

NBN Trust Strategy 2021 - 2025

Introduction

The National Biodiversity Network (NBN) Trust has been championing the gathering, curation, sharing and use of data about the UK's wildlife for over 20 years. We are the UK's largest partnership for nature working with over 200 partners under the banner of the National Biodiversity Network (the Network). The partnership includes volunteer-led taxon or region specific recording groups, Local Environmental Records Centres, large conservation NGOs, museums, botanic gardens, universities and government agencies.

We host the UK's largest aggregation of multi-taxa biodiversity data, via the NBN Atlas (www.nbnatlas.org), which is rapidly approaching making a quarter of a billion species occurrence records accessible for use by everyone. Through this, we provide an unparalleled resource that far exceeds the power of the individual datasets, enabling easy visualisation and analysis at the regional and national scale, which would not otherwise be possible.

We provide a facilitation and co-ordination role across the Network and a collective voice for the biodiversity data sector. By bringing these organisations together, we drive forward national and international standards in the collection, sharing and use of wildlife data, foster collaboration and knowledge exchange and enhance the reputation of the Network as a whole.

This strategy sets out how, over the next five years, the NBN Trust will put data at the heart of nature conservation, through our unique role as the national scale multi-taxa data aggregator, the potential provided by the NBN Atlas and as the facilitator of the Network. So that, ultimately, the NBN Trust will contribute towards a greater understanding of our natural world and providing solutions to the biodiversity crisis and climate emergency.

Our **vision** is for "A world where data about wildlife are used to understand and benefit nature"

Our **mission** is:

"Bringing together all those who generate, curate and use high quality data about the UK's wildlife to increase understanding of our natural world and create a more resilient natural environment."

The NBN Trust is an independent charity, which means that our work must be for the public benefit. Our charitable purpose states that we have a duty to advance the sustainable and wise use of the biological resources of the UK, Channel Islands and Isle of Man and to increase public participation in the conservation of biodiversity and their understanding and enjoyment of our natural world by providing access to biological records, data or information.

The role of the NBN Trust

The NBN Trust is an umbrella organisation, bringing together all those with an interest in the gathering, curation and use of data about the wildlife found in the UK, the Channel Islands and Isle of Man as the NBN Network. The Network was conceived to make access to datasets about the nation's wildlife easier, to enable everyone to use the data to plan, make decisions and learn from the valuable information held in various forms and locations across the UK. And to ensure those data are trustworthy, reliable and recorded in a consistent way. These

aims are even more important now than they have ever been. Continued access to trusted biodiversity data, and its associated metadata, are fundamental to decision making, research and conservation.

Providing wider access to data has been made easier over the years with the advances in technology and since April 2017 one of the main roles of the NBN Trust has been to own, develop and manage the NBN Atlas as the UK's accessible national scale, multi-taxa, digital data sharing infrastructure. Our role is to encourage and promote the sharing of data, which we facilitate, predominantly via the NBN Atlas. We encourage open data where it is appropriate, and support and implement the FAIR data principles. However, there is no statutory requirement for data owners to share their data. It is only through their willing participation that this vital resource can be made accessible.

The NBN Trust provides a facilitation, coordination and support role for the Network. We work collaboratively with the Network partners to design, adopt and implement national and international standards for wildlife data and solve problems associated with data collection, sharing and use. We also support the Network through coordinating learning to assist partners in improving their skills and services, bringing them together in joint ventures to increase sharing of knowledge and resources and providing a collective voice for the biodiversity data sector.

The majority of data about wildlife in the UK still comes from volunteers. Volunteers also make up the majority of verifiers, expert amateurs who use their vast knowledge and experience to confirm species identification. Neither the NBN Trust nor the Network would exist without the dedication and hard work of the individuals who go out, record and verify the UK's wildlife in all its forms. The NBN Trust's role is to ensure their hard work is recognised, given the value it deserves and contributes to informed decision making for policy and planning, scientific research, conservation and education. We will continue to recognise the contribution of these individuals and groups through the annual NBN Awards for Wildlife Recording. However, we do not directly support those individuals with the provision of the tools, resources and training they need to do their work. This role is performed by others within the Network who have the required skills and expertise we do not have in the NBN Trust.

While the NBN Trust is primarily focused on data from the UK, Channel Islands and the Isle of Man, we also have a key role in data sharing internationally. As the UK node for the Global Biodiversity Information Facility (GBIF), we not only share UK data at an international level, but also assist UK organisations with sharing data they collect in other countries. Furthermore, through GBIF and the Living Atlases community we play a role in international development of biodiversity informatics infrastructure.

The NBN Trust Past and Present

The most significant achievements the NBN Trust has made have been realised through the collaboration of the Network. The most visible of these has been the sharing of data, initially through the NBN Gateway and, since 2017, the NBN Atlas. As of July 2020, over 236 million records of over 46,000 species, spanning four centuries from 154 data partners have been aggregated and made accessible via the NBN Atlas.

