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Welsh Government

Consultation Document

Consultation on the Nature Recovery Plan for Wales

Date of issue: **10 September 2014**
Action required: Responses by **3 December 2014**

Overview

The Nature Recovery Plan for Wales will set out the ambition to reverse the decline of biodiversity, the goals we will put in place to achieve that ambition and the actions we will take to achieve those goals.

This consultation is the Welsh Government's first step to defining the direction of travel for biodiversity action in Wales, in the context of our commitment to putting in place an integrated approach to natural resource management, and fulfilling our international commitments under the Convention on Biological Diversity (CBD) over the next 5 years.

The consultation seeks your views on our proposed ambition, goals and actions, and asks how we can deliver the Nature Recovery Plan together to best effect.

How to respond

Please respond to this consultation either by:

Email: biodiversity@wales.gsi.gov.uk

Or in writing to:

Biodiversity and Nature Conservation Branch
Rhodfa Padarn
Llanbadarn Fawr
Aberystwyth
Ceredigion
SY23 3UR

You may use the Consultation response form below.

Further information and related documents

Large print, Braille and alternative language versions of this document are available on request.

Contact details

For further information:

Biodiversity and Nature Conservation Branch
Rhodfa Padarn
Llanbadarn Fawr
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Ceredigion
SY23 3UR

Email: biodiversity@wales.gsi.gov.uk

Tel: 0300 062 2285

Data protection

How the views and information you give us will be used

Any response you send us will be seen in full by Welsh Government staff dealing with the issues which this consultation is about. It may also be seen by other Welsh Government staff to help them plan future consultations.

The Welsh Government intends to publish a summary of the responses to this document. We may also publish responses in full. Normally, the name and address (or part of the address) of the person or organisation who sent the response are published with the response. This helps to show that the consultation was carried out properly. If you do not want your name or address published, please tell us this in writing when you send your response. We will then blank them out.

Names or addresses we blank out might still get published later, though we do not think this would happen very often. The Freedom of Information Act 2000 and the Environmental Information Regulations 2004 allow the public to ask to see information held by many public bodies, including the Welsh Government. This includes information which has not been published. However, the law also allows us to withhold information in some circumstances. If anyone asks to see information we have withheld, we will have to decide whether to release it or not. If someone has asked for their name and address not to be published, that is an important fact we would take into account. However, there might sometimes be important reasons why we would have to reveal someone's name and address, even though they have asked for them not to be published. We would get in touch with the person and ask their views before we finally decided to reveal the information.

Summary

What is this consultation about?

Biodiversity - the variety and abundance of the natural world - underpins our lives and livelihoods by providing essential services such as water cycling and soil formation, as well cultural services such as our landscapes and wildlife.

We need to put in place a plan to support biodiversity to continue to provide these services, and to protect our species, habitats and ecosystems.

The Nature Recovery Plan for Wales will also fulfil our commitment, under the Convention on Biological Diversity, to have in place a national biodiversity strategy and action plan by 2015.

What is the current position?

Many of our habitats and species are in decline, and are under pressure from land use change, pollution, climate change and invasive species. While more traditional approaches to nature conservation based on protection of sites and species have had notable successes, habitats outside of protected areas have become less diverse and more fragmented. This makes our environment less resilient, and less able to adapt to change.

Why are we proposing change?

As the pressures on our land increase, we need to ensure that our environment can continue to provide us with essential services, through healthy functioning ecosystems underpinned by biodiversity. We need to do that by building the resilience of our environment, across the whole of Wales, while continuing to protect our priority sites and species.

What are we proposing?

Our proposed ambition is 'to reverse the decline in biodiversity and ensure lasting benefits to society by building the resilience of our ecosystems, by focusing on effective natural resource management.'

- Natural Resource Management as set out in the proposals for the Environment Bill is the application of an integrated approach to the sustainable management of natural resources by building the resilience of our natural resources and the services they provide.
- Maintaining and enhancing biological diversity, ecosystem extent and connectivity are fundamental to this new approach as is the sustainable management of our natural resources and landscapes/places for multiple benefits in collaboration with people.

Our proposed goals are to:

- restore degraded habitats at scale
- address key negative factors of biodiversity loss and increase connectivity significantly
- improve management of our highest quality environments
- achieve 'no net loss' of biodiversity

We propose to do this through:

- putting in place effective natural resource management,
- delivering a Welsh National Marine Plan,
- facilitating cross – sector policy integration,
- funding our partners; and identifying and using other financial instruments;
- reviewing designated sites and species;
- monitoring and reviewing regulatory instruments;
- encouraging effective communication and engagement: and
- improving our evidence base.

In addition we propose to put in place a framework of governance to support delivery, working together across sectors and strengthening our collective evidence base. We will begin this process by refreshing the Wales Biodiversity Partnership in order that we can:

- develop a collaborative approach based on shared knowledge, experience and skills.
- ensure integration across sectors by providing a mechanism that encourages and promotes biodiversity and enables best practice and lessons learnt to be shared
- develop our understanding of the relationship between biodiversity and ecosystem resilience
- monitor biodiversity as an indicator of ecosystem resilience; and
- identify priority species or habitat that society wishes specifically to see benefit from improvements to our ecosystems.
- provide strategic advice on practical delivery to those taking action on the ground.

Consultation Response Form

Your name:

Organisation (if applicable):

email / telephone number:

Your address:

Consultation Questions

1. Do you agree with the focus of the ambition on addressing the underlying resilience of our ecosystems and identifying and capturing benefits for society? If not, what else do we need to consider?

2. Does the ambition statement capture this new approach fully? What might be added?

3. Are our goals the right ones? What might be added?

4. Are the actions proposed right and adequate?

5. What additional action would you wish to see?

6. How do we engage with business more effectively to deliver our ambition?

7. How can we strengthen the way we work together?

8. How can we share budgets and look at integrated outcomes?

9. What else should be done to avoid duplication and to deliver our goals?

10. How can we best use the Information Hub to collate and disseminate data and evidence?
11. How best should we communicate progress with delivery of our ambition, for example, by a three or five year work programme or an annual delivery plan?

12. We have asked a number of specific questions. Please let us know if you think there are related issues which we have not specifically addressed, and provide further information.

