

Biodiversity

Research Briefing

November 2023



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Senedd Research acknowledges the parliamentary fellowship provided to Matthias Noebels by the Engineering and Physical Sciences Research Council and to Amandine Debus by the Natural Environment Research Council, which enabled this Research Briefing to be completed.



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Summary

What is the issue?

In 2021 the **Senedd declared a 'nature emergency'**. This was in recognition of human induced declines in biodiversity. The **2023 State of Nature Report** highlights that 18% of 3,897 species assessed in Wales are threatened with extinction.

Pressures on biodiversity come from many sources, including urbanisation, pollution, hydrological change, certain agricultural and woodland management techniques and invasive non-native species. Biodiversity has intrinsic value and provides benefits to humans, through '**ecosystem services**' such as flood prevention and food production. Biodiversity losses are thought to cause risks to human safety and well-being.

How is biodiversity being protected?

Nature conservation is an area of devolved competence in Wales. Many policies and legislation on biodiversity in the UK, including Wales, are derived from the EU and international obligations, such as the **Nature Directives** and **Convention on Biological Diversity** (CBD).

The **Nature Recovery Action Plan** is the Welsh Government's overarching biodiversity strategy. The **Environment (Wales) Act 2016** includes various duties to protect biodiversity.

Natural Resources Wales (NRW) is the Welsh Government's statutory body responsible for the management of Wales's natural resources.

What are stakeholders calling for?

Environmental stakeholders are calling on the Welsh Government to introduce statutory domestic biodiversity targets.

Recovery from the Covid-19 pandemic may offer an opportunity to address biodiversity loss. Branded as ‘the green recovery’, **environmentalists have highlighted** the need for green jobs to stimulate the economy and protect biodiversity.

The Welsh Government’s plans for a **National Forest** have gained momentum and stakeholders highlight that trees must be planted in the right places to maximise the benefit to biodiversity.

The Welsh Government’s future Sustainable Farming Scheme has been identified as an opportunity to enhance biodiversity through payments for public goods.

Post-EU withdrawal, there is **concern amongst environmentalists** that with the loss of EU structures to ensure compliance with environmental legislation, current laws may not be implemented appropriately. Stakeholders are calling for a domestic system of environmental governance in Wales.

Stakeholders are also calling for appropriate financing of nature recovery through both public and private funding. Wales Environment Link’s **Pathways to 2030** report highlights areas for investment.

Introduction

This section introduces what biodiversity is, why it is important, and why it is declining.

What is biodiversity?

Biodiversity, or biological diversity, is defined as “the diversity of living organisms, whether at the genetic, species or ecosystem level” in the [Environment \(Wales\) Act 2016](#). Similar definitions are used by the international [Convention on Biological Diversity](#) (CBD) and the [UK Government](#).

Living organisms are individual entities that show some characteristics of life, such as being composed of one or more cells and having the ability to metabolise, grow, adapt, or reproduce. Animals, plants, fungi and microorganisms such as bacteria are all living organisms.

The definition further emphasises the range of ways in which biodiversity occurs. Biodiversity considers genetic variants and variety of species, but also different types of habitats.

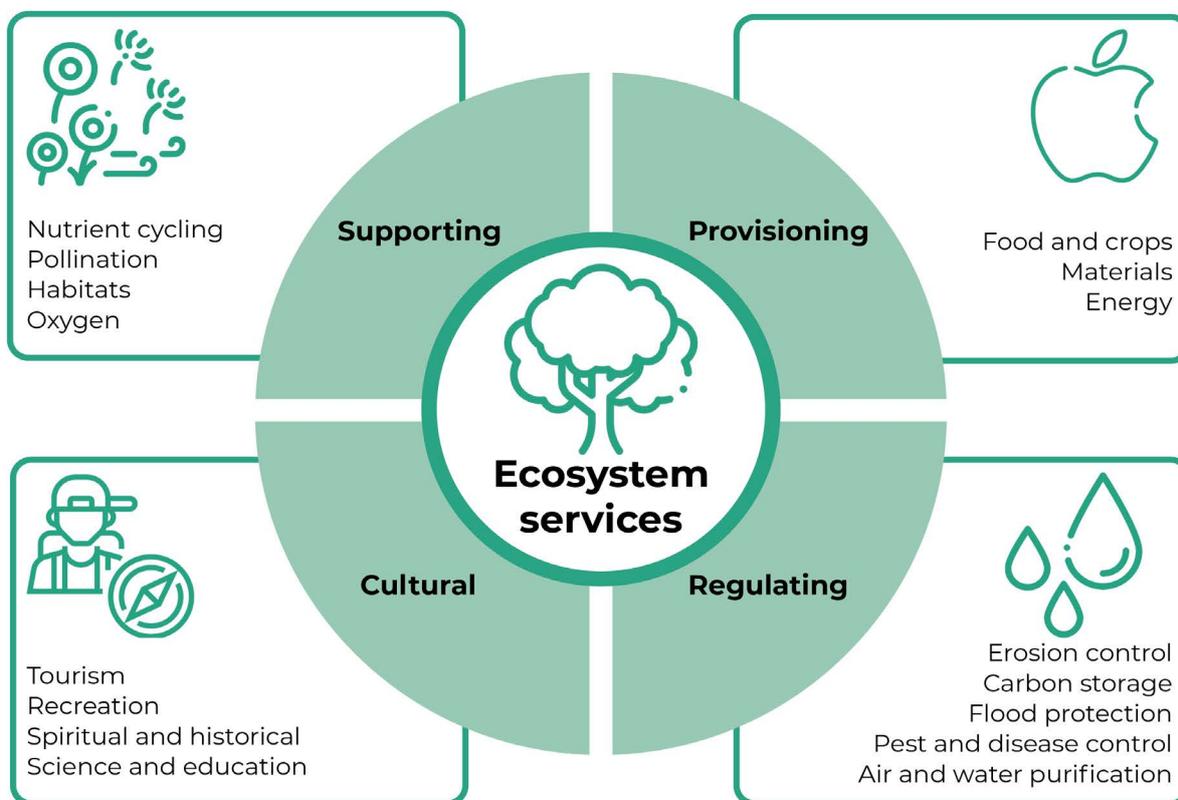
Wales’ geographic location bordering three oceanic climate zones and its varied geology and temperate climate has the potential to support a diversity of species. Some, like the Radnor lily or the Snowdon lily, [cannot be found anywhere else](#) in the world. The number of species in Wales is difficult to determine, but the [Wales Biodiversity Partnership](#) estimates that there are around 50,000 species.

