides nesting habitat and enhanced feeding opportunities, benefiting species such as Cirl Bunting *Emberiza cirlus* and Eurasian Thick-knee *Burhinus oedicnemus*. PHOTO Pixabay



The UK Cirl Bunting population has increased nine-fold since the introduction of agri-environment schemes designed to provide overwinter stubbles, grass margins, and beneficially managed hedges. PHOTO Mickaël Dia/ Flickr



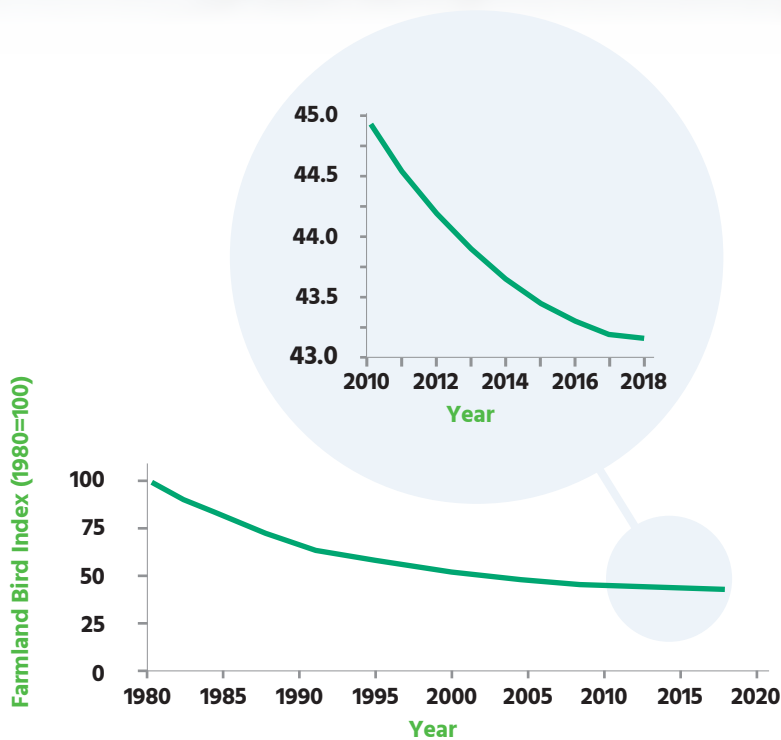
Population growth rates of common farmland birds (resident and short-distance migrants) in relation to percentage of farmland under agri-environment schemes, showing that in areas with a higher proportion of farmland under such schemes, declines are less severe (i.e. less negative growth rates). Dashed lines show confidence intervals. Source: Gamero *et al.* (2017).



Grey Partridges *Perdix perdix* were recently declared extinct in Switzerland, and continue to show marked declines across their native European range due to agricultural intensification. PHOTO Ekaterina Chernetsova/ Flickr

...BUT TARGET NOT MET
Farmland bird population trends in Europe show that agriculture remains unsustainable in the region

Unsustainable agriculture remains the predominant threat to threatened birds and the key sites for their conservation, but it also affects many common and widespread taxa worldwide. Almost half of Europe’s 530 bird species are impacted by agriculture, including 40 regionally threatened species. The impacts of agriculture on birds in Europe are revealed by the European Farmland Bird Index. This is based on annual breeding bird survey data from 28 European countries collected through the Pan-European Common Bird Monitoring Scheme. Regional trend indices for 170 common and widespread species, weighted by the proportion of the population in each country, are combined to produce multi-species indicators showing trends in bird populations in key habitats. The European Farmland Bird Index, combining data for 39 farmland specialists, has declined by 57% since 1980, with no sign of recovery since 2010 (trend = -4%). This represents a net loss of more than 300 million birds, indicating that European agriculture remains unsustainable. Source: BirdLife International (2015), PECBMS (2019).



The European Farmland Bird Index showing trends in average population abundance of 39 farmland specialist species in 28 European countries (1980-2018). Source: Pan-European Common Bird Monitoring Scheme (European Bird Census Council/BirdLife International/RSPB/CSO).

REDUCING POLLUTION

Significant progress has been made in tackling particular types of pollution, from oil spills to veterinary drugs. However, pollution remains a major threat to the world's birds and is a factor driving some species towards extinction.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

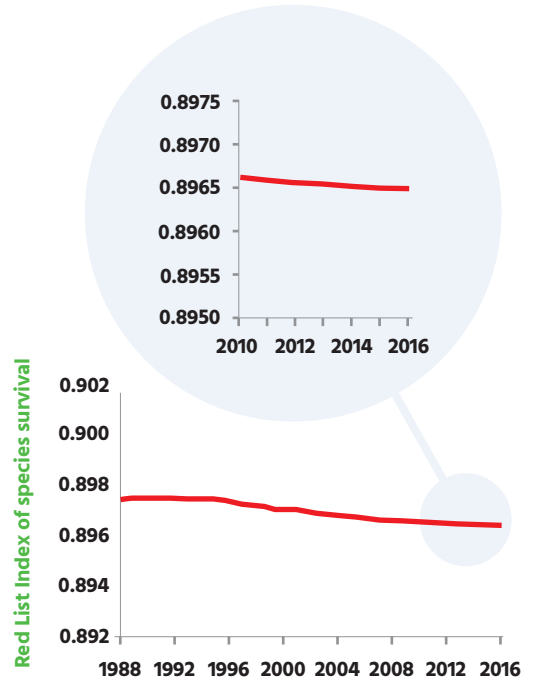
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By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

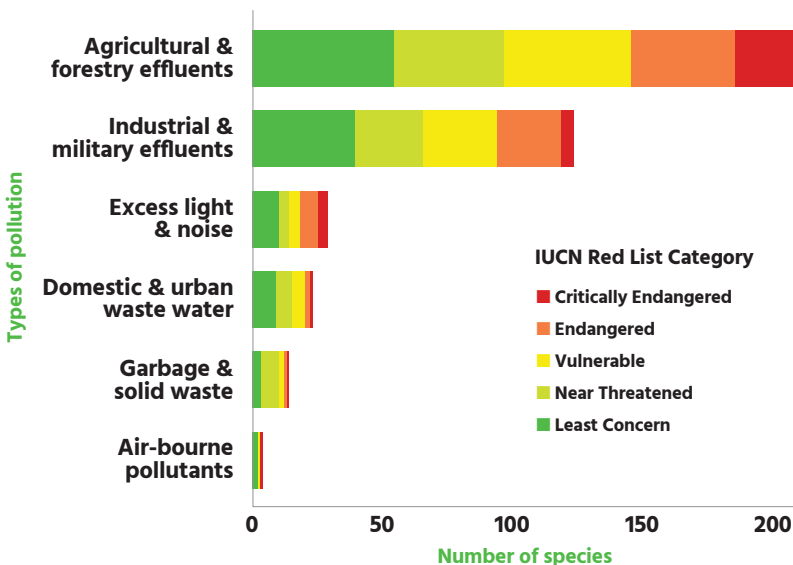
TARGET NOT MET...

A diversity of types of pollution threaten the world's birds and drives them towards extinction

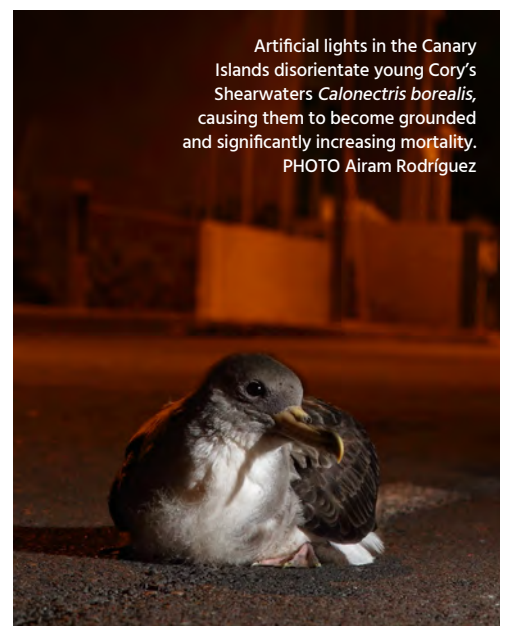
Pollution currently threatens 434 bird species worldwide, including 212 globally threatened species. Agricultural effluents cause ecosystem degradation, and industrial effluents such as oil spills can also cause direct and indirect mortality. Increasing light pollution is already affecting 7.5% of seabird species, particularly small pelagic petrels which are attracted to artificial lights at night in coastal settlements, as well as on ships and oil and gas platforms at sea. Confused by the lights, birds can be injured or "grounded" and unable to fly, and incineration of huge numbers of birds has been recorded in oil and gas platform flares. Other emerging forms of pollution such as marine plastic debris are poorly studied but likely to have widespread impacts. The Red List Index showing the impacts of pollution indicates that pollution has continued to drive declines in the world's birds since 2010. Sources: BirdLife International (2019); Dias et al. (2019); Rodríguez et al. (2019).



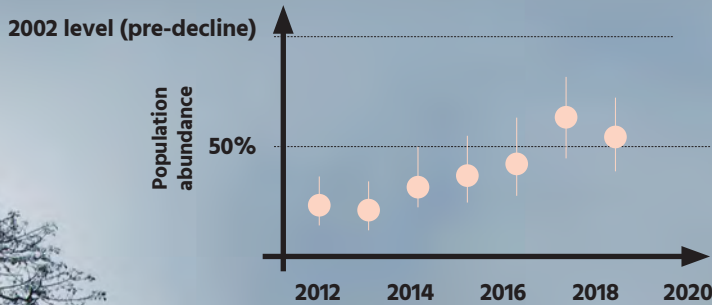
The Red List Index for the world's birds showing trends driven by pollution indicates that this threat continues to drive birds towards extinction. A value of 1.0 indicates that all species are Least Concern, while a value of 0 indicates that all species have gone extinct.



Number of bird species threatened by different types of pollution. (Past threats are omitted, as are those with unknown scope and/or severity). Source: BirdLife International (2019).



Artificial lights in the Canary Islands disorientate young Cory's Shearwaters *Calonectris borealis*, causing them to become grounded and significantly increasing mortality. PHOTO Airam Rodríguez



Indices of population abundance for White-rumped Vulture *Gyps bengalensis* in Nepal for 2012-2018, relative to 2002, reflecting recovery since the ban on veterinary use of diclofenac in 2006. Source: adapted from Galligan et al. (2019).

At Chitwan National Park, Nepal, numbers of nesting vulture pairs increased from 17 to 45 in the three years following the ban of Diclofenac and creation of Vulture Safe Zones. PHOTO Paul Hilton



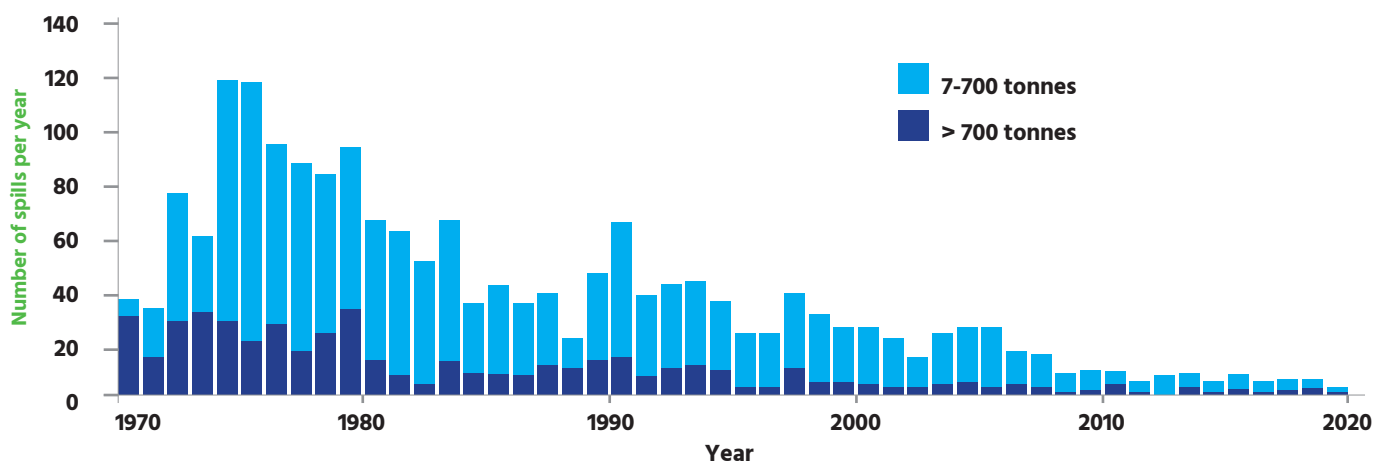
...BUT SOME PROGRESS

From oil spills to veterinary drugs, action to reduce pollution is benefiting birds

The incidence of oil spills has declined in recent decades, with a 66% reduction in the number of significant spills (>7 tonnes) per year since 2010 compared with the previous decade. The threat posed by oil spills and other types of marine pollution to seabirds has consequently decreased since 2010, now affecting 23 rather than 30 globally

threatened seabird species. Another positive example of progress in reducing pollution is the reduction in veterinary use of the drug diclofenac in South Asia since 2010, including a ban in some countries such as India, Pakistan, Nepal and Bangladesh. The toxic effects on vultures of ingesting diclofenac from carcasses of animals that had been

treated with it is the driver of recent vulture population crashes in South Asia. Banning its veterinary use has helped to halt catastrophic declines and initiate recovery of some vulture populations, although the issue remains a concern elsewhere. Sources: Dias et al. (2019); Galligan et al. (2019); ITOPF (2020).



