

BTO Futures 2015-2020

Strategy Green Paper – May 2014

Introduction

BTO's vision is for people to understand and contribute to knowledge that supports a healthy and wildlife-rich environment for society. Our work aims to inform responses to environmental change, taking account of our knowledge and understanding of species and habitats - the ecosystems that underpin our planet's life support systems. By growing our scientific and engagement capabilities, we aim to play an even greater role in the provision of knowledge to secure our natural wealth for the future. Your views will help us to set a clear agenda.

BTO is an independent charity combining professional and volunteer science aimed at using evidence of change in wildlife populations, particularly birds, to inform society, opinion-formers and environmental policy- and decision-makers. Our impartiality enables our data and information to be used by many partners, and we actively encourage collaborations which further knowledge. We have academic alliances, particularly but not exclusively, with UEA and Cambridge, and strong partnerships within Government and the NGO nature conservation sector.

Over 40,000 BTO volunteer birdwatchers collect long-term monitoring data on the status of UK birds and other wildlife, and this data sets the standard world-wide for informing and underpinning research to understand and address the effects of environmental change on wildlife. We are committed to advancing the science of ornithology through the use of innovative analyses and the latest data-gathering technology. We aim to engage more of society in making their contribution to ensuring an environment fit for wildlife and people.

During 2014 we are renewing our strategy to enable us to continue to set the agenda for ornithological science beyond 2020, and to deliver influential science aimed at better informing decisions affecting conservation and the environment. We aim to publish the BTO Strategy 2015-2020 around the turn of the year. This consultation sets out early intentions for our future directions and we would welcome your comments and views.

Achievements and challenges 2009-2014

Our previous strategy period has seen significant achievements:

- We completed fieldwork for the Atlas, validated and analysed data, and published the book, *Bird Atlas 2007–11*;
- We developed all our scientific research themes, and saw substantial growth in some areas of our work, such as climate change, international and marine science;
- We contributed to raising the quality of monitoring data for other taxa, with examples from bats and dragonflies;
- BTO has become renowned for the quality of its on-line and mobile applications for capturing volunteer data - we launched mobile Apps for both Ringers and BirdTrack users, and placed all our mainstream monitoring schemes on-line;

- Our technological capability extended to significant migrant tracking projects to inform our knowledge of the pressures faced by many declining long-distance migrants;
- The relevance of our research to Government and Agency decision-makers benefited from leadership of the BICCO-Net projects to bring together diverse datasets for the analysis of the impacts of climate change on biodiversity, and our contribution to three of the four Biodiversity & Ecosystem Services for Sustainability (BESS) projects;
- Advice to the offshore wind industry, and modelling the likely impacts of developments enabled strategic inputs to the Round 3 Offshore Wind programme in partnership with The Crown Estate;
- A number of significant new relationships with partners have been fostered, such as the Wildlife Trusts on broad taxa monitoring of 'Living Landscapes' through *The Living Map* project, and with the Cornell Lab of Ornithology (CLO) to develop *Tringa*, a global repository for bird observations.

Our fundraising, membership and communications teams have built capability and capacity, enabling us to grow our membership, our volunteer community and our wider profile. We have established a successful, vibrant and engaging social media presence that has helped with the diversification of our supporter base and our funding streams. Our brand refresh ensured we have a more accessible and appealing face to the broader environmentally aware community across society. We cut costs early, and maintained our income over the period, bucking the trend of widespread recession and public sector funding cuts.

There have been many challenges along the way. We remain constrained by lack of funds, particularly not having grown unrestricted income as a proportion of our overall funding. This limits the aim to undertake more of our own agenda-setting science, and places a tough delivery burden on our scientists with respect to contracts. A consequence of this pressure is a limited ability to publish in the peer-reviewed literature many of the findings from our scientific research. In the longer-term, a reduced peer-reviewed publications record would damage our scientific reputation and the aspirations of our scientists. A requirement during the period to pay off our pension deficit over a decade, through no fault of our own, has placed a significant further burden on scarce funds.

Externally we are still perceived by some as too controlling of our data. We have not made as much progress as hoped in providing services to integrate the efforts of bird clubs across the UK, particularly around data capture and reporting. Our Regional Network is sometimes frustrated by the pressured timescales that we operate under and the generally under-funded nature of our programme of periodic surveys.

Internally, our communication needs to improve, as does the integration between our science and fundraising programmes.

Future Directions

The future provides significant opportunities for the organisation, opportunities that can be grouped into a number of key areas. The following sections outline these opportunities, together with associated questions where your input will be important to helping the organisation develop in a manner that is appropriate to its staff, members, volunteers, supporters, partners, customers and other stakeholders.