Why is biodiversity important?

Biodiversity is the building block of ecosystems and supports a healthy natural environment. Biodiversity helps the environment to provide a range of benefits to humans, often classed as [‘ecosystem services’](#). These range from pollination and flood prevention to recreational and health benefits and are generally classed as:

- **Supporting** (e.g. pollination, photosynthesis, nutrient cycling);
- **Provisioning** (e.g. food, raw materials, energy);
- **Regulating** (e.g. carbon sequestration, decomposition, water and air purification, flood protection, disease control); or
- **Cultural** (e.g. recreational, science, therapeutic).

Figure 1: Categories and examples of ecosystem services. Figure based on UK National Ecosystem Assessment.



The 2021 **Dasgupta Review** assesses the economic benefits of biodiversity globally and the economic costs and risks of biodiversity loss. The review shows that sustainable economic growth and development requires nature enhancement to increase collective wealth and well-being.

How and why is biodiversity declining?

Global biodiversity levels have always undergone changes. **Scientists differentiate six mass extinctions** since life on Earth began, interspersed with phases of thriving biodiversity. Each mass extinction is thought to have resulted in at least 75% of all species becoming extinct. Fossils found on Welsh coasts are evidence of species that became extinct hundreds of millions of years ago, to be replaced by others through evolution.

Scientists say we are entering the sixth mass extinction event, and the first **linked to human activity**. **Research suggests** that the average rate of vertebrate species loss over the last century is up to 100 times higher than pre-human extinction rates.

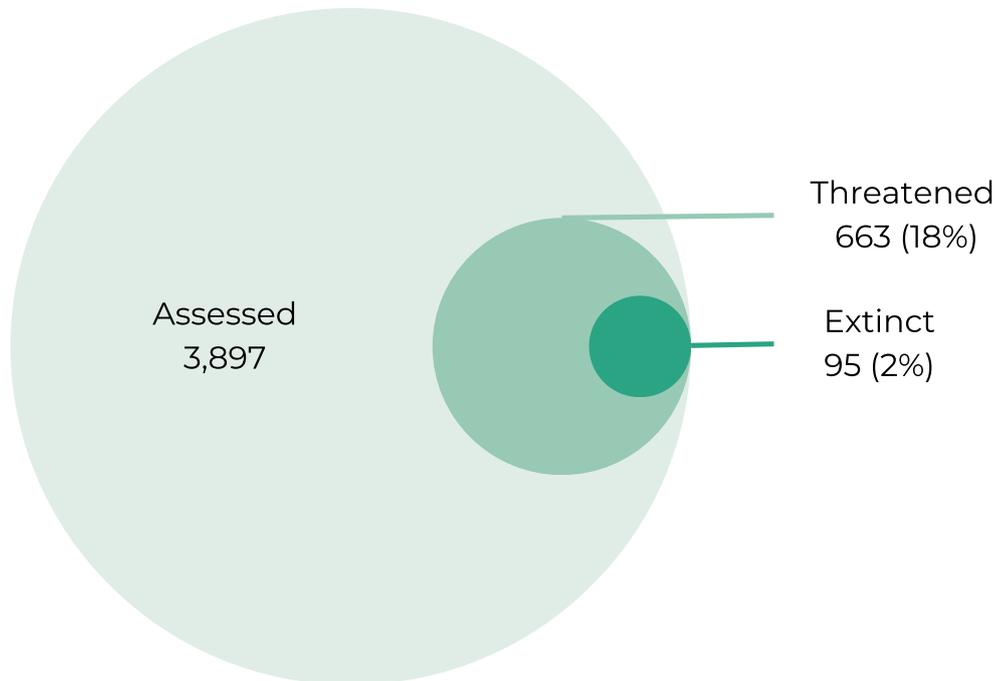
The IPBES Global Assessment (2019) revealed widespread, accelerating declines in biodiversity and life-support systems. It concluded that biodiversity is threatened by habitat conversion, excessive resource harvesting, climate change, invasive species, and other impacts. The assessment gained unanimous approval by the 132 member countries. It highlighted that unless these declines are reversed, regression in human safety, mental and physical health, and food and livelihood security will continue.

At a UK and Welsh level, the environment sector's collaborative **State of Nature report 2023**, concludes that pressures upon biodiversity come from sources including agricultural management, urbanisation, pollution, hydrological change, woodland management and invasive non-native species. It says climate change is driving widespread changes in the abundance, distribution and ecology of Wales' wildlife.

