



 **JNCC**

STRATEGY 2020-2025

JNCC's strategy to 2025

Vision and mission

Our vision

- To be a world-leading provider of environmental evidence, innovative solutions, and advice that place nature at the heart of sustainable wealth and well-being.

Our mission

- To be an impartial scientific authority on UK and international nature conservation. As a public body we advise governments, and work in partnership with business and society. Our people are dedicated to providing high-quality evidence and advice on the natural environment, for the benefit of current and future generations.

Introduction

Human existence ultimately depends on the natural environment. Environmental assets (often referred to as natural capital or natural resources) such as rocks, soil, water, air and living organisms provide a range of benefits (often termed ecosystem services) to human populations. Ecosystem services include food, water, timber, climate regulation and crop pollination. However, the continued flow of the ecosystem services on which humanity depends is threatened by the inter-related environmental crises of climate change and biodiversity loss.

The climate crisis has received considerable attention publicly and politically. The IPCC estimates that human activities have already caused global temperatures to rise by approximately 1.0°C above pre-industrial levels. In the UK, the 2008-2017 decade was 0.8°C warmer and 20% wetter than the 1961-1990 average. Currently the world is not on track to meet the goal of the 2016 Paris Agreement to limit global temperature increase by reducing greenhouse gas emissions.

The societal and economic implications of unmitigated climate change are profound. There are also significant implications for biodiversity. For example, in the UK the distributions of many birds, butterflies, moths, dragonflies and marine fish have shifted north over recent decades in response to rising temperatures. Climate change poses an increasing challenge for the maintenance and restoration of biodiversity and ecosystem services.

Biodiversity loss has received less public attention than climate change but has equally profound implications. The 2019 IPBES global assessment summarised compelling evidence for human-induced declines in biodiversity and noted that “the rate of global change in nature during the past 50 years is unprecedented in human history”. In the UK the 2019 State of Nature report described declines in the abundance and distribution of many species since 1970, trends which are continuing to the present day.

Globally, the main direct drivers of biodiversity loss have been intensive use of terrestrial and marine ecosystems, direct exploitation of species, pollution and invasive non-native species. Increasingly, these factors are being exacerbated by climate change. Ultimately, biodiversity loss is caused by indirect drivers of change, including human population growth, changing patterns of production and consumption, trade and technological innovations. Direct and indirect drivers have accelerated in last 50 years.

Without a change in approach, biodiversity and ecosystem services will continue to decline with serious consequences for humanity. For example, unless action is taken many of the UN's Sustainable Development Goals will not be achieved; indeed, gains made in recent decades may be reversed.

There are many links between biodiversity and climate change. Addressing the inter-related crises will require transformative change – by governments, by the private sector and by society as a whole. Many solutions will place nature at their core and will potentially be complex and multifaceted. Nature-based solutions aim to enhance and restore the services derived from nature and thus provide a solution to societal challenges, such as climate change, food security, disaster risk and poverty alleviation. For example, tree planting and woodland regeneration are powerful tools for climate change mitigation and also provide other benefits, such as reduced flooding and improved water quality. In the marine environment, protecting seagrass beds sequesters carbon while also preventing coastal erosion and benefitting fish stocks.

JNCC's role

Governments and many other bodies are responsible for making decisions in relation to biodiversity and climate change, from setting national policies to determining management action on a nature reserve. Deciding on the best course of action requires access to high-quality evidence and advice. JNCC is well-placed to synthesise evidence and provide advice relating to the natural environment, utilising our unique combination of strengths, as described below.

Nature conservation and natural capital

JNCC's role is centered on nature conservation and we have deep expertise in biodiversity. We also understand how biodiversity relates to other aspects of the natural environment and how it underpins the ecosystem services that benefit society and the economy. JNCC can therefore provide advice and evidence within the frame of natural capital or natural resources, with the aim of maintaining or restoring resilient ecosystems and implementing nature-based solutions to societal problems.

Geographical scope

JNCC's remit covers nature conservation matters that concern the UK as a whole or have an international dimension. JNCC integrates evidence across the four countries in the UK to provide a consistent evidence base and facilitates collaboration between the countries in pursuit of shared aims. JNCC provides a mechanism for the countries to pool their resources to work at UK and international scales – turning their common investments into a shared asset with substantial added value.