Future directions: BTO science, the environment and conservation

Our impartial science – objective and without bias – and our independent stance – free from outside control – enables BTO to make a strong contribution to environmental understanding and to conservation. We should be informing and challenging debates and policies, particularly where BTO data can assist with understanding environmental impacts, and biodiversity's responses. Increasingly Government requires knowledge of where its policy and practical interventions can improve the environment, and reverse declines in biodiversity. Alongside the provision of impartial scientific data and derived information, BTO can bring to bear its expert judgement to inform debate and the delivery of effective solutions to enhance the environment and protect biodiversity. We aim to better explain and to illustrate where our science makes a contribution to the understanding of environmental processes and to conservation.

It is clear that many stakeholders benefit directly from a relationship with BTO, and are users of our data, information and advice. Government, Country Conservation Agencies and the Joint Nature Conservation Committee (JNCC) commission research and survey and are recipients of the interpreted results. NGO's such as RSPB receive and use our data products. Our members, volunteers and birdwatchers contributing data through a variety of surveys benefit from interacting with their data and, with society, are informed of our scientific research through our peer-reviewed publications and interpreted information in magazine articles and on the web. Increasingly, as BTO becomes better known, the public are engaging with our research - the Cuckoo satellite tracking is the prime example. The increasing public interest in our research is a potential source of greater support and income. We intend to improve our ability to inform wider society of the value of our work, and the value of participating with us as a BTO volunteer.

- 1. How do you think our science can better contribute to environmental decision-making and to conservation?**
- 2. How do you think BTO can better represent the value of our science to society?**
- 3. Do you think the BTO has a wider role to play in helping society learn about birds and their relationships with the environment and people? If so, how might we develop this role in future?**

Future directions: Accessible BTO data

BTO data is one of our strongest assets. It is the combination of professional ecologists, long-term datasets (some in excess of 50 years), and volunteers participating all over the country that gives BTO a unique impartial and knowledgeable voice in nature conservation. There is a growing expectation that biodiversity data should be freely accessible to all, and we are continuing to make BTO's substantial high-quality datasets more accessible. We have provided full datasets from our recently published Bird Atlas to the Country Conservation Agencies and to the RSPB for conservation purposes, and we have many academic collaborations based on BTO data. The National Biodiversity Network holds significant BTO datasets, and our data and information services to Government provide interpreted products such as the Wild Bird Indicator. Our investment in the on-line capture of data and dissemination of derived data products fuels the increasing accessibility to BTO data, and its value and influence. We aim to better communicate the value of BTO data and make our knowledge most useful to the sector generally and to wider society.

4. What would you like to see from BTO that improves your accessibility to our data, information and derived data products?

Future directions: Strategic science priorities

BTO's primary research expertise is in the distributions, abundances, population dynamics and ecology of UK bird populations. Our approach spans a range of scales from local to continental, combining large-scale analyses with detailed field studies that help us to understand the ecological mechanisms that drive population changes. We generate robust measures of ranges, abundance, demography and phenology that contribute both to ecological understanding and to key metrics that drive conservation policy. We seek to understand how these measures are affected by ecological and policy drivers. Our current work includes a strong focus on climate change, declines in long-distance migrants, land-use across a range of habitats, agri-environment policy, woodland management, urbanisation and the impacts of marine renewables. In addition to these core research areas we contribute to collaborative research on topics such as ecosystem services, valuing nature and avian diseases.

Peer-reviewed publications are essential to provide confidence in our findings and to maintain our excellent track record for continuing to attract research funding. We will continue to expand our output of high quality refereed publications, evaluating our performance with respect to standard measures of scientific impact and breadth of coverage.

Our future research will build on existing strengths. We envisage more spatially explicit work on population dynamics, climate change and land-use, building on ideas such as those from the Lawton report, *Making Space for Nature* (2010). We will further develop our inputs to multi-disciplinary work through collaborative projects, for example assessments of the cultural value of birds in relation to ecosystem services and valuing nature. We are already undertaking innovative work on bat monitoring based on sound detection and there will be increasing scope to develop such novel approaches for other groups. Potential work on the impacts of avian diseases and on the use of DNA techniques to study food chains offer opportunities for exciting and novel collaborations.

- 5. What are the key issues to which BTO research should give the highest priority?**
- 6. How can we best measure the impact of BTO science?**
- 7. What are the key new research areas, including those beyond birds, into which BTO should aim to develop its research over the next five years?**

Future directions: International

Recognising that many birds are international travellers, BTO is growing its international reach. Within Europe we continue to build close and effective relationships with those ornithological institutions working predominantly in monitoring, both through the European Bird Census Council, and EURING where we hold governance positions, and provide services through web applications and data management. Our research benefits increasingly from international collaborations, particularly in the areas of climate change research and migration studies. We have active European collaborations tracking migrants on their journeys to and from Africa, and we work jointly with BirdLife Partners and others in West Africa monitoring habitat usage and movements of long-distance Palaearctic migrants. We have undertaken research on agriculture and biodiversity, and on endangered species ecology in Africa.