NRW's **State of Natural Resources Report (SoNaRR 2020)** and the **Nature Recovery Action Plan for Wales** acknowledge that Wales is still far from reaching national and international biodiversity goals, such as achieving the 'sustainable management of natural resources' as defined in the **Environment (Wales) Act 2016**. Instead, **NRW's interim SoNaRR 2020 found:**

Climate change is driving species to move location. Arctic-alpine species within mountain habitats could disappear from Wales as their habitats are lost. Where coastal plants and wildlife cannot move inland, sea-level rise and increased land erosion could lead to widespread loss. The number and range of invasive non-native species is likely to increase with the changing climate. Environmental pressures are causing global biodiversity declines at rates not previously encountered in human history. The rate of species extinctions is accelerating.

Figure 2: Species extinction risk in Wales, with 1970 as the extinction baseline
(Source: State of Nature report 2023)



The State of Nature Report 2023 presents assessments of extinction risk within Wales for several taxonomic groups (3,897 species). Of these, 663 (18%) are threatened with extinction from Wales, and another 95 (2%) have become extinct (from a 1970 baseline).

Biodiversity policy and legislation

Many policies and laws on biodiversity in Wales and the UK are derived from EU and international law, such as the EU's Nature Directives and the international Convention on Biological Diversity. This section presents the landmark international treaties, EU, UK and Welsh biodiversity policies and legislation.

International

Convention on Biological Diversity

The **Convention on Biological Diversity (CBD)** is an international treaty adopted at the Conference on Environment and Development (also known as 'Earth Summit') in Rio de Janeiro in 1992 and came into force in 1993. There are **196 parties** to the Convention, which was **ratified by the UK in 1994**. The CBD requires parties to create and enforce national strategies and action plans for conservation, protection and enhancement of biodiversity. Particularly, the CBD sets out three goals:

- The conservation of biodiversity;
- The sustainable use of the components of biodiversity; and

The fair and equitable sharing of the benefits arising from use of genetic resources.

Strategic Plan for Biodiversity 2011 - 2020

The **Strategic Plan for Biodiversity 2011 - 2020** was adopted at the 10th Conference of the Parties (COP10) to the CBD in Nagoya, Japan, in 2010. It concluded that:

1. The 2010 targets for biodiversity had not been met; and
2. The drivers of biodiversity loss (habitat change, over-exploitation, pollution, invasive alien species and climate change) had not been properly addressed and biodiversity issues were not sufficiently integrated into national policies (partially due to limited capacities and technical and financial resources in developing countries).

Another development from COP10 was the introduction of the **Aichi targets**.

The targets included to at least halve and, where feasible, bring close to zero the rate of natural habitat loss, conserve 17% of terrestrial and inland water areas and 10% of marine and coastal areas and to restore at least 15% of degraded areas through conservation and restoration.

The parties agreed to incorporate the Aichi targets into national biodiversity strategies and action plans within two years. For Wales this is the **Nature Recovery Action Plan**.

The Strategic Plan for Biodiversity from COP10 also set out the '2050 Vision for Biodiversity', which states:

By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.

According to the **Global Biodiversity Outlook 5 report** published in 2020, none of the Aichi targets have been achieved. Six targets have been partially achieved, and ten targets show no progress or a move away from the target for at least one of their specific elements.

Kunming-Montreal Global Biodiversity Framework

The **Kunming-Montreal Global Biodiversity Framework** was adopted at COP15, in December 2022. It replaced the CBD's Strategic Plan for Biodiversity 2011-2020 and the Aichi targets and includes four goals and 23 targets to achieve by 2030.

The Global Biodiversity Framework addresses various issues to halt and reverse biodiversity loss, including targets to:

- Protect ecosystems (targets 2 and 3) and species (targets 4, 5 and 6);
- Tackle pollution (target 7); and
- Respect the rights of indigenous peoples and local communities (Goal C and included in 7 targets).

Target 3, also referred to as '30x30', is a key aspect of the COP15 agreement, which aims to protect:

...at least 30% of terrestrial, inland, water, and of coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services...

Figure 3: Secretary-General António Guterres with participants during COP15 in Montreal, Canada (Source: UN Photo)



Other international treaties

Biodiversity is the subject of several other international treaties. A few examples are listed below.

The **1979 Bern Convention on the Conservation of European Wildlife and Natural Habitats** aims to conserve flora, fauna and habitats, promoting cooperation, and calling attention to endangered and vulnerable species. Parties are obliged to promote national conservation policies and measures against pollution. In the UK, the Bern Convention is implemented by the **Wildlife & Countryside Act 1981** (detailed below).

The **1979 Convention on the Conservation of Migratory Species of Wild Animals** (or ‘Bonn Convention’) aims to conserve migratory animals, including terrestrial, aquatic and avian species, and promote sustainable use of their habitats. In the UK, the Bonn Convention is implemented by the Wildlife & Countryside Act 1981 and the **Countryside and Rights of Way Act 2000**.

The **1971 Convention on Wetlands of International Importance especially as**

Waterfowl Habitat (or ‘Ramsar Convention’) aims to protect wetlands, promoting their sustainable use as well as international cooperation. There is no dedicated legislation for Ramsar sites in the UK, but they are Sites of Special Scientific Interest (SSSIs) and are protected by other legislation (below).

The **Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction** (the “BBNJ treaty” or “Treaty of the High Seas”) was adopted in June 2023. It contains binding and voluntary measures to improve implementation of the Law of the Sea Convention to address degradation of ocean ecosystems in areas beyond national jurisdiction (i.e. the high seas). The UK Government signed the treaty on 20 September 2023.

EU

The EU passed two important Directives addressing biodiversity, the **Birds Directive** (on the conservation of wild birds) and the **Habitats Directive** (on the conservation of natural habitats and of wild fauna and flora). Together they are known as ‘the Nature Directives’.