Responses to consultations are likely to be made public, on the internet or in a report. If you would prefer your response to remain anonymous, please tick here: ☐

Consultation on the Nature Recovery Plan for Wales

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September 2014

Ministerial Foreword

Nature makes Wales special. It shapes our rich and diverse land and seascapes, providing us with a sense of place and supporting both the well-being and the livelihoods of all who live and work in Wales. It is our life support system.

We have some real success stories in conserving individual habitats and species, but the overall picture of the state of nature in Wales is still mixed, with some previously numerous species in decline and too much of our environment degraded.

To ensure we can continue to enjoy the many benefits nature provides, we need to make a step change in the way we think about the diversity of nature and the services it gives us.

This is one of the main reasons why, as a Government, we are committed to introducing a system of Natural Resource Management in Wales through the work of Natural Resources Wales and our planned Environment Bill. This sets the positive aim of increasing the resilience of our natural environment as a whole. It means moving beyond traditional approaches of conserving what is there, towards landscape-scale action to improve our natural environment.

Nature recovery is central to our new approach because nature both creates our environment, and benefits from the increased resilience of the environment. This Nature Recovery Plan consultation document therefore focuses on defining the role and priorities for biodiversity action as we move to implement Natural Resource Management.

The consultation proposes a guiding ambition and goals for action on biodiversity in Wales and sets out the broad strategic steps we believe are needed to deliver them, including meeting our international biodiversity commitments. It will be followed next year by a final plan and be supported by a rolling programme of action.

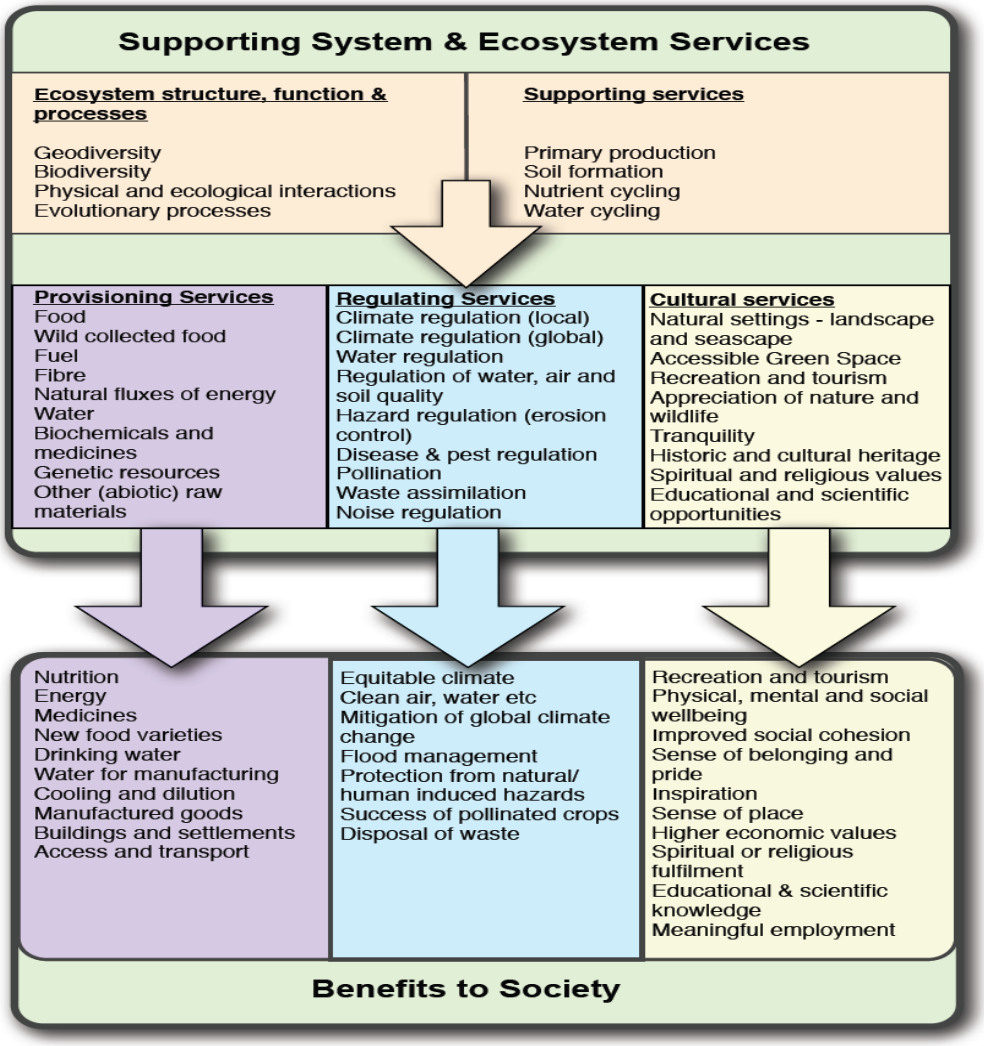
This consultation has been produced with the input of the Wales Biodiversity Strategy Board. I am extremely grateful for the valuable contribution of the members of the group. We will continue to work with landowners, farmers, fishermen, foresters, nature groups, and public bodies across Wales in order to achieve our ambition.

I look forward to hearing your views and to working with you to make the Nature Recovery Plan a reality.

Introduction

Biodiversity[1] - the variety and abundance of the natural world - underpins our lives and livelihoods. It drives the functioning of our ecosystems[2] which in turn deliver a multitude of essential ecosystem services to society. These include the provision of food, fuel and materials; the regulation of air, water and soil quality; and the special cultural relationships we have with biodiversity and nature as a whole, for example in our appreciation of nature and the increasing evidence that our natural world contributes significantly to our mental and physical health and well-being.

Figure 1, below illustrates the relationship between biodiversity and the provision of ecosystem service, and their benefits to society.



[1] Biodiversity is defined as: "the variability amongst living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems." (United Nations Convention on Biological Diversity)

[2] An ecosystem is made up of living organisms (plants, animals and micro-organisms) in conjunction with their non-living environment (air, water, minerals and soil) and all the diverse and complex interactions that take place between them. (Environment Bill White Paper)

In this framework, in common with those developed by the UN Millennium Ecosystem Assessment[3], UK National Ecosystem Assessment (UK NEA)[4] and others, biodiversity is both a supporting service, enabling the basic needs of life – primary production, soil formation, water and nutrient cycling; and a cultural service, reflecting the many benefits nature provides to society. Biodiversity is both an input to, and an output of, healthy functioning ecosystems. There is also a strong moral argument that we should take action to conserve species, habitats and ecosystems.