The gathering of bird observational data at the global scale, in ways in which it can be useful for ornithological research, is a growing commitment for BTO. During this strategy review period we have established the BirdTrack Global Data Portal to enable predominantly UK birdwatchers to enter their observations from anywhere in the world. This development is also the basis for growing collaborations, particularly with BirdLife International and Cornell Lab of Ornithology (CLO). We aim to build capacity amongst BirdLife Partners in their own countries to capture and use observational data on birds, and to assist BirdLife globally in reporting on the status of bird populations. In partnership with CLO we are developing a global repository for databases of bird observational records, enabling analysis and visualisations at international and global scales.

We intend to focus our increasing international reach in these key areas of BTO work and to ensure that we become well known internationally for our particular skills in data capture, analysis and modelling that enable us to understand patterns of change in bird populations at a variety of scales. We aim to offer these skills in a collaborative way that ensures we can be part of broad partnerships that can access significant international funding to answer key environmental and conservation questions at international and global scales.

8. What comments do you have on BTO's international work and are there additional areas where you would like us to be active?

Future directions: Other taxa

BTO is fortunate to lead the monitoring of change in bird populations where the datasets are extensive and long-standing, and where a significant proportion of society is both inspired by birds and can play a fundamental role in gathering the observations upon which our research is based. We should use this position to encourage many more people to participate in broader wildlife recording, and use our well-developed collaborative research expertise to answer key questions of environmental importance by the analysis and modelling of broad taxa biodiversity data.

The future of State of Nature reporting in the UK relies on improving the overall quality of biodiversity monitoring data across a much broader spectrum of taxa. BTO's expertise in mobilizing volunteers, data capture, analysis, modelling, interpretation and visualization ought to be a well-used asset to meet this requirement. The JNCC is the Government agent well placed to coordinate effort, and we aim to work with JNCC and our like-minded biodiversity monitoring partners to improve reporting for the next round of State of Nature.

We have been successful in establishing and leading broad research partnerships to bring together and analyse key biodiversity datasets across a broad range of taxa, and to look at process-oriented questions, for example around the impacts of climate change on biodiversity (the BICCO-Net Government funded project). Using, in particular, our modelling capability we wish to undertake further research on these questions that rely on integrated data.

BTO's partnership with The Wildlife Trusts is establishing the capability for volunteers to record, on-line, all their wildlife sightings in Wildlife Trust Living Landscapes, the habitats in and around local nature reserves. These data help to set a baseline for biodiversity knowledge in areas where the habitat quality and species diversity is expected to benefit from restoration, recovery and increasing connectivity. We aim to extend this capability by offering our expertise and experience alongside other NGO and Government partners to establish baseline biodiversity monitoring datasets useful for conservation.

9. How can we best support others, and collectively agree a set of priorities for improving the quality of monitoring data for taxa other than birds?

Future directions: Bird Clubs and Bird Observatories

BTO would like to make our data and our services more available and useful to Bird Clubs and to Bird Observatories in the UK. Whilst we recognize that one system might not fit all, and that many clubs and observatories have developed their own bespoke methods for capturing and reporting observations, we believe there are advantages to building on-line capacity and capability across the UK birding scene based on BirdTrack. In conjunction with our local partners, we can curate data in perpetuity, county and local reports can be produced directly from the datasets, with enhanced interpretation and discussion of pattern and change, and we can help set the local picture in a national context.

10. How can BTO best support Bird Clubs and Observatories to ensure the most effective use of birders' observations at local and national scales?

11. Are there other audiences we could support in this way to assist them in contributing to the broad-scale recording of birds or other taxa?

Future directions: Services to members and volunteers

We have useful and recent information from BTO members and volunteers on their motivations and what they would like from BTO: more local opportunities for meeting like-minded individuals; a stronger sense of the BTO community; and more regular engagement with BTO staff. BTO has ambitions for continuing to grow and broaden our membership and volunteering community. More extensive participation from the UK's birders will be important for the future, as will attracting new supporters and helping them develop their birding skills and confidence to enable participation in monitoring. We are keen to nurture young naturalists, and enable their contribution towards our knowledge and conservation effectiveness. We aim to give the best service to volunteers to enable the gathering of the best quality data.

Income we receive from members is a very important part of our unrestricted funding, and one of the few ways we are able to fund BTO agenda-setting science, such as Bird Atlas research. We also recognise the benefits of a 'family feel' and personal relationships at current levels of membership, and of the importance of members who stay with us, and who participate in what we do. We aim to ensure that all of our supporters feel good about BTO and understand the real value of BTO data, through improved feedback, better stories of the impact of BTO's data, and enhanced on-line services.

12. How could BTO improve your membership and volunteering experience?

13. Should BTO be giving volunteer data-gatherers more opportunities to engage with their data and undertake science?

14. How should BTO best engage with young people?