Number of oil spills from tankers worldwide during 1970-2019. Source: ITOPF (2020).

TACKLING INVASIVE ALIEN SPECIES

Eradications of invasive alien mammal populations have significantly improved prospects for the world's birds since 2010, but, overall, invasive species remain a major threat to the survival of many species.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

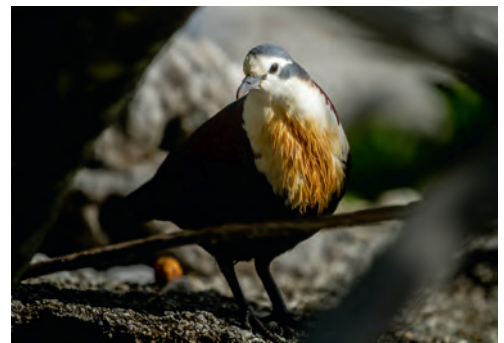
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By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

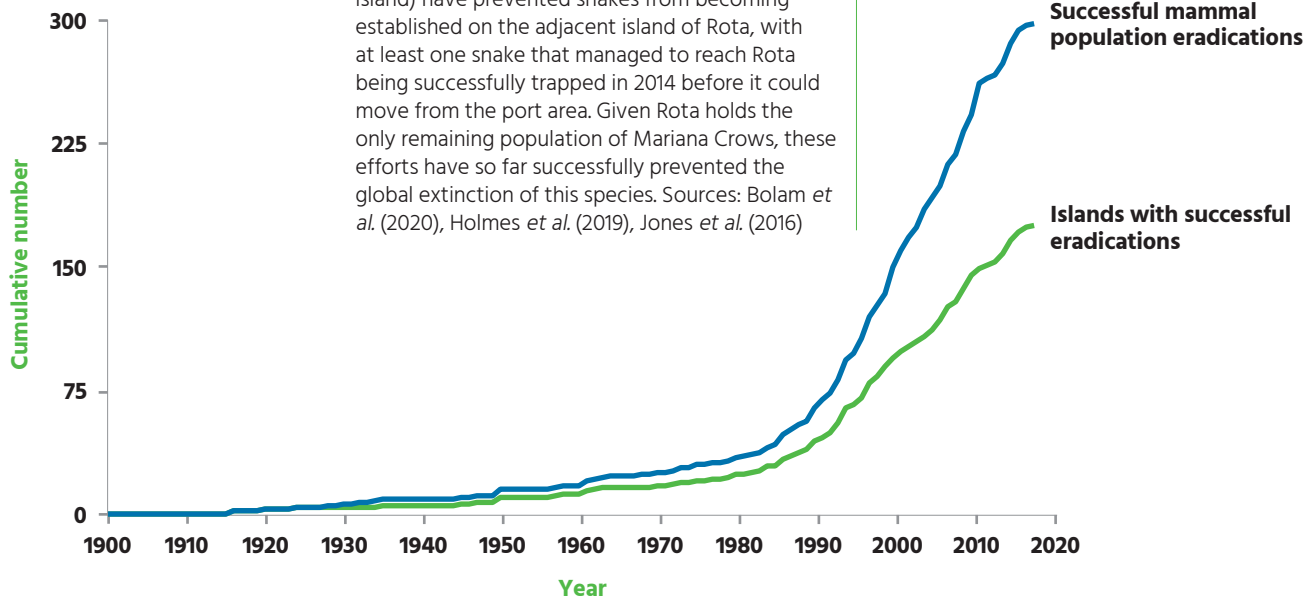
SOME PROGRESS...

Over 160 native bird species have benefited from successful eradications of invasive mammal populations on islands, while biosecurity has saved at least one bird species from extinction.

At least 1,084 successful eradications of invasive animals have been carried out on 806 islands to date, and these have benefited at least 80 seabird and 82 terrestrial bird species, with many others likely to have benefited but lacking data to demonstrate this. Encouragingly, further eradications of 107 invasive mammal populations on islands are considered technically and socially feasible in the near future, and would benefit at least 80 highly threatened native vertebrate species, mostly birds. Introduced Brown Tree Snakes *Boiga irregularis* drove extinct the population of Critically Endangered Mariana Crows *Corvus kubaryi* on the Pacific island of Guam, but stringent biosecurity efforts (including use of trained dogs to inspect vessels leaving the island) have prevented snakes from becoming established on the adjacent island of Rota, with at least one snake that managed to reach Rota being successfully trapped in 2014 before it could move from the port area. Given Rota holds the only remaining population of Mariana Crows, these efforts have so far successfully prevented the global extinction of this species. Sources: Bolam et al. (2020), Holmes et al. (2019), Jones et al. (2016)



The BirdLife International Partnership has recently removed invasive mammal populations from more than 30 Pacific Islands, including the Acteon Gambier island group – home to the last viable population of the Critically Endangered Polynesian Ground-dove *Alopecoenas erythropterus*. PHOTO Marie-Helene Burle/ Island Conservation



Cumulative number of successful invasive alien mammal population eradications (296) on islands (174) that have benefited native bird populations. Note that some islands have had multiple eradications. Source: Data from Jones et al. (2016) and the Database of Island Invasive Species Eradications, developed by Island Conservation, Coastal Conservation Action Laboratory UCSC, IUCN SSC Invasive Species Specialist Group, University of Auckland and Landcare Research New Zealand. <http://diise.islandconservation.org>



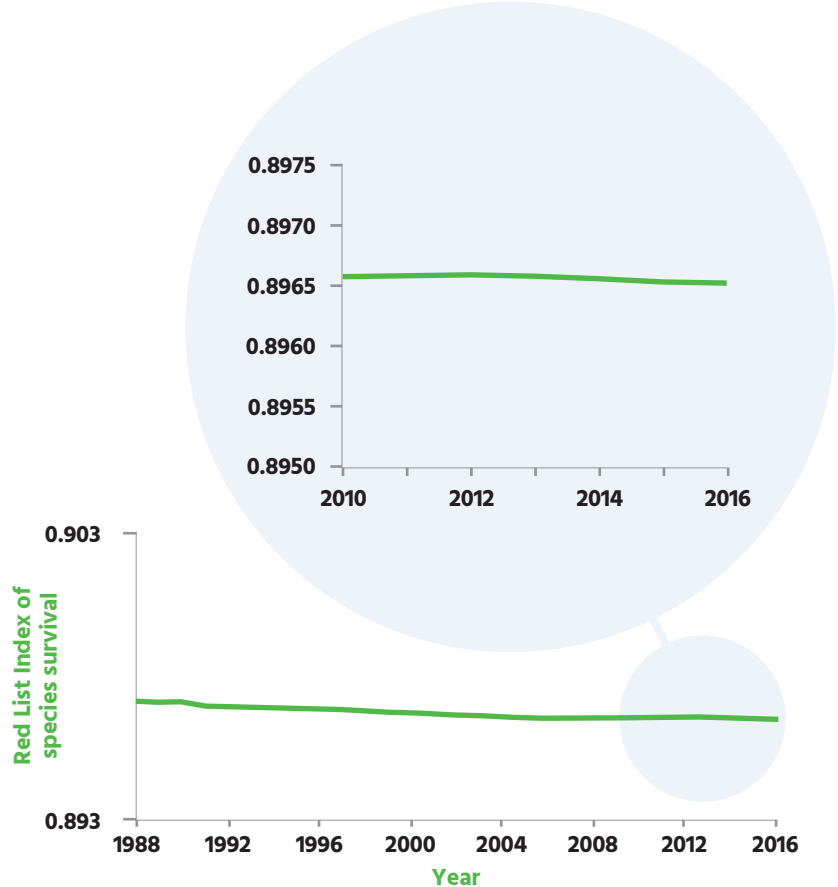
Black Rats *Rattus rattus* are adept climbers with an extremely broad diet. In New Zealand, introduced Black Rats are thought to have been instrumental in the extinction of at least eleven bird species, including Bushwren *Xenicus longipes* and Huia *Heteralocha acutirostris*. New Zealand has eradicated all introduced mammals (both herbivores and predators, including Black Rat) from over 100 of its offshore islands. PHOTO Ngā Manu Nature Images

...BUT TARGET NOT MET
Invasive alien species continue to drive declines in native bird populations, particularly threatened species on islands

Invasive alien species pose a threat to one-third of the world's threatened bird species, including two-thirds of threatened oceanic island species. Invasive mammals, particularly rats and cats, are the most frequent problematic species. A version of the Red List Index showing the net impacts of invasive species indicates that despite some successful efforts to control or eradicate such species, these have been insufficient to reduce the net level of extinction risk posed by invasive species to the world's birds since 2010.



The global domestic cat population is estimated to be as high as 600 million. In the USA alone, cats kill over one billion birds every year. PHOTO Pixabay



The Red List Index for the world's birds showing trends driven by invasive alien species. A value of 1.0 indicates that all species are Least Concern, while a value of 0 indicates that all species have gone extinct. There is no sign of an increase, meaning that species continue to be driven towards extinction.

MINIMIZING PRESSURES ON CORAL REEFS AND OTHER VULNERABLE ECOSYSTEMS IMPACTED BY CLIMATE CHANGE

Climate change poses a major threat to the world's birds, with a quarter of threatened species likely to have already been impacted negatively. However, the existing global network of IBAs will remain critical for bird conservation under a changing climate.

WHAT BIRDS TELL US



Movement away from target

AICHI TARGET
10

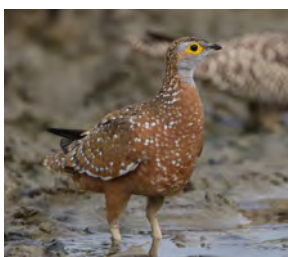
By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

SOME PROGRESS...

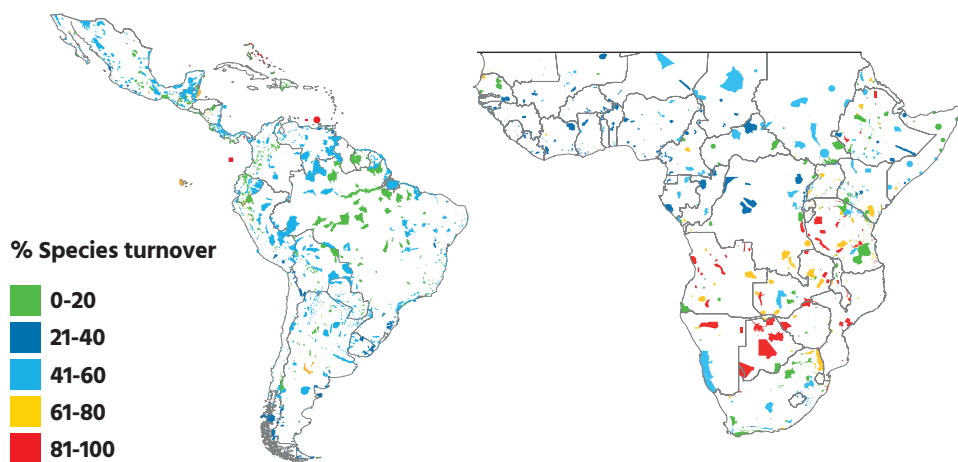
The global network of Important Bird and Biodiversity Areas, if effectively conserved, will remain resilient under climate change

Climate change is already having profound effects on bird species, altering their behaviour, genetics, phenology (the timing of breeding and migration), abundance and distributions (with many species shifting their distributions to higher altitudes and latitudes as climatic conditions change). Such impacts pose a serious challenge to the conservation of Important Bird and Biodiversity Areas (IBAs, Key Biodiversity Areas identified for birds). Some of the species for which an IBA has been identified as important may no longer be able to survive at the site once conditions become unsuitable, while others may be able to colonise. Average 'turnover' of species of conservation concern at IBAs is projected to be 35-45% in Sub-Saharan Africa and 33% at IBAs in Central

and South America by the end of the century. Encouragingly, however, these continental IBA networks are projected to remain resilient to climate change. A total of 88-92% of species of conservation concern in Sub-Saharan Africa and 88% in Central and South Americas are projected to experience suitable climatic conditions by the end of the century in at least one IBA in which they currently occur. IBAs therefore have the potential to continue to play a key role in conservation of birds and other biodiversity under climate change, although a much more dynamic approach to site management objectives will be required. Sources: Hole *et al.* (2009), Bagchi *et al.* (2013), BirdLife International & National Audubon Society (2017).