JNCC's UK role supports devolved implementation of country-specific priorities while providing the following benefits:

- *Cost-effective delivery* through economies of scale and avoiding duplication of effort.
- Integrating evidence to meet *international reporting obligations* and developing UK positions to demonstrate *global leadership* in addressing environmental issues.

- Facilitating solutions to address *cross-border environmental challenges*, for example non-native species and climate change.

Applying science to policy

JNCC operates at the interface between policy and science. We provide evidence and impartial, independent advice to enable governments and others to make informed decisions (for example, on policy development and management interventions) across sectors and at a range of geographical scales from local to global.

JNCC is a science-based organisation. By trialing innovative approaches, we demonstrate how science and technology can be applied to benefit nature conservation. In some areas we apply cutting-edge science.

By bringing together evidence from a variety of sources including the country nature conservation bodies, JNCC can provide advice to address complex environmental problems such as the application of an ecosystem services approach in the marine environment and the impact of UK trade on global biodiversity.

Integrated functions and capabilities

JNCC's functions cover the full range of ecosystems. This enables us to take account of the interactions between terrestrial, freshwater and marine environments and apply complementary approaches. Our functions also bring together domestic and international concerns.

JNCC staff have a blend of scientific and technical skills including marine and terrestrial environmental science, UK and international environmental policy/legislation, data modelling and analysis. Our capabilities are mutually supportive and can be deployed flexibly and in different combinations to meet the needs of our customers.

Working in partnership

Collaboration is at the heart of everything that JNCC does. We work in partnership with many organisations, including the country nature conservation bodies, other government bodies, academia, research organisations, businesses and NGOs, utilising our convening power to bring organisations together. By working in partnership, we are able to complement our own expertise with that of others, and so provide robust and cost-effective solutions.

Priorities for JNCC to 2025

JNCC will play a leading role in providing evidence and advice to enable decision makers to address the twin interrelated environmental crises of climate change and biodiversity loss within the UK and internationally. Our actions will be focused on where we can make a distinctive contribution based on our unique role and our world-class expertise. In this way we will support achievement of the UN Sustainable Development Goals, other international environmental targets and national priorities within the UK.

Successful implementation of our strategy will require us to make changes to what we do and how we do it. Over the next five years the main changes we will make are as follows:

- We will more fully embed the concepts of natural capital and ecosystem services in our evidence and advice¹. Our aim is to better incorporate an understanding of

¹ Some current regulatory regimes may limit the opportunities to adopt such an approach.

the benefits nature provides in decision-making and provide solutions that optimise ecosystem services. We will promote nature-based solutions to major societal challenges such as climate change, in the UK and internationally.

- Within the UK, our relationships with country nature conservation bodies and government administrations will evolve. Our emphasis will be on providing scientific services that support the specific priorities of each administration by utilising the strengths derived from operating across countries. We will support UK standards and frameworks where there is a clear requirement for comparison and/or consistency at a UK scale.
- Beyond the UK there are many opportunities to achieve substantial environmental benefits, for example by advising on large-scale interventions in areas of high biodiversity value. We will increase our international engagement, broaden our support for the international agendas of government and strengthen bilateral relationships with selected countries. Our work will be directed towards addressing the main drivers of global biodiversity loss, using the most effective instruments to drive action.

To support these changes, we will:

- Continue to diversify our funding base so that a greater proportion of our funding is derived from sources other than core grant-in-aid. This will increase JNCC's resilience and enable us to provide a high-quality service to governments and other customers by maintaining a critical mass of expertise.
- Strengthen our relationships with country nature conservation bodies and devolved administrations, embedding more JNCC staff in countries and maintaining a pool of expertise in JNCC that can be deployed flexibly to meet country needs.
- Build specialist, multi-disciplinary teams that can be deployed flexibly.
- Enhance existing JNCC skills with additional expertise in economics, social sciences and international ecosystems and biodiversity.
- Innovate in the use of new technologies and approaches, demonstrating how they can be used to solve real-world problems. Strengthen our science through new and existing partnerships with research institutes and universities.

JNCC's work over the next five years will comprise four themes.

Assessing environmental status in the UK

Developing environmental policies, assessing their effectiveness and directing operational activity all require a robust evidence base describing the status of the environment, how it is changing and what is driving the changes. Whilst the majority of policies relating to the natural environment are devolved within the UK, there is still considerable value in assessing status and change at a UK scale because it is more efficient to produce and it provides consistency to underpin UK reporting obligations.