The Nature Directives are implemented in the UK through various instruments as described below (‘UK biodiversity legislation’ section). Although the Nature Directives **apply domestically through retained EU law** following the UK’s exit from the EU, the UK is able to replace or repeal this legislation, including via the **Retained EU Law (Revocation and Reform) Act 2023**.

The Birds Directive

The Birds Directive was adopted in 1979 in recognition that habitat loss and degradation are the most serious threat to wild birds. The Birds Directive protects, with some exceptions, all naturally occurring wild birds, across Member States, as well as their eggs, nests and habitats. It prohibits actions such as deliberate killing or destruction (Article 1). It requires EU Member States to designate **Special Protection Areas (SPAs)** for the protection of migratory birds (Article 2) and a further 194 bird species listed in Annex I of the Directive (Article 4).

The Habitats Directive

The Habitats Directive was adopted in 1992 to ensure restoration or maintenance of natural habitats and species of interest at a favourable conservation status as part of the EU’s contribution to sustainable development.

Article 2 of the Habitats Directive requires EU Member States to designate **Special Areas of Conservation (SACs)** for the protection of over 1,000 animal and plant species as well as 200 habitats. Importantly, the Directive is not limited to species facing extinction. It aims to protect species that are endangered, vulnerable or rare, and habitats that are in danger of disappearing, have a small natural range or present outstanding examples of typical geographical regions. For some species, protection measures must be in place for their entire natural range.

Article 3 of the Habitats Directive also established the **Natura 2000 network**, which is composed of 14 biogeographical regions containing all SACs and SPAs. This extends to around 20% of the EU's land territory, as well as to some marine areas. Since withdrawing from the EU, the UK has replaced Natura 2000 with the **National Site Network** (detailed below).

UK-EU obligations

The UK and EU agreed the terms of their new relationship in the **Trade and Cooperation Agreement (TCA)**.

The TCA contains several provisions relating to the environment and climate. They are both part of the **'level playing field' (LPF) provisions**, which aim to ensure fair competition between the UK and EU in a manner conducive to sustainable development.

'Nature and biodiversity conservation' is explicitly listed in these provisions. They include a non-regression duty not to weaken or reduce the levels of protection in place on 31 December 2020 in a way that affects UK-EU trade or investment. They also permit the UK and EU to use rebalancing measures if their future levels of protection diverge.

In addition to the LPF provisions, matters of relevance to biodiversity could be considered to come under other important **provisions on environmental cooperation**. For example, the TCA sets out the basis for UK-EU cooperation in Articles 763-770, which apply to it and future UK-EU agreements. There are two which relate directly to environment and climate:

- The fight against climate change; and
- Global cooperation on issues of shared economic, environmental and social interest.

'The fight against climate change' is also considered an 'essential element' of the

TCA (Article 764). Essential elements have an elevated status in the TCA because a breach can lead to termination of the agreement.

Lastly, the TCA's trade provisions include commitments to take sustainable development into account. Duties are placed on the UK and EU in a number of focused sections on trade and specific environmental areas, such as climate change, biological diversity, forests and marine biological resources and aquaculture.

UK

UK biodiversity policy

Prior to devolution, work to meet international biodiversity obligations was carried out at a UK level. The UK **Biodiversity Action Plan**, published in 1994, was the first response to the CBD. It described the UK's biological resources and their international importance, and presented the strategies and frameworks for setting and achieving biodiversity targets.

Although nature conservation is now devolved in Wales, the UK Government represents Wales at an international level and it is the UK that is party to the CBD. The governments of the UK continue to collaborate in the Four Countries' Biodiversity Group (4CBG) with other cross-governmental bodies in order to meet national and international biodiversity commitments.

Post-EU withdrawal the UK countries also aim to coordinate action through **Common Frameworks** and regular inter-governmental meetings as part of the **inter-institutional relations agreement**.

The **Joint Nature Conservation Committee (JNCC)** was established under the **Environmental Protection Act 1990** and reconstituted under the **Natural Environment and Rural Communities Act 2006**. The JNCC is the public body that advises the UK Government and devolved administrations on UK-wide and international nature conservation. JNCC includes representatives of the devolved nations' statutory conservation bodies, including NRW for Wales.

In 2021, JNCC, along with Natural England, NRW, NatureScot and the Northern Ireland Environment Agency, published Nature Positive 2030, which includes two reports: a Summary Report and an Evidence Report. These reports describe how the UK can fulfil its commitments to the Leaders' Pledge for Nature, launched at the United Nations General Assembly in 2020, and the 30x30 target, which

was agreed by G7 members in 2021 ahead of COP26. In the run up to COP15 in 2022, the UK's Statutory Nature Conservation Bodies published the Nature for Our Survival, Prosperity and Wellbeing Joint Statement, building on Nature Positive 2030 and reinforcing the need for action. The UK Biodiversity Framework will need to be updated to integrate the COP15 Global Biodiversity Framework.

UK biodiversity legislation

Below are the main laws that address biodiversity at a UK level.

The Wildlife and Countryside Act 1981

The **Wildlife and Countryside Act 1981** is the key legislation for the protection of animals, plants and habitats in the UK. It implements the EU Birds Directive, including the legislation for Special Protection Areas (SPAs).

As amended, the 1981 Act prohibits (with exceptions):

- Intentionally killing, injuring or taking listed wild animals;
- Intentionally picking, uprooting or destroying listed wild plants;
- Introducing non-native wild species, both animals and plants, into the wild; and
- Possessing invasive species.