Burchell's Sandgrouse *Pterocles burchelli* lives in arid environments throughout southern Africa, and is a priority species in several IBAs predicted to experience high species turnover. Requiring regular access to water, climate change is likely to cause significant range shifts in this species.
PHOTO Derek Keats / Flickr



Important Bird and Biodiversity (IBA) networks in Sub-Saharan Africa and Central and South America, showing the 'turnover' in species of conservation concern (i.e. those for which IBAs have been identified) towards the end of the century (2070 for the Americas, 2085 for Africa) under climate change. Values represent ensemble means across three Global Climate Models and an intermediate/business as usual emissions scenario (rcp45 for the Americas, SRES B2a for Africa, underlying climate data differ for the two studies). Sources: Hole *et al.* (2009), BirdLife International & National Audubon Society (2017).



Black Skimmer *Rynchops niger* nests on sandy beaches, islands, and shell banks throughout the Americas. Sea level rise is predicted to decrease the availability of nesting areas, causing widespread population declines. PHOTO Carol Rizkalla, Florida Fish and Wildlife/ Flickr

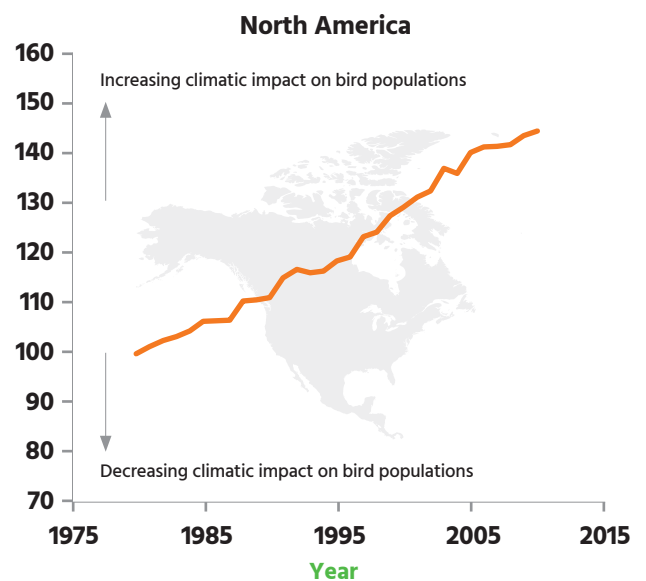
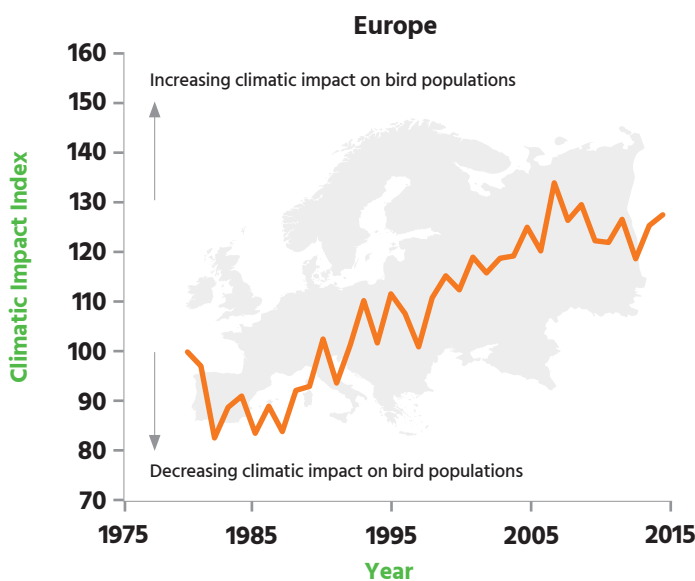
...BUT TARGET NOT MET

Climate change is having substantial and largely negative impacts on the world's birds

The Climatic Impact indicator shows that there has been a strong signal of climate change on bird population trends in North America and Europe since 2010, with cold-adapted species declining. One quarter of threatened species may already have been negatively affected by recent climate change, with declines in local abundance, breeding success and/or survival.

Projected trends are alarming: almost 50% of the world's land area will experience a change from the current avian community assemblage to one currently occurring elsewhere, even under a modest scenario of greenhouse gas emissions, with 9% of land area projected to support entirely new communities. However, the extent of novel future assemblages is projected to

be three times larger on average and up to 12 times larger in the Neotropics, under a higher warming scenario. These disruptions to avian communities will likely impact ecosystem functioning profoundly, with important consequences for the services that ecosystems provide to people. Sources: Pacifici *et al.* (2017), Stephens *et al.* (2016), Voskamp *et al.* (in review).



Climatic Impact Index for Europe and North America. Source: Stephens *et al.* (2016) based on data from EBCC/Durham University/RSPB/University of Cambridge/BirdLife International and North American Breeding Bird Survey (courtesy of John Sauer USGS Patuxent Wildlife Research Center).



STRATEGIC GOAL C

To improve the status of biodiversity by
safeguarding ecosystems, species and
genetic diversity



PHOTO: Chinstrap Penguin *Pygoscelis antarcticus* and Adelle Penguin *Pygoscelis adeliae* © Duncan Armour

PROTECTING AND CONSERVING BIODIVERSITY

Many critical sites for bird conservation have been designated as protected areas since 2010. However, the proportion of the protected area estate covering Key Biodiversity Areas (KBAs) has declined since 2010, and only 20% of such sites identified for birds are completely covered by protected areas. Other effective area-based conservation measures appear to be significant for conserving unprotected KBAs.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

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.

SOME PROGRESS...

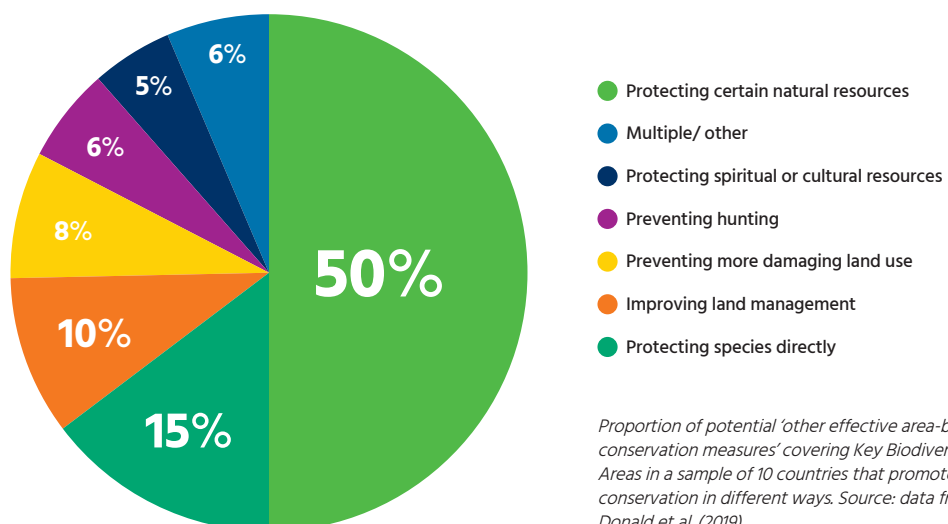
Community reserves and other area-based approaches appear to be important for conserving Important Bird and Biodiversity Areas outside protected areas

Target 11 introduced the concept of “other effective area-based conservation measures” (OECMs), defined as ‘geographically defined areas other than Protected Areas, which are governed and managed in ways that achieve positive and sustained long-term outcomes for the *in situ* conservation of biodiversity.’ Research in ten countries suggests that a high proportion (76.5%) of Key Biodiversity Areas (KBAs, most of which are IBAs) that fall outside the protected area network are likely to meet the definition of OECMs, and therefore that their formal recognition will contribute to the long-term conservation of these sites. The conservation of ecosystem services or biodiversity was a stated management aim in 73% of these potential OECMs. Local or central government bodies managed 46% of potential OECMs, while local and indigenous



The Moora IBA in Western Australia supports at least 1% of the breeding population of Endangered Carnaby’s Black-Cockatoo *Zanda latirostris*. Local residents are helping to conserve the species in privately owned, unprotected parts of the IBA using artificial nest hollows and supplementary feeding. PHOTO The Rainbird Photography

communities and private landowners managed 24% and 14% respectively. While these results provide an encouraging picture for conservation of important sites for biodiversity outside protected areas, further evidence is needed of the effectiveness of these potential OECMs. Source: Donald *et al.* (2019).



Proportion of potential ‘other effective area-based conservation measures’ covering Key Biodiversity Areas in a sample of 10 countries that promote conservation in different ways. Source: data from Donald *et al.* (2019).



Important Bird and Biodiversity Areas identified for seabirds, such as Cory's Shearwater *Calonectris borealis*, have informed rapid expansion of the marine protected area network since 2010. PHOTO: Franco Banfi/ Science Photo Library

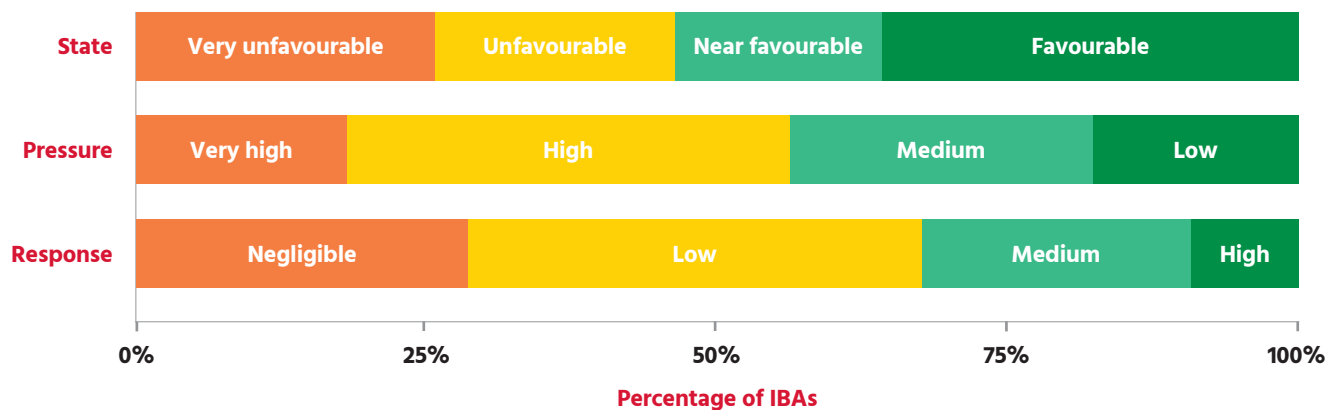
...BUT TARGET NOT MET

Expansion of protected area networks is failing to target Important Bird and Biodiversity Areas

While the average coverage of Important Bird and Biodiversity Areas (IBAs, Key Biodiversity Areas identified for birds) by protected areas has increased from 43% to 46% since 2010, 36% of IBAs have no formal designation as protected areas. IBAs holding the last remaining population of one or more highly threatened bird species (and therefore also qualifying as Alliance for Zero Extinction sites) have higher coverage by protected areas, but

127 (32%) of these sites lack any protection, and this risks the global extinction of the 185 species confined to them. Overall, the proportion of the global protected area estate covering KBAs (83% of which are important for birds) has declined from 19% to 16% since 2010. Furthermore, IBA monitoring assessments (submitted for one-third of sites) have shown that 47% of IBAs are in unfavourable conservation condition. Threats are impacting the qualifying species

(those for which the site has been identified as an IBA) at more than half of the IBAs monitored, yet conservation designation, management planning, and implementation of appropriate conservation interventions have been poor at more than 67% of IBAs. These results show that there has been insufficient progress in protecting and effectively managing the most important sites for conserving the world's birds.



Bar charts showing the proportion of Important Bird and Biodiversity Areas (IBAs) with different levels of State, Pressure and Conservation Responses. Note that only one-third of sites have monitoring data.

PREVENTING EXTINCTIONS

Many extinctions have been prevented, and extinction debt would be substantially higher without conservation. But the extinction risk of birds overall is increasing, showing that we have not met this target.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

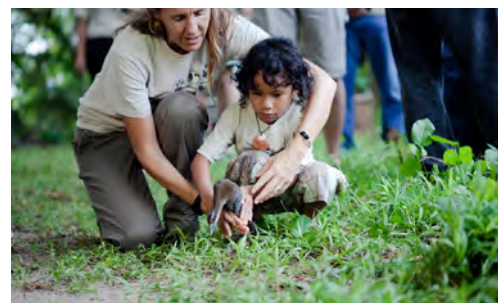
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By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

SOME PROGRESS...