There is much potential for the NBN Atlas to truly revolutionise the way wildlife data is shared, used and visualised in the UK. A lack of funding has stifled significant development since its launch. Nevertheless, the NBN Trust is committed to continued development of the NBN Atlas,

listening to the wants and needs of our data providers and users, to produce a world leading, fit for purpose infrastructure.

While the aggregation of data on the NBN Atlas is the most visible achievement of the NBN Trust, there is much important work that goes on behind the scenes that contributes to improving Network efficiency and the overall goals of making wildlife data accessible and used, especially in decision making, as well as championing the sector. For example, in the early years, there was the Linking Local Record Centres project led by the Wildlife Trust and the development of the Species and Habitat Dictionaries, work that is continued with the updating of the UK Species Inventory (led by the Natural History Museum). More recently there has been work to agree data quality and verification standards and terminology, and involvement in the Scottish Biodiversity Information Forum's (SBIF) Review of the biological recording infrastructure in Scotland. In 2019, the State of Nature partnership made use of our website to release its authoritative reports to a wide readership.

Our ambition is to make data ever more accessible in ways that ease their effective use for education, research and decision making. We want to reduce the time it takes between field observation and publication. And, we want to enhance the value of data sets by closing gaps, maintaining high standards and recognising and exploiting opportunities provided through digital systems.

Of course, we must continue to work with data partners in ways that acknowledge the complex issues around data ownership and the data curation time and resource required to take an observation from field to Atlas. We must also continue to champion the value of the species observation data collected and shared by the Network. While new technologies are providing ever more data at what may appear to be a lower cost, there is no substitute for accurate and reliable direct observation, which must be used in conjunction with new technologies to ensure robust, properly evidenced, informed decisions about biodiversity are being made. If decisions are made in the absence of species observation data, there is the very real probability that biodiversity loss will not be halted and may in fact be exacerbated. For example, there is a growing need to explore how better to enable the analysis of biological records alongside data from satellite earth observation (and vice versa).

The world in which we work

There are a number of external factors that will pose both challenges and opportunities for the NBN Trust in delivering this strategy. We need to remain aware and be ready to respond to, what can be rapidly changing circumstances.

It should not be news to anybody that we are living in a time of great peril for the environment. The climate emergency and biodiversity crisis are interlinked and we cannot solve one without making real progress on the other. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystems Services (IPBES 2019) reported rapid loss in biodiversity globally and highlights that there is insufficient data and information to monitor and address these trends. The UK's State of Nature Report 2019, which relies on the species data collected and shared by the Network, showed a significant decline in species abundance with 15% of the species found in Great Britain under threat of extinction.

Additionally, at the time of writing, the world is emerging from the Covid-19 pandemic, which has had a huge impact on the way we all work and interact with others and the natural world. The economic impacts of the pandemic have had a negative effect on funding opportunities

and the sustainability of aspects of the Network. The longer-term effects are unknown, but it is possible that there will be lasting consequences of the economic dip and it remains to be seen how the efforts to promote a return to normal and an economic recovery will affect nature.

Furthermore, the uncertainties around environmental legislation post Brexit provide some challenges. Changes in environmental legislation and reporting requirements may generate different needs to be met from data and new responsibilities for our partners, and ourselves, in drawing attention to the evidence provided through the data of biodiversity losses and gains, their links to climate change and to the value of the nations Natural Capital.

Despite all of these challenges, public sector funding on biodiversity has significantly decreased and the government's country nature conservation bodies have seen their budgets reduced over the last decade. This makes funding for the Trust, and many of our Network partners, increasingly hard to obtain. Therefore, we need to continue to prove the worth of the Trust and Network, diversify our funding streams and find new ways of working with others to share scarce resources.

There are also exciting opportunities on the horizon. Some of the immediate impacts of the COVID-19 pandemic have been positive, lockdown measures resulting in cleaner air and the re-emergence of wildlife into areas they have not been seen in for decades. There has also been a resurgence in the public's interest in and engagement with nature. Furthermore, there is wide acknowledgement that there needs to be a green recovery. For example, the World Health Organisation's manifesto for a healthy recovery from COVID-19 includes nature as a main facet of its prescription for a healthy, green recovery¹ and the World Economic Forum makes a strident call for an environmentally sustainable economic recovery²

In England, the government's promises in the 25 Year Environment Plan and proposals for strengthening legislation in the Environment Bill and linking farm payments to management practices that protect or improve the environment in the Agriculture Bill are also encouraging. As is the inclusion of biodiversity data in the Secretary of State for the Environment's speech on environmental recovery³. The focus on a green recovery, green economy and the measures in upcoming Environment and Agriculture Bills will mean that the requirement for reliable, quality wildlife data of the type collected and shared by the Network will only increase.

The devolved administrations are pursuing the green recovery with real vigour. For example, the Programme For Government in Scotland highlights the green challenge and opportunities and includes increased investment for peatland restoration, new woodlands and urban greenspace⁴. While the Welsh Government aims to secure a net zero carbon public sector by 2030⁵ and demonstrates its longer term commitment to environmental improvement under the Well-being of Future Generations Act⁶.