Where are we now?

'The natural world, its biodiversity and its constituent ecosystems are critically important to our well-being and economic prosperity, but are consistently undervalued in conventional economic analyses and decision making.'

This statement from the UK NEA, emphasises how important biodiversity and ecosystems are. It highlights that the underlying social and economic drivers causing biodiversity loss and ecosystem degradation are not being tackled, leading to continued loss of the diversity and abundance of habitats and species.

Despite some notable successes, this means we have less richness and abundance of nature across the terrestrial and marine environments of Wales – diminishing us as a nation and putting the many services we get from nature at risk. We need to help nature to recover from these declines for the wellbeing of the environment and ultimately, the people of Wales.

In response to missing the 2010 Convention on Biological Diversity target to halt the loss of biodiversity the Welsh Government published its 'Living Wales' consultation which called for a more integrated approach to managing our natural environment. Following this and the publication of the green paper 'Sustaining a Living Wales' the Welsh Government has committed to embedding the ecosystem approach[5] across government, and to promoting the value of this approach to the Welsh public and to businesses.

In 2013 the Welsh Government published the White Paper consultation on the Environment Bill which will deliver a more integrated statutory framework for the sustainable management of natural resources[6] including biodiversity.

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[3] UN Millenium Ecosystem Assessment, further information at http://www.unep.org/maweb/en/about.aspx

[4] UK National Ecosystem Assessment (2011) **The UK National Ecosystem Assessment: Synthesis of the Key Findings**. UNEP-WCMC, Cambridge. http://uknea.unep-wcmc.org/Home/tabid/38/Default.aspx

[5] The Ecosystem Approach is 'a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.' (UN CBD) See Annex 2 for further details.

[6] In relation to Wales, *Natural resources* extends to the following matters relating to the sustainable management of natural resources: air, water resources and soil, geologic and landscapes, biomass and biological resources and ecosystems. *Biological resources* represents essentially all organic life forms, plants, animals and other living organisms. (Environment Bill White Paper.)

This new approach to integrated natural resource management will strengthen existing approaches to biodiversity management which are reflected in existing national and international commitments. This will take us to a more pro-active whole system approach which recognises the role that biodiversity plays in the functioning and resilience of ecosystems and the delivery of the essential services and wider benefits that they provide.

The Marine Transition Programme will ensure coordinated policy development and delivery to achieve resilient marine ecosystems and protect our most valuable environmental assets to encourage sustainable jobs and growth in a way that is consistent with our national and international commitments. It will establish an integrated whole system approach to the management of the marine environment.

This consultation is our first step to defining the direction of travel for biodiversity action in Wales to ensure that we achieve our international 2020 commitments under the Convention on Biological Diversity (CBD) over the next 5 years. This includes our contribution to the European Union Biodiversity Strategy (EUBS) and implementation of the relevant EU, UK and Wales legislation.

It sets out the proposed strategic direction for biodiversity policy in the context of the Welsh Government's commitment to putting in place an integrated approach to natural resource management.

It proposes strategic actions that the Welsh Government and Natural Resources Wales (NRW) will take to modernise and strengthen delivery of action for biodiversity while maximising the opportunities that biodiversity provides for the people of Wales.

In order to achieve these actions we will need to work closely together with many partners. The Wales Biodiversity Strategy Board (WBSB) has begun this process. This consultation asks how we can deliver the Nature Recovery Plan together to best effect.

What is our Ambition?

We propose the following **ambition**:

To reverse the decline in biodiversity and ensure lasting benefits to society by building the resilience of our ecosystems, by focusing on effective natural resource management.

Reversing the decline in Biodiversity

Wales is a country with a much cherished and very diverse natural environment. The terrestrial environment is dominated by some of the most southerly upland regions, with an associated altitudinal range in rainfall and temperature. The green fields of our lowlands form a complex mosaic with species-rich meadows, several forms of natural woodland including Atlantic oak rainforest, fens and heathlands. We have over 20 large river systems flowing from their headwaters to the sea which together with a multitude of wetlands and lakes support an array of wildlife that help make our freshwaters part of the heart of our landscape heritage and cultural identity. Wales is situated on the boundary of three oceanic/climatic zones and so is richer in marine life than many other European sea areas. Wales also has a wider range of seabed habitats compared with the North Sea and a higher tidal range than much of Europe leading to higher intertidal diversity.

Our understanding of the value of nature has developed since the 2006 Wales Environment Strategy. In 2007, the 'Wildlife Economy Wales: An Economic Scoping Study[7] estimated wildlife-related economic activities to be worth around £1.9 billion in any one year and comprise around 3% of Wales' national output. The UK NEA in 2011 provided the first objective analysis of the benefits of the environment for nature itself, society and economic prosperity. As illustrated by these reports the many benefits that we enjoy from biodiversity represent a significant financial and natural resource asset to Wales.

However, chapter 20 of the NEA (Status and Changes in the UK's Ecosystems and their Services to Society: Wales)[8] listed some of the changes to the species and habitats of Wales over the last few decades, as summarised in Annex 1.

The State of Nature report (2013)[9] also revealed that much of our wildlife is under pressure and declining.

The continuing declines of many species and habitats across Wales despite much work, investment and effort highlights the need for a revitalised approach in order to

[7] Environment Agency Wales (2007) **Wildlife Economy Wales: An Economic Evaluation Scoping Study.** The Valuing Our Environment Partnership, Wales.
[8] See Chapter 20 of the Technical Report at http://uknea.unep-wcmc.org/Resources/tabid/82/Default.aspx
[9] http://www.rspb.org.uk/ourwork/projects/details/363867-the-state-of-nature-report

help our nature recover and provide the best possible environment on which to base our economy and society. The proposed basis of this approach is to build the resilience of our ecosystems.