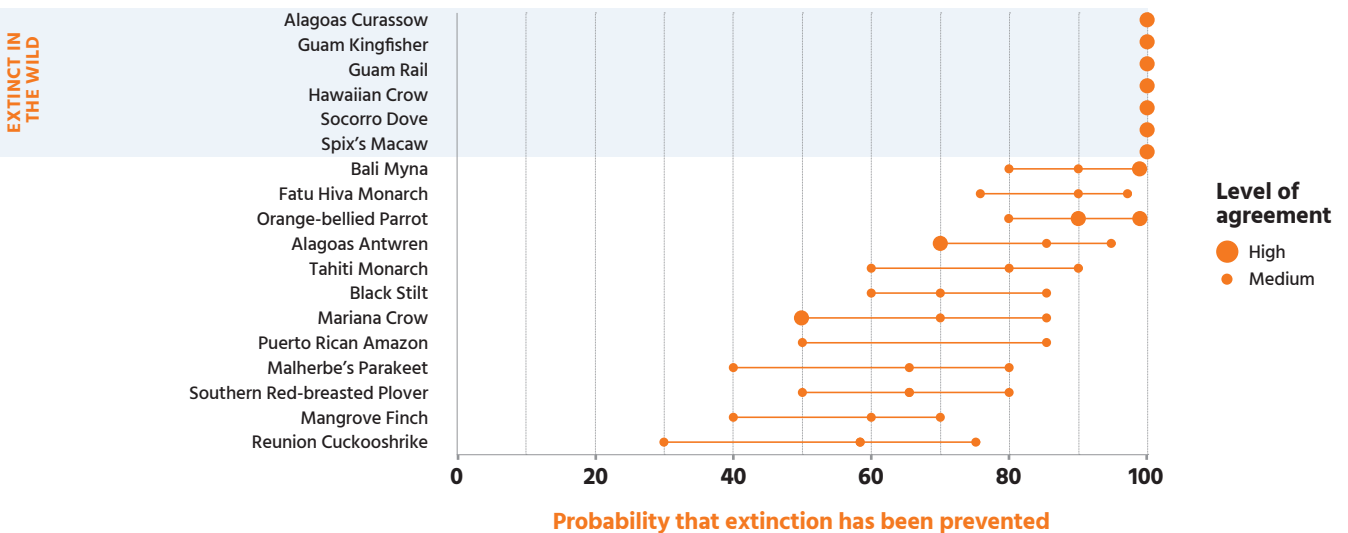
Conservation efforts have prevented up to 18 bird species from going extinct since 2010, and have slowed the effective extinction rate by at least 40%

Since 2010, one bird species has been documented to have gone extinct, with the Alagoas Foliage-gleaner *Philydor novaesi* from Brazil lost in 2011. However, an additional 9-18 bird species are judged likely to have gone extinct if conservation efforts for them had ceased in 2010, according to a recent analysis. For example, Fatu Hiva Monarch *Pomarea whitneyi* from French Polynesia would very likely have been driven extinct by invasive alien rats had these not been controlled under a conservation programme, while Mangrove Finch *Geospiza heliobates* from the Galapagos Islands, Ecuador, only survived owing to predator control and management of introduced nest parasites. Six species survived only in captivity, with one of these — Guam Rail *Hypotaenidia owstoni* — successfully reintroduced into the wild since 2010. Overall, the number of bird extinctions since 2010 would have been 10-19 times higher without conservation. Furthermore, the rate at which species have moved from lower categories of risk towards



Following a successful captive breeding programme, Guam Rail *Hypotaenidia owstoni* was released onto Rota and Cocos islands, and is now breeding in the wild for the first time in more than 30 years. PHOTO Guam Dept. Agriculture

extinction, and eventually become extinct, would have been at least 40% higher during 1988-2016 according to another study. Finally, some species have been reclassified as at lower risk of extinction owing to genuine improvements in status since 2010 resulting from conservation action. For example, Seychelles Warbler *Acrocephalus sechellensis* was translocated to Frégate Island in 2011, qualifying it for downlisting from Vulnerable to Near Threatened in 2015. Source: Bolam *et al.* (2020), Monroe *et al.* (2019)



Probability that extinction of bird species would have occurred in the absence of conservation action during 2010 – 2020. Source: Bolam *et al.* (2020).

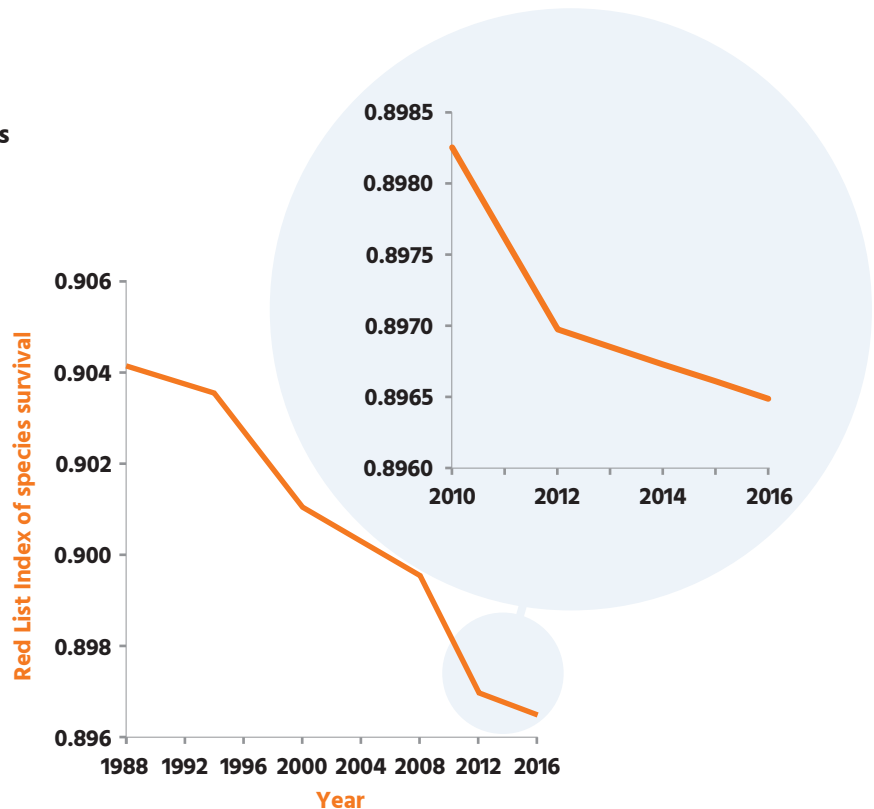
High rates of deforestation and hunting pressure resulted in the Great Hornbill *Buceros bicornis* being uplisted from Near Threatened to Vulnerable in the 2018 IUCN Red List. PHOTO Francesco Veronesi/ Flickr



...BUT TARGET NOT MET

Overall, the conservation status of the world's birds has worsened since 2010

The world's birds are now at greater risk of extinction than in 2010, according to the Red List Index. This is because the number of species moving to higher categories of risk on the IUCN Red List as a result of accelerating declines, falling populations and shrinking ranges has outweighed the number moving to lower categories as a result of slower declines or recovery. Trends for different regions and ecosystems show that declines are pervasive, with species in Oceania and the marine environment being most threatened overall. These trends in survival probability are complemented by trends in population abundance shown by the Wild Bird Index, indicating that the average population abundance of habitat specialist bird species has declined by 60% since 1980 in European farmland, and by 42% and 37% since 1968 in North American grassland and aridland respectively. Sources: Pan-European Common Bird Monitoring Scheme (European Bird Census Council/BirdLife International/RSPB/CSO); North American Breeding Bird Survey (courtesy of John Sauer USGS Patuxent Wildlife Research Center).



Red List Index of species survival for the world's birds. A value of 10 indicates that all species are Least Concern, while a value of 0 indicates that all species have gone extinct.

MAINTAINING GENETIC DIVERSITY IN CROPS, LIVESTOCK AND WILD RELATIVES

Wild relatives of domesticated species may provide genetic diversity that is essential to food security in an uncertain future. However, their extinction risk is increasing owing to a variety of threats.

WHAT BIRDS TELL US



Some progress but target not met

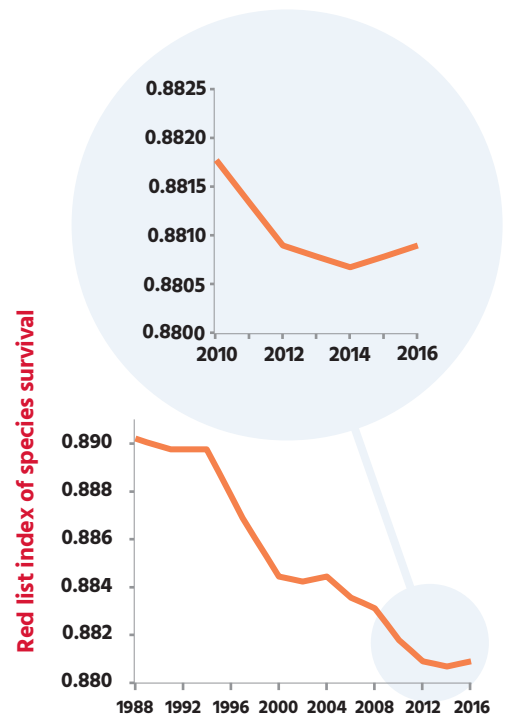
AICHI TARGET
13

By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

TARGET NOT MET

Wild relatives of farmed and domesticated bird species are becoming increasingly threatened

Eleven bird species are farmed and domesticated, ranging from the ubiquitous chicken, bred from Red Junglefowl *Gallus gallus*, to quail, pheasant, and turkey. Together, these provide an important source of nutrition for the human population. There are 449 bird species that are wild relatives of these farmed and domesticated species. One in five (19%) of wild bird relatives are presently threatened, including eight that are Critically Endangered. The Red List Index for these wild relatives declined by 2.02% between 1988 and 2016, showing that these species are being driven towards extinction. This finding is important because these species contain genetic diversity that may allow the development of more productive, nutritious, and resilient breeds, which is significant given the likely impacts of global change on the animal populations we rely on for food. Source: McGowan et al. (2018).

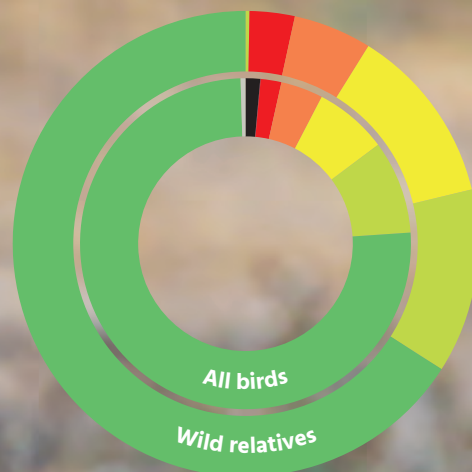


Red List Index of species survival for wild relatives of farmed and domesticated birds (449 species). A value of 1.0 indicates that all species are Least Concern, while a value of 0 indicates that all species have gone extinct.



Red Junglefowl *Gallus gallus* is the ancestor of the domestic chicken – now one of the most common and widespread domestic animals. Although listed as Least Concern, the Red Junglefowl population is declining owing to habitat loss and over-hunting. PHOTO Panu Ruangjan/ Shutterstock.com

Domestic turkeys originated from the Wild Turkey *Meleagris gallopavo*, native to the USA. Turkeys produce a large quantity of meat for relatively low production costs, and are therefore a popular form of poultry worldwide. PHOTO Allan Hack/ Flickr



- Extinct
- Extinct in the Wild
- Critically Endangered
- Endangered
- Vulnerable
- Near Threatened
- Least Concern
- Data Deficient