The 1981 Act legislates for:

- Sites of Special Scientific Interest (SSSIs);
- National nature reserves; and
- Marine nature reserves.

The designation of these protected areas in Wales is generally the responsibility of NRW.

The Conservation of Habitats and Species Regulations 2017

The **Conservation of Habitats and Species Regulations 2017** is the main piece of legislation through which the EU Habitats Directive and parts of the EU Birds Directive are implemented in England and Wales for terrestrial and inshore habitats.

Implementation of the Nature Directives is complemented for the offshore marine areas by the **Conservation of Offshore Marine Habitats and Species Regulations 2017** and the **Offshore Petroleum Activities (Conservation and Habitats) Regulations 2001**.

The Nature Directives remain in place as retained EU law following the UK's exit from the EU. Most recently, the 2017 Regulations and the 2001 Regulations have been amended by the **Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019** in order to keep them operable. Importantly, the 2019 Regulations replace the Natura 2000 network through a new National Site Network. The **Explanatory Memorandum** to the 2019 Regulations states:

The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU. There is no change to policy.

Further UK legislation

Further UK legislation on biodiversity includes:

- The **National Parks and Access to the Countryside Act 1949**;
- The **Marine and Coastal Act 2009**;
- The **Invasive Alien Species (Enforcement and Permitting) Order 2019**;

Wales

Welsh biodiversity policy

Nature Recovery Action Plan

The **Nature Recovery Action Plan** is the Welsh Government's biodiversity strategy and action plan. It sets out how the CBD's Strategic Plan is addressed in Wales. The plan was first issued in 2015 and revised in 2020. The Welsh Government **plans to revise** the Nature Recovery Action Plan to implement the COP15 new Global Biodiversity Framework.

Biodiversity Deep Dive

As a response to the 30x30 commitment and ahead of COP15, the Welsh Government launched a **Biodiversity Deep Dive**, which concluded in October 2022. A **group of experts and practitioners** identified **key themes and recommendations** for actions to support the 30x30 target. The Deep Dive included a **commitment** to develop primary legislation to establish an environmental governance body and set up statutory biodiversity targets.

Woodlands for Wales

The Welsh Government's **Woodlands for Wales strategy** (first published in 2009 and updated in 2018) recognises that woodlands can make significant contribution to biodiversity and healthy ecosystems. The strategy sets a 2,000 hectares per annum target for woodland creation for the enhancement and promotion of environmental quality, response to climate change, recreational purposes, and the forestry sector. The **Low carbon delivery plan** (2019) reiterated this target and proposed that it be increased to 4,000 hectares per annum "as rapidly as possible".

However, these already ambitious **planting targets were superseded in 2021** following the **Trees and Timber Deep dive** (more on this later). The target now is to plant 43,000 ha of new trees by 2030 (almost 5,000 ha per year), rising to 180,000 ha by 2050 (over 6,000 ha per year). A number of other **recommendations** came out of the deep dive, to help meet the aims of the Woodlands for Wales strategy.

Figure 4: Newborough Forest on the Anglesey coast



Local Places for Nature

The **Local Places for Nature (LPfN) programme**, commencing in early 2020, aims to help communities with high deprivation and little access to nature restore and

enhance nature in their local areas. This programme supports small-scale projects carried out with local authorities and community groups. Examples include the **creation of green spaces, community orchards, and growing projects; changes in mowing practices; and tree planting.**

National Peatlands Action Programme

The **National Peatlands Action Programme (NPAP)**, is a 5 year plan (from 2020) to restore peatlands in Wales, specifically to recover ecosystems for carbon storage and capture. NPAP is funded by the Welsh Government and coordinated by NRW.

Natur am Byth

Natur am Byth is a 6 year programme (from 2021), which targets the protection of endangered species in Wales and community engagement to promote nature conservation. This programme is led by NRW, in partnership with nine environmental charities.

Marine Protected Areas

Marine Protected Areas (MPA) is a collective term for all forms of protected nature conservation sites in the marine environment. They include Marine Conservation Zones (MCZ; **only 1 in Wales since 2014: Skomer MCZ**), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Sites of Special Scientific Interest (SSSIs) and Ramsar Sites. **Various legislation, regulations and policies are relevant for MPAs**, including the 2019 **Welsh National Marine Plan**, which includes policies supporting the development and functioning of the MPA network. In total, **there are 139 MPAs in Wales, covering 69% of inshore waters.**

The MPA management framework for Wales 2018-2023 describes the MPA network, how it is managed, and ways to improve its management and condition. The framework states the Welsh Government is responsible for ensuring effective management of MPAs and that various organisations share responsibility for delivering on management, including NRW and **Relevant Authority Groups (RAG) established by some management authorities.** The annual **Marine Protected Area Network Management Action Plan** complements the framework by setting priority actions to improve the management and condition of MPAs. NRW has also developed **indicative feature condition assessments** for SPAs and SACs, and is planning to produce a similar reporting process for MPAs.

Welsh biodiversity legislation

The Environment (Wales) Act 2016

The purpose of the **Environment (Wales) Act 2016** is to promote sustainable management of natural resources (SMNR). It supersedes the previous “duty to conserve biodiversity” set out in the **Natural Environment and Rural Communities Act 2006**.

Section 6 of the 2016 Act requires public authorities to maintain and enhance biodiversity to promote ecosystem resilience. This ‘biodiversity and resilience of ecosystems duty’ also includes that public authorities must publish plans setting out their proposed actions to enhance biodiversity and ecosystem resilience, and report on their progress.

Section 7 of the 2016 Act requires the Welsh Ministers to take all reasonable steps to maintain and enhance **living organisms and types of habitat that are of principal importance** for biodiversity in Wales.