Building Resilience

"Investment in diverse and resilient ecosystems, able to withstand the multiple pressures they are subjected to, may be the best value insurance policy devised yet"[10]

Resilience, when applied to ecosystems, is defined as the ability of an ecosystem to withstand, or recover from disturbance and its capacity to survive and adapt so that its biological diversity, natural processes and provision of ecosystem services are maintained[11].

Ecosystems, and so biodiversity, are subject to negative impacts in the form of many pressures and drivers often referred to as the root cause of biodiversity loss.

The UK NEA provided analyses of the primary pressures and drivers of biodiversity change, including land use change, pollution, climate change and invasive species and the WBSB has been working on producing an updated analysis of pressures and drivers of biodiversity change in Wales to further inform the Nature Recovery Plan.

When managing our resources it is important that we think about the ability of ecosystems to resist, absorb, or recover from these pressures. To do this requires knowledge and understanding of the components of ecosystems, including the biodiversity, and how these interact. The characteristics of more resilient ecosystems are:

- Connectivity - habitats are well connected to other habitat types within a network so as to optimise the opportunity for species to move, both in the interests of maintaining a genetically diverse population and conservation of that species, and where habitats and species appear at the edge of their natural range, in the interests of being able to adapt to climatic changes.
- Diversity – generally speaking the more diverse communities of species and habitats are the more resilient they are to external influences, and the impacts of climate change.
- Scale or Extent – the smaller the extent of a habitat the more vulnerable it becomes to change, or loss of function. For example, the extent of wildflower habitat greatly impacts on the ability of pollinators to do their job.

[10] Secretariat of the Convention on Biological Diversity (2010) 'Global Biodiversity Outlook 3' Montreal
[11] J. Latham, Thomas, Rh., Spode, S. & Lindenbaum, K.(2013) **Ecosystem Resilience: a discussion paper on the use of the concept for Natural Resource Management.** Welsh Government Living Wales programme.

- Quality or Condition - linked to all of the above, the ecosystem needs to be managed to a good condition to maintain the delivery of services. Ecosystems can still function and provide services in poor condition, but these will be more vulnerable to change and degradation. Condition underpins diversity.
- Adaptability – the likelihood to be able to adapt to changing conditions, threats, shock or enhancement, which is directly related to the above factors.

The role of protected areas in providing resilient ecosystems

It is important that we consider the condition and connectivity of our protected areas and species within wider frameworks so that they better contribute the overall resilience of our environment. Designation of sites and species aims to protect and enhance the full range of natural biodiversity and geo-diversity by including not just rare habitats, species and features, but also the best examples of the full range of variation. This diversity should maintain the ability of ecosystems to adapt to whatever disturbance is applied to them. This could be especially the case for rare species which may support unique ecosystem functions but rely on the protection and appropriate management afforded by protected sites for their continued survival. The wider countryside, in contrast, is under pressure to deliver particular services as efficiently as possible, and as such, cannot necessarily maintain this underlying diversity.

In addition to considering resilience at the scale of component habitats or ecosystems, we need to consider larger, linked functional units. These would include, for example, river catchments, coastal zones and habitat networks.

Completing our contribution to an ecologically coherent network of marine protected areas and ensuring that these areas are well managed will play a critical role in improving the status of the wider marine environment and supporting sustainable use of our seas.

Effective Natural Resource Management

The UK NEA made it clear that addressing current challenges will require an appropriate mixture of regulations, technology, financial investment and education, as well as changes in individual and societal behaviour and adoption of a more integrated, rather than a conventional sectoral, approach to ecosystem management.

Natural Resource Management as set out in the proposals for the Environment Bill is the application of an integrated approach to the sustainable management of natural resources by building the resilience of our natural resources and the services they provide. Maintaining and enhancing biological diversity, ecosystem extent and connectivity are fundamental to this new approach as is the sustainable management of our natural resources and landscapes and places for multiple benefits, in collaboration with people.

The Welsh National Marine Plan and the Marine Strategy Framework Directive

Marine plans provide the opportunity to manage marine activities in an integrated and sustainable way taking into account economic, social and environmental issues.

The UK Marine Policy Statement is the framework for preparing marine plans and for taking decisions in the marine environment, bringing together the high level marine objectives, marine policies and reflecting European and international commitments.

Marine plans will help implement measures to achieve Good Environmental Status (GES) [12] of EU's marine waters by 2020 under the Marine Strategy Framework Directive (MSFD). This means:

- protecting the marine environment
- preventing its decline
- restoring it where practical
- using marine resources sustainably

The MSFD considers all components of a healthy marine ecosystem with the overarching objective to protect the marine environment, restore it where practical and provide for the sustainable use of the marine resources. The MSFD is the first EU legislative instrument related to the protection of marine biodiversity, it contains the objective that biodiversity is maintained by 2020 as being key to achieving GES by that time.

An integrated approach to the sustainable management of our natural resources may also provide opportunities to bring together and modernise a range of plans, tools and methods, as well as opportunities to engage with, and work in partnership with all parts of society, to realise our ambition.

Consultation Questions

13. Do you agree with the focus of the ambition on addressing the underlying resilience of our ecosystems and identifying and capturing benefits for society? If not, what else do we need to consider?

14. Does the ambition statement capture this new approach fully? What might be added?

[12] Good Environmental Status means: 'the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations'.

What is our Policy Context?

International policies

The International policy context is set by The 1992 United Nations Convention on Biological Diversity (CBD). This has an overall objective "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources".

The Convention commits signatories to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity and to integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies. The Convention sets out 12 operational principles which focus on the application of an ecosystem approach to the management of biodiversity, see Annex 2 for these principles.

The vision for the CBD's Strategic Plan for Biodiversity 2011-2020 is:

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

The Strategic Plan contains 5 strategic goals each of which has a number of targets, referred to as the Aichi Biodiversity Targets:

- **Strategic Goal A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
- **Strategic Goal B:** Reduce the direct pressures on biodiversity and promote sustainable use
- **Strategic Goal C:** To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity
- **Strategic Goal D:** Enhance the benefits to all from biodiversity and ecosystem services
- **Strategic Goal E**: Enhance implementation through participatory planning, knowledge management and capacity building

The Aichi targets are shown in full in Annex 2.