STRATEGIC GOAL D

Enhance the benefits to all from
biodiversity and ecosystem services



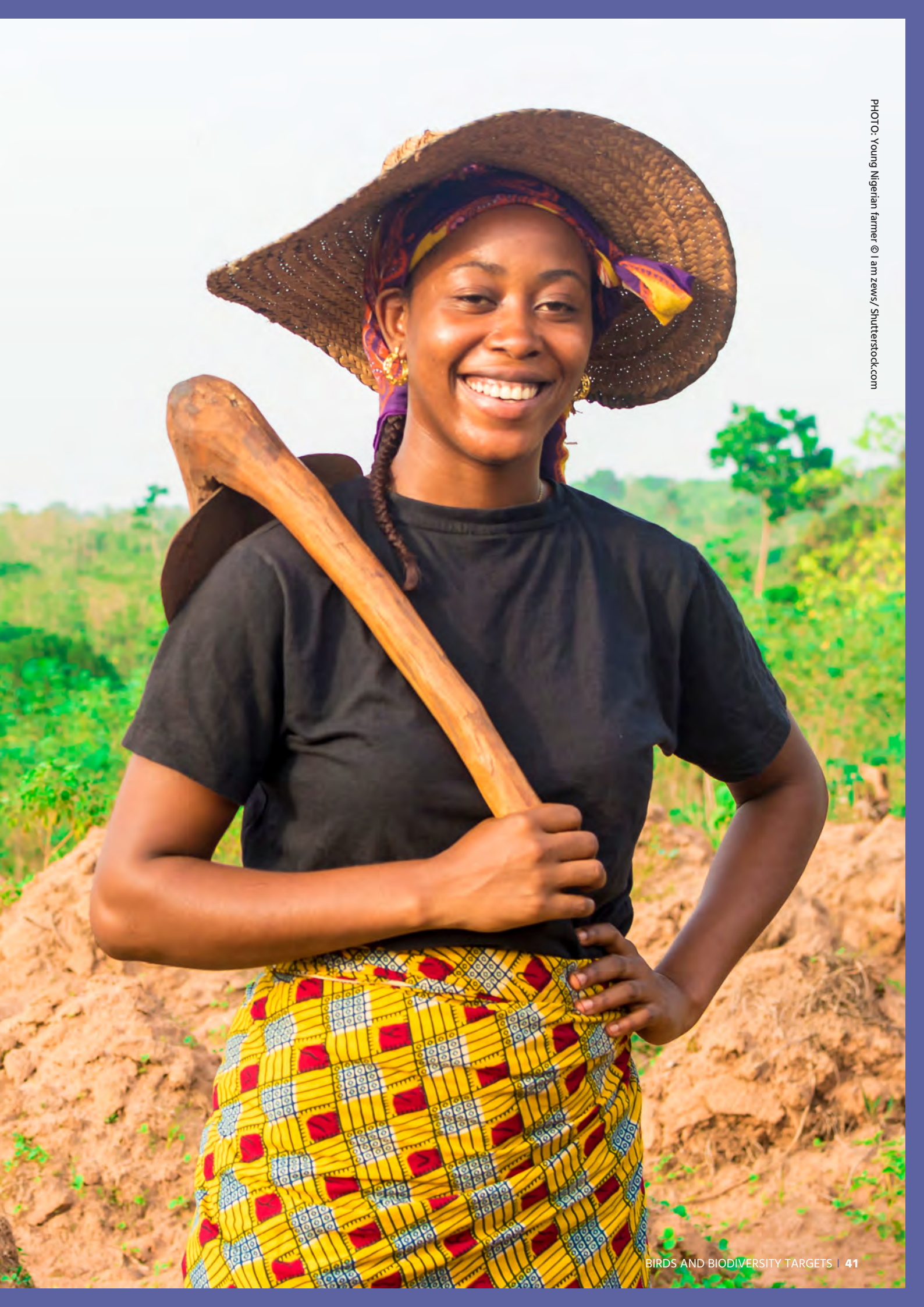


PHOTO: Young Nigerian farmer © I am zews/ Shutterstock.com

SAFEGUARDING AND RESTORING ECOSYSTEMS THAT PROVIDE ESSENTIAL SERVICES

Conserving important sites for birds often generates benefits for people. While birds provide important ecosystem services such as pollination and seed dispersal, global declines in the status of avian pollinators indicate that the ecosystems they depend upon are not being adequately safeguarded.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

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.

SOME PROGRESS...

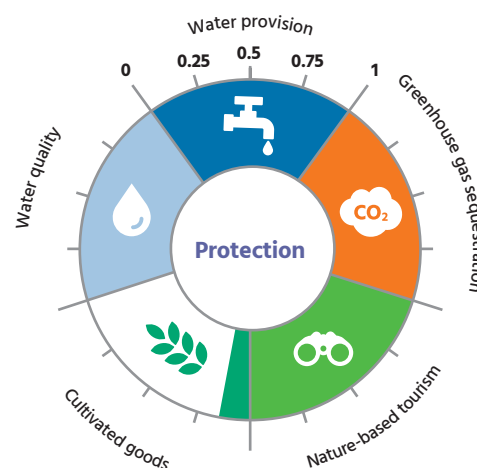
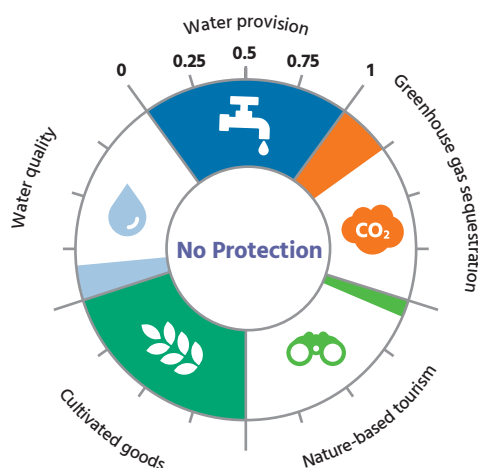
Conservation of important sites for birds typically benefits people as well as biodiversity

Globally, Important Bird and Biodiversity Areas (IBAs, Key Biodiversity Areas identified for birds) provide a multitude of benefits to people ('ecosystem services'), such as the provision of clean water, food, flood protection and climate regulation. However, most of these sites face human-induced threats, impacting both biodiversity and the provision of these services. Increasingly, data are being mobilised to inform decision-makers on the changes in ecosystem service flows and their values under different potential management or land-use options. These often show that conservation and restoration of sites of importance for birds delivers net-positive outcomes for people as well as biodiversity. For example, an assessment by Bird Conservation Nepal (the national BirdLife partner) using the Toolkit for Ecosystem Services Site-based Assessment showed that protecting Shivapuri National Park yields higher net benefits (\$11 million/



Protection of the Shivapuri National Park ensures the ongoing provision of ecosystem services to communities downstream, while allowing the sustainable harvesting of natural resources by local people. PHOTO Göran Höglund/ Flickr

yr) than conversion to agriculture (the most likely alternative land-use; \$4.9 million/yr), mainly driven by the value of carbon sequestration for climate regulation, as well as other net benefits that were not quantified in monetary terms, such as reduction of soil erosion and provision of nearly 60% of the annual freshwater requirements for 2.5 million people. Source: Peh *et al.* (2016).



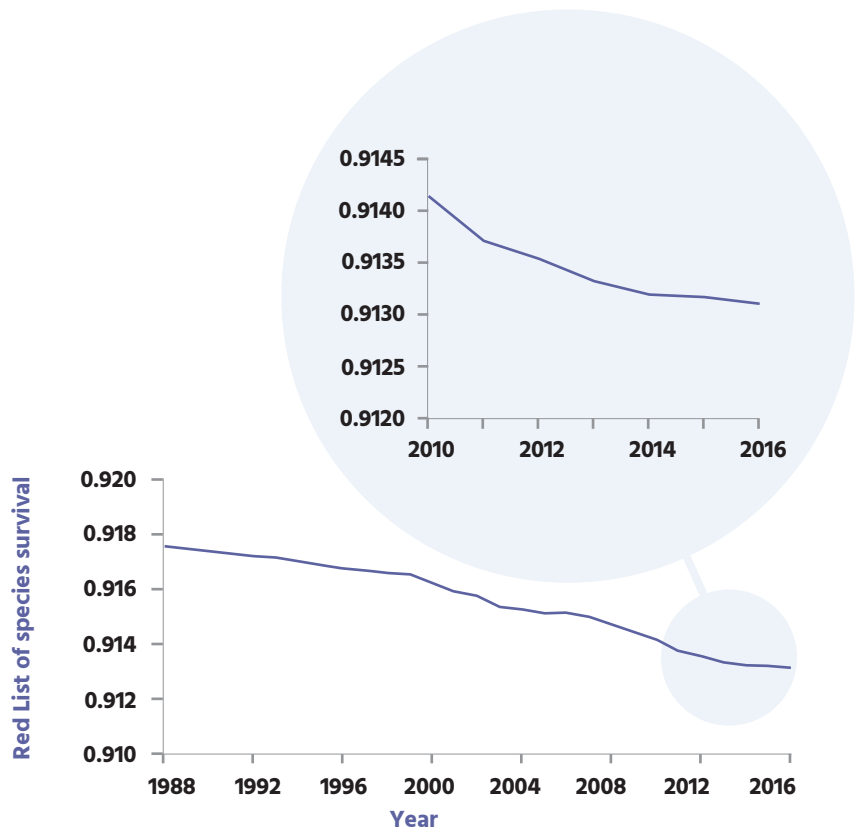
Differences in the value of annual flows of different ecosystem services provided by Shivapuri National Park under protection compared with conversion to agriculture. A value of 1 equates to the maximum value in either state for each service. Note that water quality and provision are valued in biophysical metrics, not in monetary terms. Source: data from Peh *et al.* (2016) <http://tessa.tools>.



Hummingbirds are important pollinators, but many are in decline. The Santa Marta Blossomcrown *Anthocephala floriceps* is restricted to north and south-east slopes of the Sierra Nevada de Santa Marta in Colombia. Only around 15% of its original premontane evergreen forest habitat remains intact, leaving a small and fragmented population. PHOTO Martin Mecnarowski/Shutterstock.com

...BUT TARGET NOT MET
Birds that pollinate plants are in decline, with implications for ecosystem functions and services

Birds provide a variety of ecosystem services, ranging from control of invertebrate and mammal pest species, to seed dispersal, pollination, carrion removal and disease regulation. For example, avian control of the coffee berry borer on coffee farms in Jamaica has been estimated to be worth US\$310 per hectare. Birds are important for pollination of flowering plants in 65 families, including at least 50 crop and medicinal plant species. Over 1,000 bird species (including hummingbirds, honeyeaters, sunbirds and white-eyes) have been identified as pollinators. However, the status of these species is declining, with more species moving toward extinction than away from it, as shown by the Red List Index for pollinators. This shows that we have failed to safeguard and restore ecosystems that provide essential services. Sources: Cronk & Ojeda (2008), Johnson et al. (2010), Nabhan & Buchmann (1997), Regan et al. (2015).



Red List Index of species survival for pollinator birds (1,089 species). A value of 1.0 indicates that all species are Least Concern, while a value of 0 indicates that all species have gone extinct.

ENHANCING ECOSYSTEM RESILIENCE AND THE CONTRIBUTION OF BIODIVERSITY TO CARBON STOCKS

Considerable deforestation in Important Bird and Biodiversity Areas (IBAs) since 2010 shows that the contribution of biodiversity to carbon stocks in IBAs has not been maintained, let alone enhanced. However, terrestrial IBAs contain substantial carbon stocks and are disproportionately important for habitat restoration, suggesting that safeguarding and restoring these sites would benefit birds and climate change mitigation and adaptation.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

15

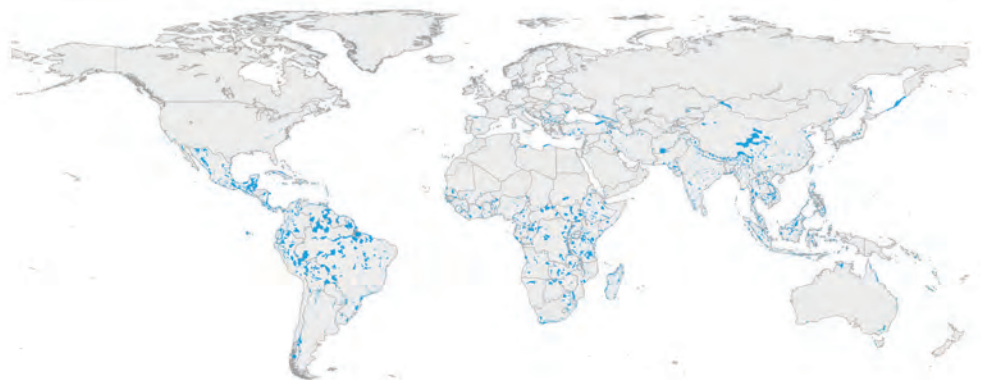
By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

SOME PROGRESS...

Important Bird and Biodiversity Areas contain almost 9% of the world's terrestrial carbon stocks and are disproportionately important for habitat restoration

Terrestrial Important Bird and Biodiversity Areas (IBAs, Key Biodiversity Areas identified for birds) contain almost 9% of the world's terrestrial carbon stocks, based on datasets on above- and below-ground biomass and soil organic carbon. Asia and North and South America are especially notable for their large volumes of carbon in IBAs. IBAs also provide disproportionate opportunities for habitat restoration. Although they cover less than 9% of the terrestrial surface, IBAs contain nearly 12% of priority areas for habitat restoration (based on a 'multicriteria optimisation approach' accounting

for benefits to habitats for species, carbon sequestration and costs). Restoration of these locations could sequester considerable volumes of CO₂, as well as benefiting the species for which they have been identified as internationally significant. Safeguarding and restoring IBAs therefore offers dual benefits for biodiversity conservation and climate change mitigation. Sources: Strassburg *et al.* (2020), and analysis of a global layer compiled by UNEP-WCMC from Bouvet *et al.* (2018), ESA (2017), Hengl (2017), Santoro (2018), Spawn *et al.* (2017), Xia *et al.* (2014).