The 2016 Act also establishes a framework of policies:

- Every 5 years, NRW must publish a **State of Natural Resources Report** (SoNaRR), assessing SMNR and biodiversity in Wales and considering trends affecting SMNR;
- The Welsh Ministers must publish and implement a **national natural resources policy**, outlining key priorities, risks and opportunities for SMNR. The policy must be reviewed after each general election (the last **Natural Resource Policy** was published in 2017; the Welsh Government has not published a new one since the 2021 general election and **plans to update it to integrate recommendations from the Biodiversity Deep Dive and COP15 Global Biodiversity Framework**); and
- NRW must publish **area statements**, which are place-based natural resource reports, contain references to natural resources in an area, explain how the principles of SMNR have been applied, and address any priorities, risks or concerns.

Senedd Research has **produced a guide** with more details on the SMNR requirements of the 2016 Act.

The Well-being of Future Generations (Wales) Act 2015

The **Well-being of Future Generations (Wales) Act 2015** aims to improve the social, economic, environmental and cultural well-being of Wales in accordance with the sustainable development principle. This means that public bodies must act so that the needs of the present are met without compromising the ability of future generations to meet their own needs.

The 2015 Act does so by defining seven well-being goals. The goal “A resilient Wales” recognises the importance of biodiversity for well-being:

A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).

The 2015 Act requires **national well-being indicators** to measure the progress towards this and other well-being goals defined in the Act. Indicators 43 (‘Areas of healthy ecosystems in Wales’) and 44 (‘Status of Biological diversity in Wales’) particularly consider biodiversity.

The Environmental Protection (Single-use Plastic Products) (Wales) Act 2023

The **Environmental Protection (Single-use Plastic Products) (Wales) Act 2023** bans the sale or supply of certain single-use plastic products in Wales. Single-use plastic items are the dominant source of ocean litter, threatening biodiversity, especially marine habitats. **Another Senedd Research briefing** provides further information.

Welsh biodiversity monitoring

The Welsh Government models and monitors the environmental, social and economic impact of some of its policies through the **Environment and Rural Affairs Monitoring Programme (ERAMMP)**. ERAMMP replaced the previous **Glastir Monitoring and Evaluation Programme (GMEP)** in 2016. It collects data across the Welsh landscape and links any changes to ensuing impacts, such as economic consequences.

Relevant Welsh organisations

Natural Resources Wales (NRW) is the Welsh Government’s statutory body responsible for the management of Wales’s natural resources. It was formed in

2013 by merging the previous Countryside Council for Wales, the Environment Agency Wales, and the Forestry Commission Wales. The Environment (Wales) Act 2016 defines NRW's purpose to pursue and apply the principles of SMNR. NRW has statutory roles and duties relating to biodiversity. These include, amongst others, publishing the SoNaRR and area statements, as well as the designation of protected areas.

Wales Biodiversity Partnership (WBP) is a group of stakeholders from the public, private and voluntary sector. It acts as an advisor to the Welsh Government with the aim of promoting and monitoring biodiversity and ecosystem action.

Wales Environment Link (WEL) is a network of environmental, countryside and heritage non-governmental organisations (NGOs). It provides advice to the Welsh Government and briefs the Senedd on environmental policy and practice.

England

The Environment Act 2021

The Environment Act 2021 makes provision about biodiversity improvements in England. It specifically includes:

- A 2030 target on species abundance;
- A requirement for a 10% biodiversity net gain as 'a condition of planning permission' and for the development of 'nationally significant infrastructure projects';
- A requirement for the creation and publication of local nature recovery strategies: they need to include biodiversity priorities and habitat maps for each area, cover the entirety of England, and make up a network of nature recovery areas;
- The creation of Conservation Covenants; and
- The prohibition of forest risk commodities in commercial activities and the requirement to report on a due diligence system for these commodities.

Under the Act, the UK Department for Environment and Rural Affairs (DEFRA) proposed additional targets in a **consultation on environmental targets** in 2022, resulting in **the publication of targets** and specifically for biodiversity, requirement to:

- Halt the decline in species populations by 2030, and then increase populations by at least 10% to exceed current levels by 2042;

- Restore precious water bodies to their natural state by preventing harmful pollution from sewers and abandoned mines, and improving water usage in households;
- Deliver net zero ambitions and boost nature recovery by increasing tree and woodland cover to 16.5% of total land area in England by 2050; and
- Restore 70% of designated features in Marine Protected Areas to a favourable condition by 2042, with the rest in recovering condition.

Scotland

The Natural Environment Bill in Scotland

In September 2023, the Scottish Government launched **a consultation** on the first 5-year delivery plan for the **Scottish Biodiversity Strategy to 2045**. This strategy was first published in 2022 and updated in September 2023. The consultation also included questions on a proposed Natural Environment Bill, which the Scottish Government committed to in a **shared policy programme** with the Scottish Green Party in 2021.

Protected areas

Over time, a large number of designations for protected areas have evolved. This section brings together types of designations that exist in Wales and the underlying legislation.

Figure 5: Puffins on the coast of Skomer Island, in the only Marine Conservation Zone in Wales



The State of Nature Report 2023 estimates **protected areas cover 50% of Wales at sea, and 11% of Wales on land.**

Sites of Special Scientific Interest (SSSIs) provide the basic protection for most of the nature conservation sites on land. SSSIs require land owners to manage their land to conserve its special features. SSSIs are identified by NRW. National nature reserves, Ramsar sites as well as SPAs and SACs, are also SSSIs. There **are currently over 1,000 SSSIs in Wales.**

Special Protection Areas (SPAs) were designated under the EU Birds Directive, which is now transposed into domestic law by the **Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019**. SPAs protect habitats of migratory and rare or vulnerable bird species, such as red kite, merlin, osprey and golden plover. SPAs are identified by NRW considering selection guidelines from JNCC. There are **currently 21 SPAs in Wales**. They can be on land or at sea.