Europe

The EU Biodiversity Strategy (EUBS) (2011) 'Our life insurance, our natural capital: an EU Biodiversity Strategy to 2020'[13] contains the vision that 'By 2050, European Union biodiversity and the ecosystem services it provides — its natural capital — are protected, valued and appropriately restored for biodiversity's intrinsic value and for

[13] Further details at http://ec.europa.eu/environment/nature/biodiversity/comm2006/2020.htm

their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided.'

To help achieve this vision, the Strategy contains a headline target: **'**Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.'

The EUBS sets out how European policy can best contribute to the achievement of the CBD's Strategic Plan and contains a number of objectives for member states.

Key EU Directives that are critical to achieving the vision and target, and objectives include the:

- EU Directive on the conservation of wild birds (the "Birds Directive")
- EU Directive on the conservation of natural habitats and of wild fauna and flora (the" Habitats Directive")
- EU Directive establishing a framework for community action in the field of marine environmental policy (the Marine Strategy Framework Directive)
- EU Directive establishing a framework for the Community action in the field of water policy (the Water Framework Directive)
- Bonn Convention on the conservation of migratory species
- Bern Convention on the conservation of European wildlife and natural habitats

The United Kingdom

At a UK level, in 2012 JNCC published the UK Post-2010 Biodiversity Framework[14] on behalf of the four countries of the UK. The framework is in support of the vision set out in the CBD's Strategic Plan (as above) and sets out a broad enabling structure for action across the UK between now and 2020:

- To set out a shared vision and priorities for UK-scale activities, in a framework jointly owned by the four countries, and to which their own strategies will contribute.
- To identify priority work at a UK level which will be needed to help deliver the Aichi targets and the EU Biodiversity Strategy.
- To facilitate the aggregation and collation of information on activity and outcomes across all countries of the UK, where the four countries agree this will bring benefits compared to individual country work.
- To streamline governance arrangements for UK-scale activity.

[14] http://jncc.defra.gov.uk/page-6189

Key UK legislation includes the following:

- The Natural Environment and Rural Communities Act 2006
- The Wildlife and Countryside Act 1981
- The Conservation of Habitats and Species Regulations 2010
- The Marine and Coastal Access Act 2009

The Natural Environment and Rural Communities (NERC) Act 2006 places a duty on every public authority, under section 40, in exercising its functions, to "have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity".

Section 42 of the NERC Act requires the National Assembly for Wales in consultation with Natural Resources Wales to publish, review, revise and act on lists of species and habitats of principal importance in Wales, known as the Section 42 (S42) lists.[15] The Section 42 list identifies biodiversity priorities in Wales and should be used to inform decision making at all levels.

The protected site series (including Sites of Special Scientific Interest and Special Areas of Conservation) has been established over many decades, as a statutory duty to both UK and European legislation. Between them, they aim to protect and enhance the full range of natural biodiversity and geo-diversity by including not just rare habitats, species and features, but also the best examples of the full range of variation.

Achieving our ambition will ensure we meet our Global and European commitments to halt the loss of biodiversity, and deliver our obligations under the EU legislative framework for biodiversity and UK domestic legislation, including the NERC Act biodiversity duty.

Wales

Sustainable Development

The policy approach to biodiversity and the management of the natural environment in Wales has been underpinned by our statutory commitment under the Government of Wales Act 2006 to sustainable development.

In Wales, sustainable development means enhancing the economic, social and environmental wellbeing of people and communities, achieving a better quality of life for our own and future generations:

[15] Further information and the current Section 42 lists can be found at: http://www.biodiversitywales.org.uk/49/en-GB/Section-42-Lists

- In ways which promote social justice and equality of opportunity; and
- In ways which enhance the natural and cultural environment and respect its limits - using only our fair share of the earth's resources and sustaining our cultural legacy.[16]

Developing Welsh Policy

The Well-being of Future Generations Bill

The Well-being of Future Generations Bill will set ambitious, long-term goals to reflect the Wales we want to see, both now and in the future. These are for a prosperous; resilient; healthier; more equal Wales; with cohesive communities; and a vibrant culture and thriving Welsh language.

The Environment Bill

The Environment (Wales) Bill planned for later in the Assembly term will provide a modern legislative framework to manage our natural resources in an integrated way and that Natural Resources Wales has relevant powers for the sustainable management of natural resources. Natural Resources Wales (NRW) has already been established as an integrated body charged with ensuring that our environment and natural resources are sustainably maintained, enhanced and used[17].

The Marine Transition Programme

The Marine Transition Programme was established earlier in 2014 to ensure coordinated policy development and delivery for achieving resilient marine ecosystems to encourage sustainable jobs and growth in a way that is consistent with our national and international commitments. It provides a framework for achieving the Welsh Government's vision for clean, healthy, safe, productive and biologically diverse oceans and seas. A new Welsh National Marine Plan is being developed as part of this to support and facilitate this and there is a clear commitment to ensuring a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and heritage assets.

[16] One Wales: One Planet, Wales' Scheme for Sustainable development, Welsh Government 2009
[17] Article 4 Natural Resources Body for Wales (Establishment) (Wales) Order 2012

How can we achieve our Ambition?

To deliver our ambition of building the resilience of our ecosystems, we need to ensure that our habitats are well connected; that we have diversity and mosaics of habitats and species across Wales; that we have increased extent of habitats, abundance of species; and that they are in better condition and able to withstand and adapt to changing conditions.

We propose the following **goals** to achieve our ambition:

- **To improve degraded habitats at scale**

We have a large extent of degraded or less diverse habitats. By appropriately managing and restoring these over wide areas to provide more diversity, we will increase ecosystem resilience and make landscape-scale impacts on ecosystem services.

This goal addresses the CBD goal (see Annex 2 for the full text of the CBD goals and Aichi targets) of 'Enhancing the benefits to all from biodiversity and ecosystem services' and the EUBS objective of 'Maintaining and restoring ecosystems and the services they provide'.

Aichi targets addressed include restoring and safeguarding ecosystems, including restoring 15% of degraded ecosystems contributing to climate change mitigation.