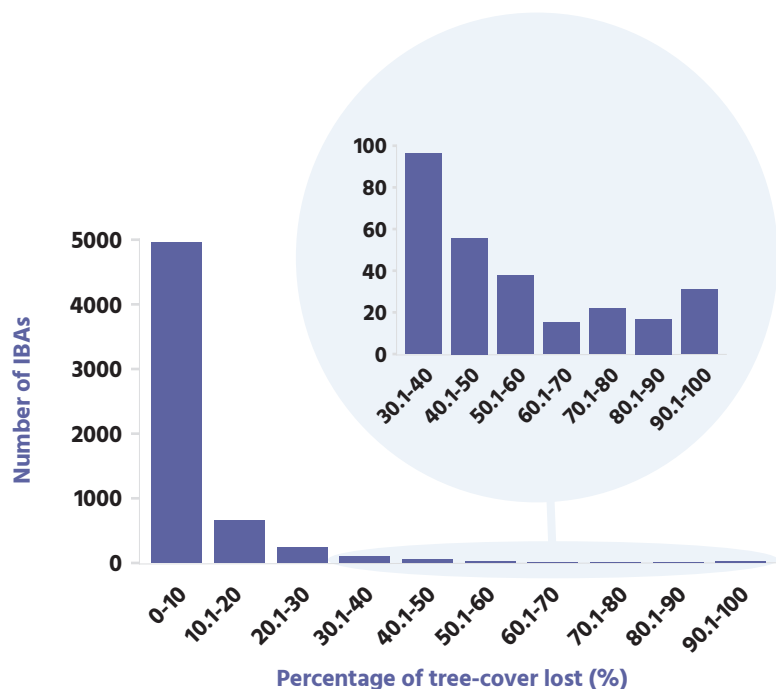
*Location of Important Bird and Biodiversity Areas overlapping with priority locations (top 15% of cells) for habitat restoration. Source: analysis of data from Strassburg *et al.* (2020).*

Peatlands cover only around three percent of the earth's surface, yet store twice as much carbon as the world's forests. IBAs containing peat bog are therefore important not only as habitat for species such as Eurasian Golden Plover *Pluvialis apricaria*, but also for carbon sequestration.
 PHOTO Tim Melling/ Flickr



...BUT TARGET NOT MET
More than 100,000 km² of forest in Important Bird and Biodiversity Areas has been lost since 2010

Important Bird and Biodiversity Areas (IBAs, Key Biodiversity Areas identified for birds) are sites that are critical for the conservation of birds, and form the majority of Key Biodiversity Areas identified to date. Since 2010, a total of 100,286 km² — 3.4% of the tree-cover in these sites — has been lost, with 134 sites having lost more than a quarter and 34 sites having lost more than half of their tree-cover. This represents a reduction in ecosystem resilience and substantial loss of carbon stocks, as well as having negative impacts on the bird species for which these IBAs have been identified. While some sites have benefitted from forest restoration efforts, overall the contribution of biodiversity to carbon stocks in IBAs has not been maintained since 2010, let alone enhanced.



Number of Important Bird and Biodiversity Areas with different proportions of tree-cover loss since 2010.

STRATEGIC GOAL E

Enhance implementation through participatory planning, knowledge management and capacity building





PHOTO: Volunteers round up flamingo chicks for tagging at Fuente de Piedra Lake, © Age fotostock/ Alamy Stock Photo

TRADITIONAL KNOWLEDGE

Birds form an integral and prominent component of traditional knowledge systems in many parts of the world, contributing to nature conservation. In the Middle East, birds are inspiring the revival of a traditional system of land designation and management to benefit both biodiversity and local communities.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

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.

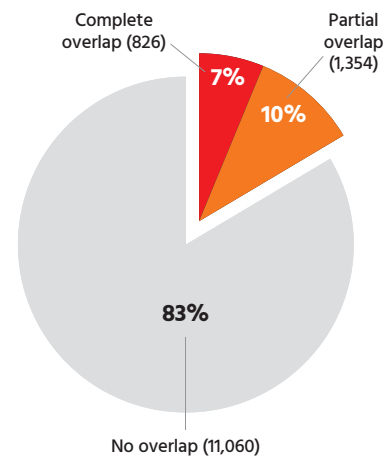
SOME PROGRESS...

Many Important Bird and Biodiversity Areas overlap with or are completely within indigenous lands

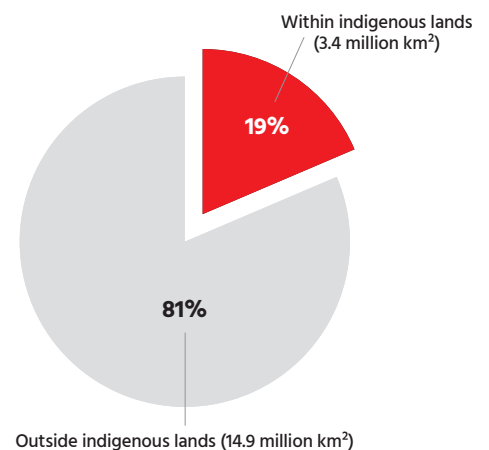
The 13,000 Important Bird and Biodiversity Areas (IBAs, Key Biodiversity Areas identified for birds) identified to date represent the most important sites for conserving the world's birds. At least 2,184 IBAs (17%) overlap partially or completely with lands that Indigenous Peoples manage or for which they have tenure rights, and nearly one-fifth of the entire area of the IBA network (3.4 million km², 19%) falls within such lands. This means that there are considerable opportunities for the traditional knowledge, innovations and practices of Indigenous Peoples and local communities to be integrated into the conservation of these sites. This is happening through the involvement of Indigenous Peoples and local communities in the governance and management of protected areas overlapping these locations, or through stewardship of 'other effective area-based conservation measures' by Indigenous Peoples and local communities. Source: Garnett *et al.* (2018), World Database of Key Biodiversity Areas.



Women from the Calleria community in the Peruvian Amazon rainforest harvest bark to make traditional dyes for textiles. There is a strong focus on sustainable harvesting to ensure the ongoing health of the forest. PHOTO Juan Carlos Huayllapuma, CIFOR/ Flickr



Number of IBAs overlapping indigenous lands



Area of IBAs overlapping indigenous lands

*Proportion of Important Bird and Biodiversity Areas (IBAs) that partially or completely overlap with indigenous lands, and proportion of total IBA area falling within indigenous lands. Source: Analysis of data in Garnett *et al.* (2018) and the World Database of Key Biodiversity Areas*

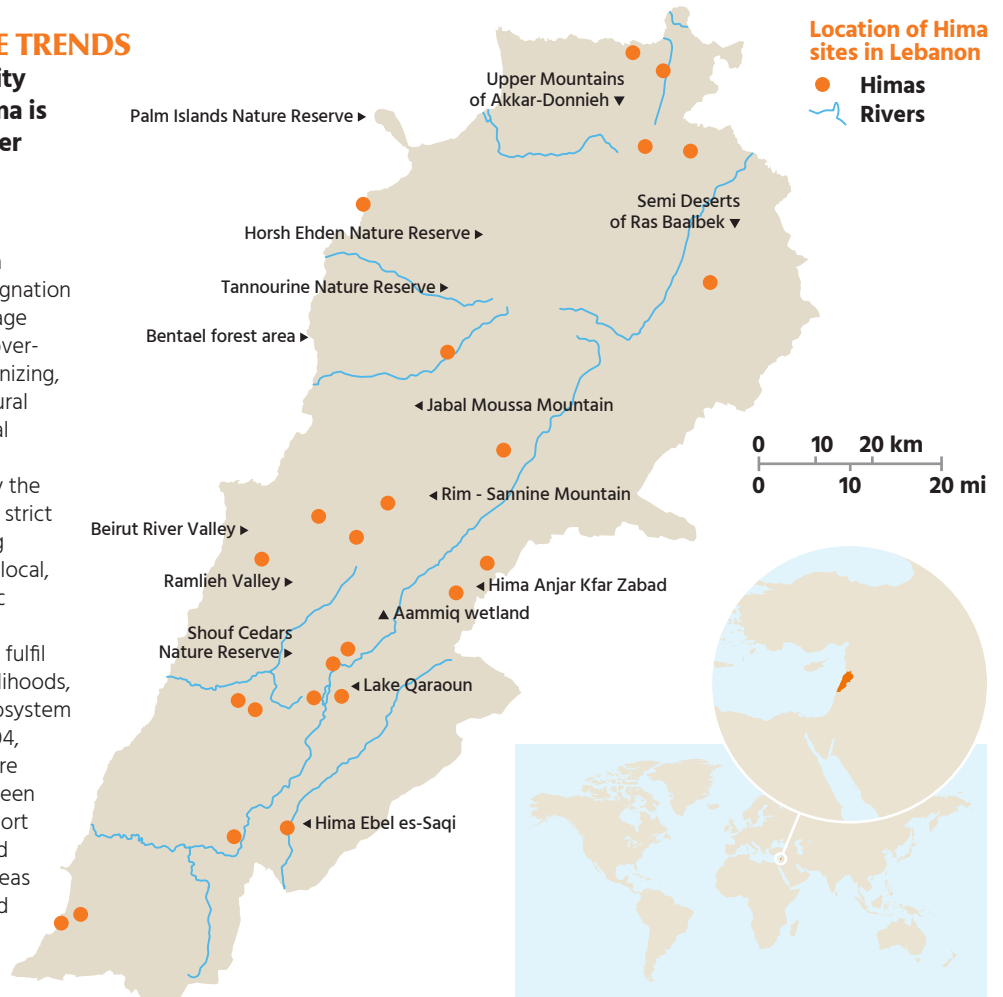


The Society for the Protection of Nature in Lebanon (BirdLife in Lebanon) works with local farmers to ensure environmentally friendly production and sustainable use of natural resources at Hima sites. PHOTO UNDP

...AND FURTHER POSITIVE TRENDS

Reviving a traditional community management system called Hima is helping conserve birds and other biodiversity in the Middle East

Hima means 'protected area' in Arabic. Dating back to the sixth century, it is a community-based system of land designation in the Middle East where people manage natural areas and protect them from over-exploitation. Hima is a system for organizing, maintaining, regulating, and using natural pasture and rangelands to fit with local ecosystems and practices. Decisions about Hima management are made by the communities themselves, and balance strict protection and sustainable use. Having evolved to absorb and accommodate local, political, social, religious and economic circumstance, Himas can help deliver conservation in ways that respect and fulfil people's rights and help to deliver livelihoods, food, water, as well as other ecosystem services and cultural values. Since 2004, the Society for the Protection of Nature in Lebanon (BirdLife in Lebanon) has been promoting the revival of Hima to support the conservation of Important Bird and Biodiversity Areas (Key Biodiversity Areas identified for birds) both nationally and across the Middle East, including at sites such as the Iraqi Marshes.



IMPROVING AND SHARING KNOWLEDGE OF BIODIVERSITY

Knowledge of the status, trends and value of birds is increasing and being shared ever more effectively, helping to define the conservation actions required, set priorities, and track progress.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

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.

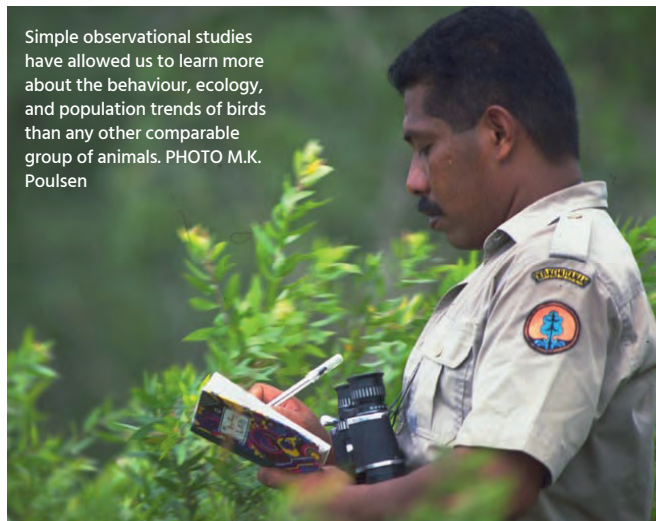
SOME PROGRESS...

More research is published on birds than for any other taxonomic group

We know substantially more about birds, including their values, functioning, status and trends, than any other taxonomic group. Since 2010, our knowledge of birds has expanded considerably. A “Web of Science” keyword search reveals that during 2010–2020, over 75,000 articles were published in academic journals with the word “bird” in the title or abstract—an increase of more than 70% since the previous decade. Of these, 3,087—an average of six articles per week—focused specifically on biodiversity conservation. Decisions informed by this unparalleled knowledge on the world’s birds, the threats they face and the conservation actions required benefit not only birds, but also a range of less well-studied taxa. Source: Web of Science (2020).