New technologies for obtaining data about the UK's wildlife, including at the habitat level, such as remote sensing and eDNA are constantly evolving. While this could be seen as a challenge

¹ <https://www.who.int/news-room/feature-stories/detail/who-manifesto-for-a-healthy-recovery-from-covid-19>

² <https://www.weforum.org/agenda/2020/06/five-ways-to-kickstart-a-green-recovery/>

³ <https://www.gov.uk/government/speeches/george-eustice-speech-on-environmental-recovery-20-july-2020>

⁴ <https://www.gov.scot/programme-for-government/>

⁵ <https://gov.wales/team-wales-approach-tackle-climate-change>

⁶ <https://www.futuregenerations.wales/about-us/future-generations-act/>

to the resource intensive more traditional method of direct observation of species data; these will still be needed to ground truth remote methods. It also presents an opportunity for the NBN Trust to incorporate a greater range of data types shared via the Network. Technological advances in the way data can be shared, analysed and visualised also present opportunities for the NBN Trust to be at the forefront of developing methods and adopting technologies to truly integrate all types of data relevant to creating a healthy natural environment.

NBN Trust Strategic Objectives

Our ambitions cover a desire to see realistic and equitable funding for the work that goes into that volunteer effort and where appropriate improved and shared systems for data collection and validation, including development of technology to support all that effort. Necessary though this ambition is, clearly it is dependent on the securing of the resources to do so and is not within the gift of the NBN Trust alone. Due to the nature of the NBN Trust, and the Network, successfully delivering the strategy will by necessity involve consultation, engagement and collaboration with our partners. However, this strategy is solely for the Trust.

The NBN Trust has four high level strategic objectives:

1. Enhance the accessibility and usability of the UK's wildlife data

Promoting and facilitating the sharing and use of data that is collected about UK wildlife is at the heart of the NBN Trust's mission. The NBN Atlas is at the forefront of biodiversity data sharing infrastructure development globally. Over the next five years we will work with Network members to increase the amount, resolution and type of data available through the NBN Atlas. We will also increase the usability of the NBN Atlas through improving the user experience, producing more and better online help and training and increasing the number and relevance of tools available to NBN Atlas users. We will also increase public participation in collecting and sharing of data through becoming the UK network node for iNaturalist.

2. Empower providers and consumers of wildlife data through engagement and collaboration at the regional, national, and global levels

The NBN Trust relies upon the Network it facilitates. The Trust will bring the Network together and provide support to assist Network members in carrying out their work more effectively and increase their resilience by providing member services that are of real benefit. We will work with Network members to promote collaboration, with other data collectors and users, to create a more resilient natural environment. We will also increase engagement with industry and the environmental consulting sector to encourage greater data sharing from these sectors.

3. Communicate the value of wildlife data for use in decision making and research and to inspire a wonder in nature

Sharing data is just one part of the NBN Trust's mission, the power of the data is in its use. We will work with Network members and other data users to demonstrate the myriad of uses for the data collected and shared by the Network. We will ensure those who should be using wildlife data know what data they need, where to access it and have confidence in its provenance. We will create engaging stories using the data on the NBN Atlas to increase understanding of the UK's natural world and advocate its intrinsic value.

4. Develop the strength and sustainability of the NBN Trust

For the Trust to succeed in our first three objectives and deliver on its mission, we must be resilient and sustainable. We will ensure that the NBN Trust delivers our strategic aims as efficiently as possible. We will create stronger relationships with current and new partners. We will work with our government funders to secure greater stability of funding, broaden our fundraising strategy to other grant funders and generate funding from the private sector, in collaboration with Network members. We will provide an improved membership scheme, with tangible benefits and through this grow membership income. The NBN Trust's success is also reliant on keeping up to date with new technology used to collect, share and use wildlife data, we will, therefore, develop strategies for technology horizon scanning and adopting new technologies where appropriate.

How we will deliver our strategy

This strategy will be supported by five, yearly, action plans which will set out the key activities for each year of the strategy. Each activity will have clearly defined objectives and outcomes, against which we can measure our success and progress towards our strategic objectives. The 12 month plans will enable the Trust to be a more dynamic and proactive organisation that can be adaptive to changing internal and external environments. The Stakeholder Advisory Group will have an important role to play in shaping the key activities for each year. These key activities will also involve consultation and collaboration with our key stakeholders and partners to ensure we are delivering our work in the way that best benefits the Network. The Board of Trustees, who oversee the Trust's strategic direction, will oversee development of the action plans and regularly review progress against the strategy.

What the strategy will deliver for nature

As a result of implementing this strategy, we will have:

- Embraced existing and new technology to improve the 'time to market' of biodiversity data
- Provided an infrastructure with the ability to integrate different types of data with species observations and which enables a holistic view of data relevant to creating a healthy environment
- Increased engagement and collaboration with current and new partners and through this have increased the amount and type of data about the UK's wildlife that is accessible for use.
- Facilitated more collaborations between data providers and users and, through our coordinating role, strengthened the skills and experience available across the Network.

By doing all of this, we will have ensured that data will be used to increase understanding of our natural world and to create a more resilient natural environment.