- **To address key negative factors of biodiversity loss and increase connectivity significantly**

Connectivity in its widest sense is about the ability of species and natural processes to move or operate in the wider landscape and requires a wide range of actions at different scales. Fragmentation, degradation and habitat loss reduces connectivity and ecosystem resilience. Reversing this trend will improve the ability of species and people to adapt to change.

Resilience is also reduced by other factors such as eutrophication, other pollutant emissions and invasive species. Tackling such root causes would have a wide positive impact.

This goal addresses the CBD goal of 'Reducing the direct pressures on biodiversity and promote sustainable use' and the EUBS objective of 'Reducing the impact of Invasive Alien Species on biodiversity'.

Aichi targets addressed include reducing pollution and controlling invasive alien species.

- **To improve management of our highest quality environments**

Our best environments are complex, often ancient, systems with great richness. We need to safeguard important ecosystems, species and genetic diversity by ensuring they are in optimum condition so they can maximise benefits both for biodiversity

and for people. This means managing them in the context of the wider environment, improving condition within priority areas, expanding and connecting high quality areas to improve ecological and wider environmental resilience.

This goal addresses the CBD goal of 'Improving the status of biodiversity by safeguarding ecosystems, species and genetic diversity' and the EUBS objective of 'Ensuring full implementation of the Birds and Habitats Directives'.

Aichi targets addressed include ensuring that at least 17% of terrestrial and inland water areas and 10% of coastal and marine areas are conserved through our systems of protected areas, and maintaining the genetic diversity of wild and cultivated species.

- **To achieve 'no net loss' of biodiversity**

A wide range of decisions in different sectors have an impact on our ecosystems. We need to integrate biodiversity into decision-making and increase societal awareness to ensure that we achieve the actions in this plan and meet our commitment to deliver 'no net loss' of biodiversity.

This goal addresses the CBD goal of 'Addressing the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society' and the EUBS objective of 'Ensuring agriculture and forestry contribute to maintaining and enhancing biodiversity' as well as 'Ensuring the sustainable use of fisheries'.

Aichi targets addressed include raising awareness of biodiversity values, and their integration into plans and strategies across sectors and society.

In addition, we propose:

- **To put in place a framework of governance to support delivery, working together across sectors and strengthening our collective evidence base.**

This addresses the CBD goal of 'Enhancing implementation through participatory planning, knowledge management and capacity-building'.

The adoption of the finalised Nature Recovery Plan as a policy instrument, together with the Marine Programme, will fulfil one of the Aichi targets under this goal.

Specific measures and targets for the final agreed goals will be put in place to track our progress against achieving our ambition.

Consultation Question

15. Are our proposed goals the right ones? What might be added?

How should we take action?

An integrated approach to the sustainable management of our natural resources will be the key to achieving our goals, however we need to harness a full range of regulatory, economic, financial, scientific and social instruments in order to increase diversity and resilience.

As biodiversity is a cross cutting issue, actions are likely to address more than one of our goals so the proposed actions have not been aligned to specific goals. This will be developed in the next stage of the delivery of the Nature Recovery Plan.

Focus for Action

Acknowledging that biodiversity is an integral part of natural resource management, we need to focus our action for biodiversity so that:

a) we know how biodiversity can deliver improved ecosystem resilience and vice versa - we better understand the causes of biodiversity loss and ecosystem degradation and the action required to reverse negative trends; and we better understand how ecosystems function and respond to change;

→**Action focussed on evidence and research**

b) biodiversity can be used as an indicator of ecosystem resilience, and we can confidently report on status and trends and other biodiversity targets based on robust evidence

→**Action focussed on monitoring and surveillance**

c) priority species or habitats that society wishes specifically to see benefit from improvements to our ecosystems are identified and maintained, including those identified by EU and UK law;

→**Action focussed on safeguarding species, habitats and ecosystems**

d) We integrate the value and importance of biodiversity across all decision making, applying improved knowledge across a range of policy areas, and engaging society:

→**Action focussed on engagement and support**

We propose the following **strategic actions**:

- **Putting in place effective natural resource management**

Achieving our ambition requires a fundamental shift in the legal and policy framework within which biodiversity and ecosystems are considered, to allow us to integrate the different aspects of the environment and manage the whole system sustainably rather than treat it as an inexhaustible source of raw materials.

The Environment (Wales) Bill planned for later in the Assembly term will provide a modern legislative framework to manage our natural resources in an integrated way, and provide Natural Resources Wales (NRW) with the relevant powers for the sustainable management of natural resources.

The Bill will set out a requirement for Welsh Government to produce a National Natural Resource Policy. This will set the high-level direction of travel for natural resource policy and actions, including setting priorities that will contribute to the long-term resilience of our ecosystems and the services that they provide. The National Natural Resource Policy will provide an opportunity to set out a clear approach to delivering many of the actions in this plan, such as our international commitments for 'no net loss' and 'restoration', by targets and monitoring and a risk-based and more pro-active approach to securing the conservation status of key species and habitats based on the ecosystem approach.

NRW has already been established as an integrated body that can look at our environment as a whole and which is charged with ensuring that our environment and natural resources are sustainably maintained, enhanced and used[18]. The Environment Bill will also introduce a requirement for NRW to publish area statements, which identify the ways in which our natural resources in each area of Wales can be managed to deliver long-term benefit of Wales, in line with the priorities set out in the National Natural Resource Policy. Decision-making will be informed by the overall resilience of an area and the multiple benefits and opportunities available by looking across policies and issues at a wider scale, and in a way that optimises social, economic and environmental benefits.

The framework established by both the Environment Bill and the Well-being of Future Generations (Wales) Bill can help public bodies to seek opportunities to collaborate on increasing the resilience of our ecosystems for example by making the enhancement of nature a core element of local well-being plans.

The Welsh Government and NRW will wherever practically possible endeavour to demonstrate best practice in implementing effective natural resource management on their own estates.

[18] Article 4 Natural Resources Body for Wales (Establishment) (Wales) Order 2012

- **Delivering a Welsh National Marine Plan (WNMP)**

The Welsh Government has committed to producing the WNMP covering both the inshore and offshore regions by 2015. This will establish an overarching, cross-cutting and integrating process for the management of the marine environment. Marine plans will set out how marine resources can be best managed to achieve sustainable development. Marine planning is a long term commitment where it is expected the benefits will accrue over time.