Bird ringing (or banding) generates a wealth of information on the survival, productivity, and movements of birds. For example the British Trust for Ornithology oversees the ringing of over 900,000 birds per year in Britain and Ireland. PHOTO Samuel Rogers



Simple observational studies have allowed us to learn more about the behaviour, ecology, and population trends of birds than any other comparable group of animals. PHOTO M.K. Poulsen

The average number of conservation articles published in academic journals per taxonomic group each year since 2010. Source: Web of Science (2020)



With over 46 million birdwatchers in the USA alone, birdwatching is one of the most popular hobbies in the world. The observations made by both amateurs and seasoned birders provide invaluable data to the scientific community. PHOTO Barend van Gernerden

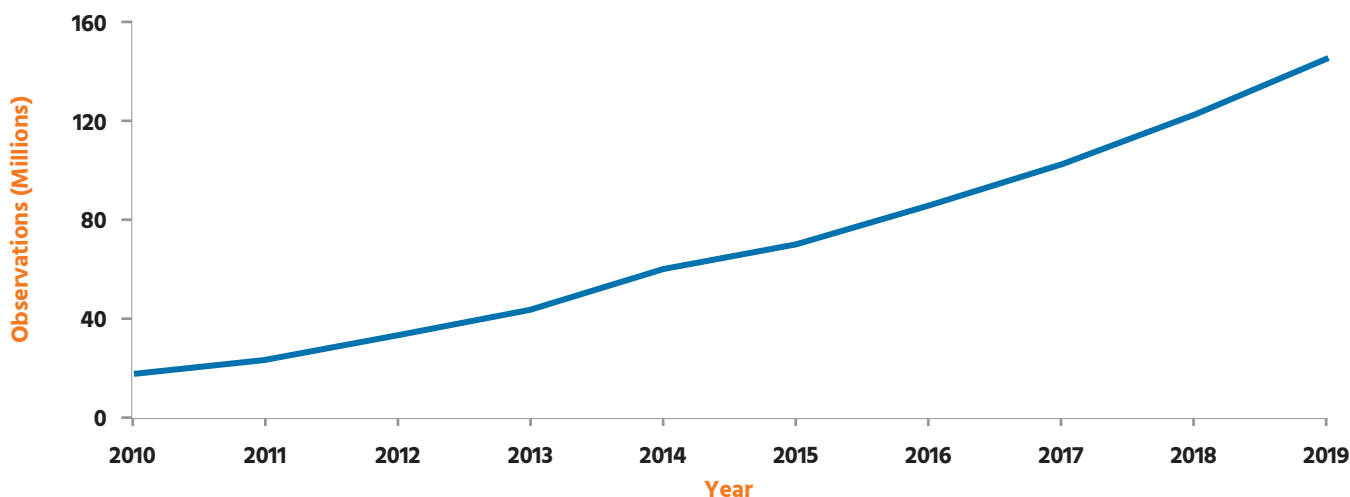
...AND FURTHER POSITIVE TRENDS

Citizen scientists are increasingly mobilising and sharing data on the occurrence and abundance of birds, enabling innovative approaches to their conservation.

Birdwatchers across the world are increasingly using online platforms and mobile applications to log their sightings. Tools such as BirdTrack and BirdLasser enable individuals to keep a record of their sightings, share these with the wider birding community and contribute to the compilation of large datasets which can be used for research and conservation. The eBird platform has become the largest, with

over 737 million bird sightings now entered into the system. This includes more than 140 million in 2019 alone; with more than 27,200 bird observations per hour in May 2019 for example. In total, eBird data comprise more than 40% of all the biodiversity data in the Global Biodiversity Information Facility. A 'Global Big Day' on 4 May 2019 set new records for citizen science, when 35,000 birders collectively noted 6,955 species of

birds, reporting 91,000 checklists from 174 countries. Furthermore, users uploaded more than 4.7 million photos and 135,000 sounds to the system with their checklists in 2019. These data are increasingly being used for research and conservation, for example to track occupancy trends, monitor migratory movements, and model distributions. Source: Team eBird (2019).



Number of observations (millions) submitted to eBird each year. Source: data provided by Team eBird, Feb 2020.

MOBILISING RESOURCES FOR IMPLEMENTING THE CBD

The actions needed to conserve birds are better understood than for other groups, enabling effective targeting of conservation resources. At the same time, birds are increasingly engaging and inspiring individuals, companies and organisations to provide financial support for conservation of threatened species.

WHAT BIRDS TELL US



Some progress but target not met

AICHI TARGET

20

By 2020, at the latest, the mobilization 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 Mobilization, should increase substantially from the current levels.

SOME PROGRESS...

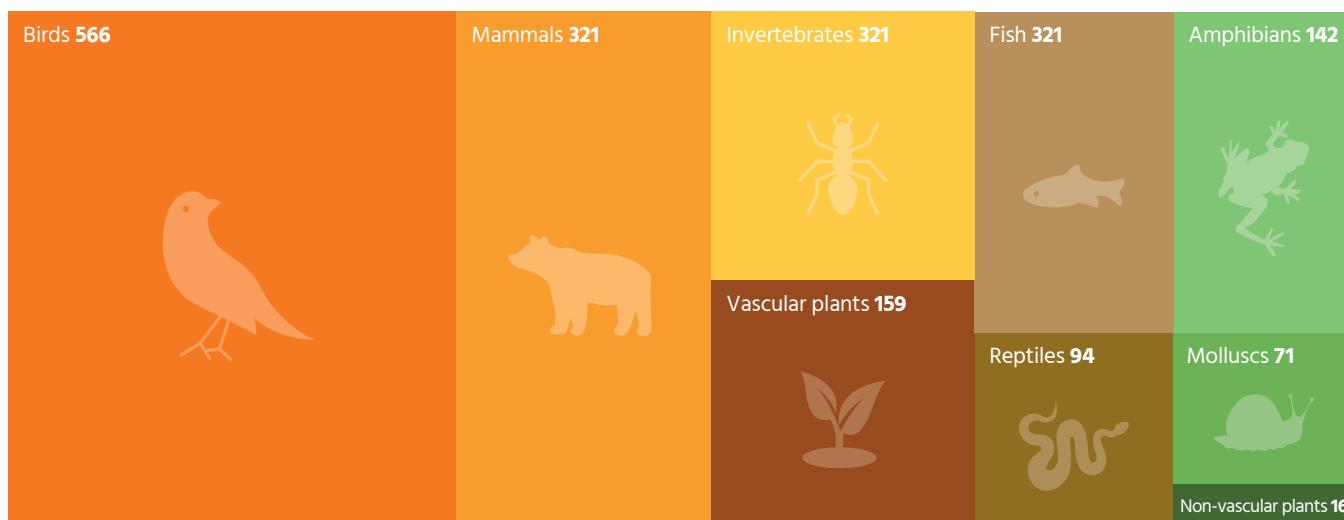
The EU LIFE programme has funded more projects on birds than on any other taxonomic group

The European Union (EU) Birds Directive is the oldest piece of EU legislation on the environment, and a cornerstone of much of the EU's environmental policy. Adopted in April 1979, it reflected Member States' recognition that the only way to protect many bird species and their habitats is by working together across borders. The Directive addresses many serious threats to the conservation of wild birds, including habitat loss/ degradation and illegal persecution, and requires Member States to designate and manage Special Protection Areas for threatened and migratory species. The LIFE programme is the EU's funding instrument for the environment and climate action, with a current budget of €3.4 billion for the period 2014-2020. Since its inception in 1992, LIFE projects have been instrumental in implementing the Birds Directive and conserving bird species, by preventing or reversing declines and avoiding



In 2017, organisations from 14 countries joined forces in a five-year EU LIFE-funded project to save the Balkan population of the Endangered Egyptian Vulture *Neophron percnopterus*, including through supplementary feeding to increase survival. PHOTO Svetoslav Mitkov

extinctions. Between 1992 and 2017, birds were the targeted beneficiaries of 566 LIFE projects (33% of all those funded), with a total budget of €500 million, reflecting their high conservation profile. Source: <https://ec.europa.eu/easme/en/news/life-and-birds-40-years-eu-birds-directive>



Number of LIFE projects targeting different taxonomic groups (1992-2017). Source: <https://ec.europa.eu/easme/en/news/life-and-birds-40-years-eu-birds-directive>



Photo: Brian Sullivan

Belding's Yellowthroat



Photo: Miguel Angel Peña Estévez

Gran Canaria Blue Chaffinch



Photo: dfaulder

Northern Bald Ibis



Photo: Pixabay

Red-breasted Goose



Photo: Juan María Raggio

Hooded Grebe



Photo: Dick Daniels

African Penguin



Photo: Prajwal km

Great Indian Bustard



Photo: Chris Birmingham

Kakapo

Threatened bird species that have directly benefitted from resources mobilised from companies and individuals enrolling as BirdLife Species Champions to support nature conservation. Orange circles indicate approximate centre of species' breeding range or location of projects supported.

...AND FURTHER POSITIVE TRENDS
Birds are inspiring companies and individuals to support conservation of threatened species

Philanthropic donations provide one source of funding for biodiversity conservation, and birds help to enthuse and engage donors to pledge support. For example, since 2007, over 100 companies and individuals have enrolled as 'BirdLife Species Champions' to help promote and finance targeted conservation action for globally threatened species by the BirdLife Partnership. More

than £5 million has been raised from their sponsorship and philanthropy through BirdLife's Preventing Extinctions Programme (PEP). To date, 103 bird species have directly benefitted from Species Champions – but by leveraging their support, the overall number of species benefitting from funding secured through PEP and the Partnership is much higher. Support from Species Champions

has enabled the development of numerous larger projects to further the conservation of threatened species and their habitats. For every pound or dollar provided by Species Champions, at least five times as much has been leveraged. Nevertheless, total funding from all sources for bird conservation requires scaling up by an order of magnitude in order to match estimated needs.

KEY IMPLICATIONS FOR THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

As well as quantifying progress (or failure) and highlighting successes and good news stories in relation to the Aichi Targets, data from birds can inform the development and implementation of the post-2020 Global Biodiversity Framework and its targets.

The rich data from birds show that while we have failed to meet most of the Aichi Targets – and indeed the overarching mission to halt the loss of biodiversity by 2020 – there are also positive examples and success stories, with encouraging trends in particular places, for subsets of species, or for particular aspects. These results also provide valuable insights for the next set of biodiversity commitments: the goals, targets and implementation of the post-2020 Global Biodiversity Framework that is under negotiation through the Convention on Biological Diversity. Here we summarise the key implications.



The health of our planet is dependent on the development of clear, ambitious, outcome-orientated goals which address the needs of both nature and people. PHOTO NASA

- 1. The new framework needs a clear, communicable, overarching aim,** comparable to the Paris Agreement's goal to limit global temperature rise to 1.5°C. The 2020 mission was lengthy, lacked the clarity needed to focus political attention and was insufficiently ambitious. The stakes are now far higher, and only transformational change across society will enable us to achieve the 2050 vision of living in harmony with nature. The new mission must be clear that we must not only halt the loss of biodiversity but start to recover it by 2030, in order to ensure full recovery by 2050.
- 2. There needs to be a clear 'theory of change' mapping a pathway to achieve this mission,** distinguishing outcome-focused aims – which should deliver against the three over-arching goals of the Convention (conservation, sustainable use and equitable sharing of genetic benefits of biodiversity) and the three levels of biodiversity (ecosystem, species and genetic) – from action-orientated targets and a set of enabling conditions.
- 3. Ultimately, the plan needs to prevent extinctions, recover the abundance and diversity of life, and retain and restore ecosystem integrity** with key biodiversity areas at the core, so that all people and nature can thrive.
- 4. New targets must not only be more ambitious in certain areas, but critically much more 'SMART'** – specific, measurable, ambitious, realistic and time-bound – so that the action needed is clear and progress can be tracked. Here, we highlight some key elements that the new goals and targets need to contain.

The post-2020 framework must focus on maintaining the diversity of life and restoring ecosystem function, particularly in Key Biodiversity Areas.
PHOTO Pale-billed Araçari
Pteroglossus erythropygius,
Murray Cooper



GOALS AND TARGETS

Ambitious, outcome-orientated goals

- A goal on **retaining and restoring ecosystems** is critical, leading to an overall increase in area, integrity and connectivity of terrestrial, freshwater, coastal and marine ecosystems while ensuring **no loss of key areas for biodiversity**.
- A goal focused on species is also needed to safeguard the diversity and recover the abundance of life, containing three elements: to **halt human-induced species extinctions** from 2020, **reduce the overall risk of species extinctions** by 20% by 2030 and to zero by 2050, and **increase the average population abundance of native species** by 20% by 2030 and recover 1970 levels by 2050.
- A goal on maintaining and enhancing **genetic diversity** should apply to **wild species** as well as domestic species.
- A goal on **nature's benefits to people** must ensure that these benefits are **provided sustainably**, making explicit the role of biodiversity in addressing both climate change and sustainable development agendas.

Targets to conserve species, sites and ecosystems

- A target on **area-based conservation** measures should specifically aim to document, **effectively conserve and restore the value of all key biodiversity areas** and other sites of particular importance for biodiversity, through at least **30% of the total land and sea area** under well-connected and integrated **networks of protected areas** and other effective area-based conservation measures.
- An action-orientated target on **species** should address the need for **active management**, both in situ and ex situ as required, for species whose continued survival depends on such actions, to enable species recovery and conservation.