Special Areas of Conservation (SACs) were originally designated under the EU Habitats Directive, which is now transposed into domestic law by the **Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019**. SACs aim to conserve biodiversity through the protection of over 1,000 listed animal and plant species as well as 200 habitats. There are **currently 95 SACs in Wales** including some cross border sites. They can be on land or at sea.

The **National Site Network** is the replacement for Natura 2000 following UK withdrawal from the EU. This network includes all previous Natura 2000 sites, as well as the new SACs and SPAs designated after the UK left the EU. **The objective is to provide the same level of protection for threatened species and habitats as with the EU Natura 2000 network**, and to facilitate co-operation between stakeholders.

Ramsar sites are protected wetlands under the **UNESCO Ramsar Convention**. Ramsar sites are identified by NRW, in collaboration with the JNCC. All Ramsar sites are also SSSIs. There are **currently 10 Ramsar sites in Wales**.

Biosphere reserves are designated by UNESCO and form part of the World Network of Biosphere Reserves. They receive protected status through other designations, such as SSSI. There is currently one Biosphere Reserve in Wales, the **Dyfi National Nature Reserve / Biosffer Dyfi**.

National Nature Reserves (NNRs) are designated by NRW under the National Parks and Access to the Countryside Act 1949, or under the Wildlife and Countryside Act 1981. Besides nature conservation, they are also designated for research and study purposes and as such are open to the public. All NNRs are also SSSIs. There are **currently 76 NNRs in Wales**. They are either managed by NRW or by voluntary bodies, such as the National Trust, the RSPB, or the Wildlife Trusts.

Local Nature Reserves (LNRs) are similar to NNRs but only of local instead of national interest. As such, they are designated by local authorities. There are **currently 62 LNRs in Wales**, including, amongst others, abandoned quarries, redundant canals or disused railway sidings.

Marine Conservation Zones (MCZs) aim to protect a range of rare or threatened marine habitats and species. Unlike National Nature Reserves, MCZs specifically address marine environments and include the sea and seabed. MCZs replace the previous marine nature reserves through the Marine and Coastal Act 2009. There is currently one MCZ in Welsh seas, the **Skomer Marine Conservation Zone**. **The Welsh Government committed** to further designations before the end of the government term.

National Parks were established under the National Parks and Access to the Countryside Act 1949 and have their origin in the demand for public access to the countryside. As such, National Parks also have a recreational purpose, and balancing recreation and conservation is driven by the **Sandford principle** which gives conservation priority over recreation when “irreconcilable” conflict occurs. There are **currently 3 national parks in Wales: Brecon Beacons National Park, Pembrokeshire Coast National Park, and Snowdonia National Park**. NRW is undertaking work to designate a **new National Park** to cover the Clwydian Range and Dee Valley.

The Welsh Government's current position and next steps

This section presents ongoing action and potential future developments relating to biodiversity policy and legislation.

In April 2019, the Welsh Government and Senedd **declared a 'climate emergency'**. Declaration of a 'nature emergency' came later, in June 2021, **by the Senedd**. The declaration was **supported** by the Minister for Climate Change, Julie James, in the Sixth Senedd, who said:

We are, of course, putting climate change and nature at the heart all the decisions in this new Government.

The **Programme for Government for the Sixth Senedd** includes the well-being objectives to:

- Embed our response to the climate and nature emergency in everything we do; and
- Build a stronger, greener economy as we make maximum progress towards decarbonisation.

In August 2020, the Welsh Government, amongst other devolved governments, cities and local authorities, signed the **Edinburgh Declaration** on global biodiversity. The signatories express their concern regarding missing the Aichi targets and call for strong and bold actions to bring about transformative change to halt biodiversity loss.

Some specific areas of interest are outlined below.

Biodiversity targets

Wales currently has no domestic targets relating to the restoration of biodiversity.

This is an issue which **environment NGOs have been lobbying on for years**.

In a **statement ahead of COP15**, NRW highlighted that targets are more effective if they are legally binding. In February 2023, more than 300 organisations under the banner of Climate Cymru wrote **an open letter to the First Minister** to call for a "Nature Positive Bill" to be brought forward in the 2023-24 legislative programme.

They asked for this Bill to include legally binding nature recovery targets and the establishment of an independent environmental governance body (discussed below). Wales Environment Link also **highlighted** the need for legally binding interim targets and short term periods for implementation.

The Welsh Government's **2023-24 Legislative Programme** doesn't include such a Bill. Instead the **First Minister** committed to bring forward the legislation "this Senedd term".

The Biodiversity Deep Dive included **a commitment** to develop primary legislation and detailed statutory nature recovery targets. These targets are also a **Programme for Government 2021-2026 commitment**. A white paper **is anticipated** for January 2024.

Forestry and woodland

The Welsh Government's target is to plant 43,000 hectares of new trees by 2030 (almost 5,000 trees per year) and 180,000 hectares by 2050 (more than 6,000 hectares per year). This objective matches the 2020 recommendations from the UK **Climate Change Committee** to reach net zero. The **planting target has been missed so far** with 620 hectares planted in 2021/22 and 1,190 hectares in 2022/23. In total, **fewer than 43,000 hectares of new trees have been planted in Wales since 1973**.