All public authorities taking authorisation or enforcement decisions that affect or might affect the UK marine area must do so in accordance with the UK Marine Policy Statement unless relevant decisions indicate otherwise. This duty transfers to marine plans once they are adopted.

Marine planning will support and inform the marine licensing system. It will do this by:

- clarifying marine objectives and priorities;
- directing decision makers and users towards more consistent, evidence based decisions for the sustainable use of marine resources in the Welsh inshore and offshore regions.

The WNMP will implement the UK high level marine objectives and the policies and objectives of the Welsh Government. The UK high level marine objectives are based on the broad principles of sustainable development. Specifically all four UK administrations are committed to:

- achieving a sustainable marine economy;
- ensuring a strong, healthy and just society;
- living within environmental limits;
- promoting good governance; and
- using sound science responsibly.

- **Facilitating Cross – sector policy integration**

The needs and values of biodiversity should be integrated across all policy areas and sectors. The Wellbeing of Future Generations Bill will require the development of wellbeing goals including the ‘resilient Wales’ goal. While NRM, marine planning and the Environment Bill will help to deliver this in areas such as planning, agriculture and forestry, and will indirectly influence areas such as economic development, transport, and energy through requiring material considerations for

local development plans, other areas of policy such as health and education will need direct engagement.

Cross sector policy integration is also important to strengthen the implementation of the biodiversity duty under the NERC Act. This could also be strengthened by future links with the Environment Bill or the Future Generations Bill.

We will work with policy teams and portfolios to address biodiversity needs within all relevant WG policies and strategies including:

- The Climate Change Strategy for Wales
- The Marine Strategy Framework Directive and Welsh National Marine Plan
- The Water Framework Directive and Wales' Water Strategy
- The Planning Bill and Planning Framework
- Rural Development Plan 2014 - 21
- Woodlands for Wales – the strategy for woodlands and trees
- Wales Marine and Fisheries Strategic Action Plan

and build on the work of the Action Plan for Pollinators in engaging more widely across government departments and improving management of public sector land for nature.

- **Funding our partners**

The Welsh Government and NRW will complete reviews of their respective grant funding models this year to ensure a clear and transparent future approach to both project and core funding for nature organisations.

For landowners and farmers, the Rural Development Programme will be the main vehicle for integrating nature into practice on the ground. The new programme has the aim of promoting a sustainable approach to the future of our land-based industries that will integrate nature outcomes.

The Nature Fund has demonstrated the appetite for cross-sector collaborative working at local level to deliver large-scale actions to improve ecosystems. We will draw strongly on the learning of the Nature Fund to inform how we best support delivery through collaborative action and at scale in the future. This will include looking for future and longer term funding to help sustain existing projects and support new collaborative delivery.

The European Maritime Fisheries Fund (EMFF) is to help fishermen implement the new Common Fisheries Policy to promote sustainable fishing. One of the key outcomes of the EMFF in the UK will be a fisheries sector that makes more efficient use of resources, as well as a healthier marine environment with improved biodiversity. A suite of different measures will be used to achieve this aim. In

particular, the move towards a zero-discards sector and towards Maximum Sustainable Yield will require investments throughout the supply chain, from adaptations on board to port infrastructure, from research and innovation to marketing and processing.

The new EU LIFE programme (2014 -2020) provides opportunities for partners to collaborate and access funding beyond the traditional project based proposals. The perceived complexities in accessing this funding need to be addressed.

- **Identifying financial instruments**

It is vital that action that will strengthen the resilience of our ecosystems is attractive to investors. This not only provides a source of finance for new actions but also allows them to compete with demands from other economic activities.

Welsh Government will support the development of markets in payments for ecosystem services (PES) in Wales as part of our Green Growth proposals. We will specifically take opportunities offered by the EU Natural Capital Financing Facility and the Wales Nature Fund to promote investment in strengthening green infrastructure. There are particular opportunities from management of water and carbon in our uplands and from action to increase natural drainage in communities.

Through natural resource management, we will also identify opportunities for investment to increase habitat or species resilience that could form a basis for the development of schemes to receive funding to offset dispersed impacts from individual development plans, or the potential to trade emissions within capped limits.

We will influence and encourage more creative use of business and other investment programmes to help support ecosystems and associated biodiversity improvements through these mechanisms.

- **Reviewing designated sites and species**

Our designated sites are the jewels in the crown of our natural environment and need to be core to our refreshed approach.

The Welsh Government will set clear objectives for the European designated Natura 2000 network in the statutory National Natural Resource Policy.

In applying an integrated approach to natural resource management, Natural Resources Wales will for example review and strengthen the approach to site management plans so that they proactively address the underlying challenges facing

the designated areas and so that regulatory and funding activity is fully aligned to deliver the management objectives.

Through the development of an area statement, Natural Resources Wales will also for example review the relationship between the Natura 2000 sites, other designations and the wider environment and ensure they are treated in ways which are mutually reinforcing to deliver multiple benefits.

In the light of experience with the new approach, Welsh Government will, if necessary, look for a future legislative opportunity further to align and focus the legislative framework to remove conflicting objectives and increase integration.

The Marine Transition Programme is seeking to complete Wales' contribution to a coherent network of marine protected areas (MPAs) and to ensure that all MPAs are well managed. The intention is to establish a framework that secures effective management of all MPAs in Wales that ultimately improves their condition by safeguarding marine biodiversity, the wider ecosystem and the socio-economic benefits for Wales.

- **Monitoring and reviewing regulatory instruments**

The Environment Bill will provide NRW with opportunities to take a more integrated approach to how they deliver their operational activities and to place on them a general duty to sustainably manage our natural resources in a way and at a rate which will help to increase the resilience of our ecosystems and the services they provide.

In the light of experience with the new legislative framework and proposals for fresh EU legislation, such as that related to the control of Invasive Non-Native Species, Welsh Government will look at the need for further regulatory steps that would increase integration, simplify requirements or address gaps in delivery.