Targets to reduce threats to biodiversity

- A target on **direct exploitation of wild species** must ensure that any such use is **sustainable, effectively regulated, legal and governed by ecosystem-based approaches**, with impacts from harvesting kept within safe ecological limits, and avoiding detrimental impacts to non-target species.
- A target on invasive alien species should aim to **eradicate or control invasive alien species** in key areas for biodiversity, and on 50% of all oceanic islands where they impact on native species.
- A target to reduce pollution should encompass **all sources of pollution**, including marine debris, chemicals, and artificial light (which represent threats to some bird species of conservation concern).

Targets for meeting people's needs

- A target on **climate change and disaster-risk reduction** should promote the implementation of **nature-based solutions** that sustain, enhance or support biodiversity as part of climate mitigation and adaptation and disaster-risk reduction pathways, while avoiding negative impacts on biodiversity or local people.
- A target on **sustainable management and use of wild species** must be adopted across sectoral policies and practices, with the emphasis on ensuring biological sustainability.



Area-based conservation measures should prioritise currently unprotected Key Biodiversity Areas, such as Gunung Sahendaruman on the Indonesian island of Sangihe, which supports several globally threatened species including Elegant Sunbird *Aethopyga duyvenbodei*. PHOTO Rob Martin

Spending time in biodiverse greenspaces provides multiple benefits for our physical and mental well-being.
PHOTO Everst/ Shutterstock.com



- A target on **agricultural and other managed ecosystems** should focus on sustainable use that fosters improved food security and nutrition while **avoiding perverse outcomes for biodiversity**.
- A target on the maintenance and enhancement of regulating **ecosystem services** should promote the implementation of **'biodiversity-inclusive' nature-based solutions**, and account for all forms of regulating services, recognising the importance of **retention and restoration of ecosystems** in achieving this.
- A target on benefits for **health and well-being** should focus on the quality of and access to **biodiverse blue and green spaces**, including their ability to deliver biodiversity benefits, local climate adaptation and mitigation, clean air and water, and improved food security.

Targets promoting the enabling conditions for implementation

- A target on **mainstreaming and economic reform must place biodiversity values and safeguards at the heart of decision-making**, with adoption of biodiversity-inclusive approaches across all sectors, for

example, comprehensively applied Strategic Environmental Assessments (SEAs) and Environmental Impact Assessments (EIAs).

- Another target must promote **fully sustainable supply chains in production systems**, to reduce the ecological footprint of production and consumption, explicitly encompassing all actors.
- An ambitious target on **resource mobilisation** is needed to ensure **sufficient financial resources** are provided to support efficient and effective implementation of all targets.
- A target on **information sharing** needs to ensure full availability of **up-to-date biodiversity data** for all indicators used to assess progress towards the goals and targets, and that these indicators are available at national scale to allow government and civil society assessment of progress.
- A target on **participation** must encompass **full, effective and equitable inclusion** in the decision-making process, recognising the different forms participation can take, including 'informing' and 'empowering'.

Being well-known, relatively straightforward to monitor, occurring worldwide in virtually all habitats, and sensitive to environmental change, birds are excellent biodiversity indicators. PHOTO Orange-eared Tanager *Chlorochrysa calliparaea*, Murray Cooper



INDICATORS FOR MEASURING PROGRESS

As for the Aichi Targets, data from birds provide a range of indicators for measuring progress towards the goals and targets of the post-2020 Global Biodiversity Framework. Key metrics derived from or drawing on bird data include:



The number of extinctions



The number of extinctions prevented through conservation action



The Red List Index of species survival, showing trends in the overall extinction risk of species, based on data from the IUCN Red List*



Subsets of the Red List Index showing trends for particular suites of species relevant to individual targets, for example marine, forest-specialist, migratory or pollinator species



Subsets of the Red List Index showing trends driven by particular threats, such as utilisation, trade, invasive alien species, fisheries or pollution



The Wild Bird Index showing trends in population abundance, and subsets of the index, for example for farmland species



The Climatic Impact Index, showing climate change impacts on bird population trends



Protected area coverage of Key Biodiversity Areas*



Proportion of Key Biodiversity Areas in favourable condition

**Indicators also used to track progress towards the Sustainable Development Goals (SDGs)*

TARGETS ARE IMPORTANT, BUT IMPLEMENTATION IS KEY



Patricia Zurita, CEO of BirdLife International, highlights the importance of birds as ambassadors for nature at the 2018 High-Level Political Forum. PHOTO Franz Dejon/IISD

While we have shown that ambitious, focused, 'SMART' targets are critical, the greatest failure of the current Strategic Plan for Biodiversity has not been the targets themselves, but the lack of implementation. The following set of enabling conditions must be addressed if we are to have any hope of reversing biodiversity loss:

Monitoring, reporting and verification

1. An improved and transparent means of planning, monitoring, reporting and verification is needed to ensure the framework as a whole is delivered.
2. Global targets and indicators must be translated into measurable and binding national equivalents so that we can add up and track the contributions of individual countries towards shared goals.

Adequately resourced implementation strategies

3. Clear implementation strategies are essential to map out the route to achieve individual targets, identifying actors, actions, milestones and resources needed, supported by capacity development and funding.

Finance and funding

4. The underlying core biodiversity datasets, such as those on Key Biodiversity Areas and the IUCN Red List of Threatened Species, and the monitoring programmes that underpin them, such as those for threatened and common species, require specific resourcing, as well as spatially explicit national conservation and development strategies to guide planning and implementation by governments and business.
5. More widely, governments and the private sector must incorporate the true value of nature into economic systems and redirect financial flows away from activities that harm biodiversity towards those that protect, restore and manage it sustainably, removing harmful subsidies, valuing natural capital and investing in nature-based solutions.

A framework for all

6. Biodiversity must be 'mainstreamed' more effectively across society. The post-2020 Global Biodiversity Framework is intended to be a 'framework for all' of society (governments, business and citizens, including women, youth and Indigenous Peoples and local communities) and through a 'whole-of-government' approach, including at local level. Both inter- and intra-generational equity is needed to ensure that decision-making and implementation are inclusive and effective.

Nature for climate and development

7. While being developed under the CBD, the new framework is envisaged as a UN-wide plan, and needs to transform how we value nature and unlock its full potential in underpinning the Sustainable Development Goals (SDGs) and the Paris Agreement on climate, both developed in 2015 with 2030 as a key milestone.
8. The new framework should commit Parties to incorporate nature-based solutions to climate change that protect and restore biodiversity and ecosystem integrity into both National Biodiversity Strategies and



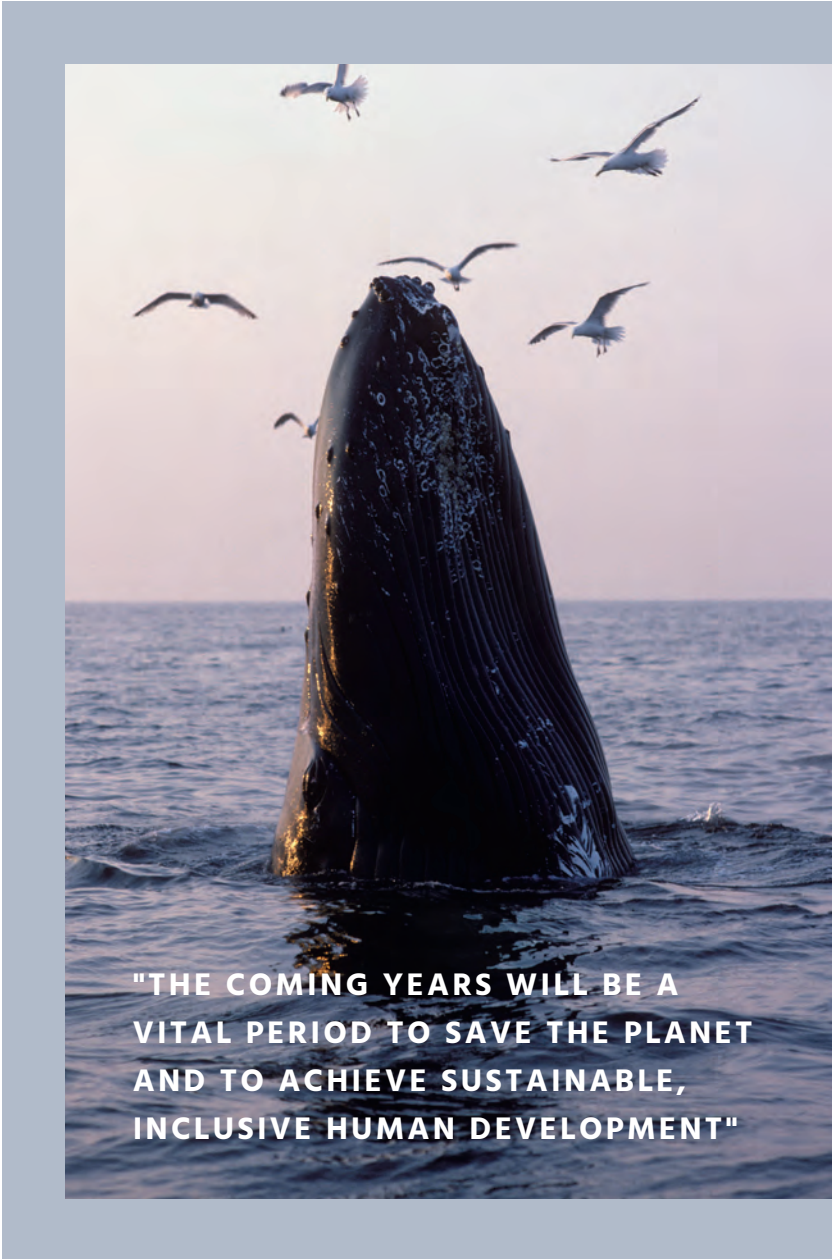
Delegates to the 13th Conference of the Parties to the Convention on the Conservation of Migratory Species applaud the signing of the Gandhinagar Declaration. PHOTO Franz Dejon/IISD

Action Plans (NBSAPs) and Nationally Determined Contributions (NDCs) to meet the Paris Agreement. Where relevant, targets and indicators should replicate or build on those used for the SDGs. Implementation of the new framework must be central to the upcoming UN Decade on Ecosystem Restoration and UN Decade of Action on the SDGs.

International cooperation

9. Synergies between the post-2020 Global Biodiversity Framework and other global policy processes are essential because biodiversity loss, climate change, land and marine degradation, the deprivation of human rights and unsustainable development are inseparable challenges caused by interdependent drivers. Parties and others therefore need to work together to raise the profile, relevance and integration of the framework with such processes, such as:

- The ‘Gandhinagar Declaration’ of the Convention on Migratory Species, which highlighted the importance of international cooperation through the post-2020 framework to ensure that conservation and development is undertaken considering ecological connectivity, including across national boundaries or along entire flyways.
- International coordination on conserving biodiversity in the high seas (areas beyond national jurisdiction, which cover nearly 50% of the planet and 70% of the oceans), including through a new UN treaty currently under negotiation.



"THE COMING YEARS WILL BE A VITAL PERIOD TO SAVE THE PLANET AND TO ACHIEVE SUSTAINABLE, INCLUSIVE HUMAN DEVELOPMENT"

As this report demonstrates, individual successes show that we have the knowledge and tools to turn things around, but transformative change, through stronger and sustained political commitment and coordinated action across society, is urgently needed to safeguard and restore the biodiversity on which we depend. We are at a pivotal moment in human history. The UN Secretary-General recently warned that “the coming years will be a vital period to save the planet and to achieve sustainable, inclusive human development”. An ambitious, effective post-2020 Global Biodiversity Framework is absolutely essential to ensure that this coming decade is the one in which we change our relationship with nature, for the sake of all people and the planet.

International cooperation is vital for conserving the biodiversity of the high seas, which provide feeding grounds to a wide range of marine species. PHOTO Humpback Whale *Megaptera novaeangliae*, Francois Gohier/ Alamy Stock Photo

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Details are provided here for sources listed for each case study and figure in addition to BirdLife's datasets on Important Bird and Biodiversity Areas and IUCN Red List assessments for all bird species.



STATE OF THE WORLD'S BIRDS

Birds are better known and more widely studied than any other comparable group of organisms. By collating and analysing bird data, we can not only understand their condition, but are also afforded an unparalleled insight into the health of the biosphere as a whole. In effect, birds enable us to “take the pulse of the planet”.

The long-running State of the World's Birds series of reports and web-resources, generously supported by the Aage V. Jensen Charity Foundation, has informed much of BirdLife's data collation and analysis. Most crucially, they have ensured that the knowledge accrued is then effectively communicated around the world—both influencing global policy and informing on-the-ground conservation action.

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