Over the next five years, JNCC will continue to maintain and enhance a UK-scale evidence base, which integrates data from across the four countries with other sources, to support UK-scale assessments and international reporting obligations as well as informing devolved

policies within each of the countries. We will:

- Work closely with organisations in England, Northern Ireland, Scotland and Wales to strengthen our support for national and local status assessments.
- Work with partners to increase the opportunities for volunteer recording to contribute to assessments of the natural environment with a focus on assessing habitat condition and associated ecosystem services.
- Facilitate the uptake of new technologies such as Earth Observation and eDNA within the four countries to support national and local status assessments.

Supporting better decisions

Optimising the use of finite natural resources requires environmental considerations to be fully integrated into decisions concerning the use of land and sea, whether these are local management interventions or national policies. Decisions ideally need to take an ecosystem services approach that provides a holistic view of the benefits, costs and trade-offs.

Over the next five years, JNCC will help decision makers make the best use of evidence to understand the potential outcomes of decisions and evaluate options – within the UK, in the UK's Overseas Territories and internationally. We will:

- Work closely with governments, country nature conservation bodies and others to understand existing approaches to decision making and identify how JNCC evidence sources can be evolved to better meet requirements.
- Develop and evaluate tools and models to assess the consequences of decisions on the ecosystem services provided by the natural environment and the associated impact on biodiversity.
- Provide evidence-based products that support delivery of nature-based approaches to climate change mitigation and adaptation and other environmental challenges, whether in the UK or internationally.
- Explore how approaches developed within the UK can be applied internationally to improve decision-making, e.g. use of satellite data and advanced modelling techniques to map ecosystem services.

Influencing international action

Global and regional environmental agreements, such as the Convention on Biological Diversity and the OSPAR Convention, set international priorities and provide a framework for environmental policy within the UK. JNCC's international work also includes advising the governments of the UK Overseas Territories, which support a rich biodiversity and whose economies are often highly dependent on their unique natural environments.

Over the next five years JNCC will help to address the main direct and indirect drivers of biodiversity loss and climate change by providing sound evidence and advice in support of co-ordinated global action. We will:

- Work with governments in the UK to develop a strategic approach to international action on the environment. Identify how a strategic approach could be implemented through evolution of multilateral environmental agreements and UK policies (including trade and overseas investment).
- Improve the global evidence base and advice function within JNCC and work with other parts of government to use this to inform investment especially with regard to overseas aid.
- Engage in international instruments and policy areas extending beyond the environment (e.g. international development and trade) to address the full range of drivers of biodiversity loss.
- Maintain a light-touch international reporting function based on re-use of country indicators and UK indicators where there is added value in a UK-scale metric.
- Increase JNCC's international profile and enhance partnerships with UK and international bodies to build our capability to support international implementation.

Advising on offshore management

UK offshore waters (beyond 12 nautical miles) represent a large proportion of the UK's economic area. Offshore waters are important for a range of biodiversity, including seabirds, cetaceans and benthic habitats.

Over the next five years, JNCC will continue to support governments in achieving their vision of clean, healthy, safe, productive and biologically diverse oceans and seas. We will use our advisory responsibilities in the UK offshore to pilot and demonstrate improved use of evidence and analysis in decision making. We will:

- Deepen our understanding of the relationships between biodiversity and ecosystem services in offshore waters and work with governments and others to develop an ecosystem service approach to managing the marine environment². We will provide evidence products to support the adoption of an ecosystem service approach and inform operational activities across the UK.
- Our offshore operational activities will be focused on meeting the specific requirements of each of the governments in the UK, utilising our strengths as a UK body with deep scientific expertise in the marine environment. We will work with partner organisations to ensure that offshore and inshore activities are complementary, delivered efficiently and fully aligned with the priorities of each country.

² Some current regulatory regimes may limit the opportunities to adopt such an approach.

Front cover

Nephrops in burrow, Fladen Grounds © JNCC/Cefas
Anguilla © Nikki Chapman/JNCC
Copernicus Sentinel Data (2016) © ESA/JNCC
Brimstone butterfly © Martin Warren, Butterfly
Conservation Survey staff on deck © JNCC and Cefas



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