The **National Forest** is a long-term project first introduced by First Minister, Mark Drakeford, in his leadership manifesto in 2018, and **launched in March 2020**. It comprises both **creation of new woodland** and upgrading existing woodland to meet UK forestry standards. The National Forest aims to improve biodiversity by providing habitats as well as carbon capture to mitigate climate change and benefits for rural development, the economy and recreation.

The project has included **initiatives** such as **community tree planting**, the **designation of 14 sites** as part of the National Forest network in November 2020, and the launch of the **National Forest for Wales Status Scheme** in June 2023. Funding is available through the **Woodland Investment Grant (TWIG)**. There is no published National Forest Strategy and the Welsh Government has said **work is underway** to determine the most suitable long-term delivery model for the National Forest.

A **Trees and Timber Deep Dive** was held in June 2021 to prioritise actions to increase tree planting and overcome barriers related to woodland creation, the use

of Welsh timber in construction, and community tree planting. The Deep Dive Task Force **recommendations** included a review of the Sustainable Farming Scheme (see below), the development of a Timber Industrial Strategy, improvements in community engagement, the creation of funding schemes, and the need for secure long-term finance.

A Timber Industrial Strategy is being developed in response to the **deep-dive recommendation** for a strategy to coordinate timber supply and construction. The **Minister said** in March that work is underway with the aim of developing the strategy by the end of 2023. Stakeholders such as **RSPB Cymru warn** that afforestation has the potential to destroy biodiversity, if woodland is expanded into established habitats, particularly rare habitats such as peatland. The **National Forest in Wales Evidence Review** found that benefits for biodiversity may be highest when improving woodland quality instead of size.

Future land management policy

The Welsh Government has been developing proposals for a future agricultural policy now the UK has left the EU's Common Agricultural Policy (CAP). The Sustainable Farming Scheme, anticipated in 2025, is expected to reward farmers predominantly for environmental benefits, including the protection of habitats for biodiversity.

Contrary to the CAP, farmers would not receive support for food production per se, **with the rationale given** that food is a marketable commodity and so should not be funded by the state. Instead funding would focus on the non-marketable benefits of sustainable food production such as enhancing biodiversity. This might be through (for example) enhancing wildflower diversity on farms alongside food production.

The **Agriculture (Wales) Act 2023** provides the legislative framework for the new scheme. The Act includes Sustainable Land Management objectives - the third objective is to “maintain and enhance the resilience of ecosystems and the benefits they provide”.

Environmental governance and principles

EU bodies, such as the European Commission and the Court of Justice of the European Union (CJEU), have a role in **enforcing the implementation of EU derived environmental laws**, such as the Nature Directives, across EU Member States. At an EU level, these laws, and their interpretation, are shaped by the **EU**

environmental principles, which are designed to ensure high environmental standards. These mechanisms are outlined in a **Senedd Research briefing**.

These EU governance structures and environmental principles no longer apply in the UK following departure from the EU. **Stakeholders have been calling** for domestic environmental governance bodies to ensure replacement accountability mechanisms are in place. These new structures have been developing separately across the UK countries.

The Welsh Government **previously committed** (2018) to “take the first proper legislative opportunity to enshrine the environmental principles into law and close the governance gap” post-EU withdrawal. A Welsh Government consultation was carried out in 2019; **Environmental Principles and Governance in Wales Post European Union Exit**. However legislation has not yet been brought forward to establish a domestic environmental governance body for Wales, or environmental principles. **Interim arrangements are in place**, however the role of the ‘Interim Environmental Protection Assessor for Wales’ is to comment on the functioning of environmental law rather than investigate breaches of the law.

The **Office for Environmental Protection (OEP)** has been established for England and Northern Ireland and **Environmental Standards Scotland (ESS)** has been established for Scotland. **Wales Environment Link argues** Wales now has “the weakest environmental governance structures in western Europe”.

The Fifth Senedd’s Climate Change, Environment and Rural Affairs (CCERA) Committee carried out two inquiries in this policy area, in **2018** and **2019**. **It advocated for these matters** to be addressed by legislation in the Sixth Senedd.

The Sixth Senedd’s Climate Change, Environment and Infrastructure (CCEI) Committee held evidence sessions on the interim arrangements in **2022 and 2023**.

Financing nature recovery

Wales Environment Link’s Pathways to 2030 report highlights the need for further investment to finance nature recovery. This report argues that insufficient funding has caused nature loss in the past and states that:

...there is a gap of between £5 billion and £7 billion between the resources currently dedicated to nature recovery actions in Wales and those needed to meet priority outcomes for nature.

The Pathway to 2030 report estimates a need for **an additional £158 million per annum** to fulfil the needs for nature recovery actions. Wales Environment Link

highlights opportunities from private investments, citing example such as the **Facilitation Fund** in England and marine environmental enhancement funds in **Scotland** and **Wales**. The report also points out that a major funding gap has arisen since the **EU LIFE Nature Fund** is no longer available.

Biodiversity monitoring

The collaborative **Nature Positive 2030** report highlighted the availability of citizen science and technology such as **remote sensing** and genetics to improve biodiversity monitoring. **Living Wales** is an innovative research project in Aberystwyth University, funded by the Welsh Government. It takes advantage of the combination of Earth Observation (e.g. satellite imagery) and ground data to improve near-real time monitoring, historical analyses and predictions.

The Bannau Brycheiniog National Park Authority told the CCEI Committee that there is a lot of data available, but it could be used in a better way. **Environment Systems emphasised** the limitations due to “locked up data”, i.e. data which cannot be released because of confidentiality licenses.