- **Improving the Evidence base: Research, Monitoring and Surveillance**

The Environment Bill places a requirement on Natural Resources Wales to produce a State of Natural Resources Report (SoNaRR). This Report will provide information that can be used to track progress towards achieving the sustainable management of natural resources. As part of developing the Report, NRW could, for example, review the need for different or additional monitoring of species, habitats and wider ecosystem function in order to inform actions and track progress. This could also include testing and monitoring of fundamental aspects of ecosystem functioning such as soil condition which are not currently undertaken.

Indicators or measures to track progress of the Nature Recovery Plan could form a subset of the SoNaRR and we will work with NRW in developing a shared evidence

base. The WBSB has already begun work to update biodiversity data and pressures and drivers of biodiversity change.

We will monitor and model the impacts of our work and the benefits that nature interventions can bring building on the innovative Monitoring and Evaluation Programme developed for Glastir under the Rural Development Programme.

We will also use Nature Fund projects to develop monitoring and evaluation of the multiple benefits of landscape-scale interventions that will inform natural resource management priorities.

The Effective Evidence strand of the Marine Programme aims to develop an appropriate research and evidence base for Wales.

Transparency of and access to the developing evidence base is key. We will utilise the developing Information Hub, to continue to improve the sharing of information on nature, including making better use of information gathered through monitoring undertaken for the planning system, so that we have a better picture of the local state of nature and can potentially reduce requirements for additional evidence gathering on smaller development proposals.

- **Encouraging effective Communication and Engagement:**

We need to engage with, and enthuse people, and communicate the value of biodiversity so that they are encouraged to act.

The move to establish a system of integrated management of natural resources as well as well-being planning at the local and national levels provides a unique opportunity for engaging the public and business in the opportunities offered by nature.

We will take the learning from the existing partnerships, the Resilient Ecosystems Fund and Nature Fund projects, Environment Wales, the Action Plan for Pollinators and the Cynefin scheme to support increased animation of community action for nature and we will use the Information Hub to increase public involvement in monitoring nature, using the latest technologies.

The statutory State of Natural Resources report will inform public debate on the Future Generations report that in turn will inform public sector priorities.

- **Providing better Governance to benefit nature**

Existing partnership working has been a vital part of delivering for nature. We now wish to refresh and strengthen the Wales Biodiversity Partnership to ensure it can focus on supporting the delivery of this new approach and support fully our international obligations. This will include expanding on existing governance

arrangements to integrate ecosystems management and biodiversity across policy areas, and clarifying the relationship with the marine programme.

The refresh will have four main elements:

- ensuring all interested parties are an active part of the partnership so that work is informed by the views of different sectors;
- restructuring the operations of the partnership to develop a clear work programme and remits based on this plan;
- refreshing the role of local biodiversity action and the responsibilities of public authorities in the context of implementing natural resource management legislation
- ensuring capacity to support partnership working and lead on collaborative initiatives, projects and programmes.

in order that we can:

- develop a collaborative approach based on shared knowledge, experience and skills
- ensure integration across sectors by providing a mechanism that encourages and promotes biodiversity and enables sharing of best practice and lessons learnt
- develop our understanding of the relationship between biodiversity and ecosystem resilience
- monitor biodiversity as an indicator of ecosystem resilience
- identify priority species or habitat that society wishes specifically to see benefit from improvements to our ecosystems, and
- provide strategic advice on practical delivery to those taking action on the ground.

Consultation Questions

16. Are the proposed actions right and adequate?

17. What additional action would you wish to see?

18. How do we engage with business more effectively to deliver our ambition?

19. How can we strengthen the way we work together?

20. How can we share budgets and look at integrated outcomes?

21. What else should be done to avoid duplication and to deliver our goals?

22. How can we best use the Information Hub to collate and disseminate data and evidence?

Next Steps

This consultation is on a set of high level and strategic proposals to take biodiversity policy and action forward in a developing framework.

We acknowledge that to progress this work we need to communicate more widely and develop further products to engage with a wider audience.

A Communications Plan is proposed, as well as an Evidence Plan and the refreshed governance structure.

We will also need to consider how best we communicate delivery and progress towards our ambition.

Following this consultation, we will consider responses and develop the proposals to produce the final Nature Recovery Plan for Wales in 2015, as well as a rolling programme of action.

Consultation Questions

23. How best should we communicate progress with delivery of our ambition, for example, by a three or five year work programme or an annual delivery plan?

24. We have asked a number of specific questions. Please let us know if you think there are related issues which we have not specifically addressed, and provide further information.

Annex 1: Key trends and statistics for biodiversity in Wales

The UK National Ecosystem Assessment

The UK National Ecosystem Assessment (UK NEA) was the first analysis of the UK's natural environment in terms of the benefits it provides to society and continuing economic prosperity.

The need for the UK NEA arose from findings of the 2005 global Millennium Ecosystem Assessment (MA), which not only demonstrated the importance of ecosystem services to human well-being, but also showed that at global scales, many key services are being degraded and lost. As a result, in 2007 the House of Commons Environmental Audit recommended that the Government should conduct a full MA-type assessment for the UK to enable the identification and development of effective policy responses to ecosystem service degradation.

The UK NEA commenced in mid-2009 and reported in June 2011. It was an inclusive process involving government, academic, NGO and private sector institutions.

Chapter 20 of the UK National Ecosystem Assessment Technical Report (Status and Changes in Ecosystems and their Services to Society - Wales) (2011) lists some of the characteristics of Wales that provide the context for considering ecosystem services and biodiversity. The key findings of the study were:

- Biodiversity contributes to economic and social prosperity in Wales by underpinning valuable ecosystem services.
- Mountains, Moorlands and Heaths in Wales hold significant amounts of stored carbon, but many protected sites in this broad habitat type are in declining condition.
- The alteration of the composition of lowland Semi-natural Grasslands was one the most rapid and widespread vegetation changes to have taken place in Wales during the 20th Century.
- About 37.4% of Wales is Enclosed Farmland, consisting of 34% Improved Grassland and 3.4% Arable and Horticultural land.
- Woodland area in Wales has almost tripled since the early 1900s, and now covers 14% of the country's total land area.
- Welsh freshwater ecosystems still suffer from an industrial legacy, for example, point sources of metal pollution from mines, but there is evidence of improvement following remediation measures.
- Five per cent of Wales is classified as urban habitat. During the past 40 years, activities have taken place to improve the quality of human well-being in the urban environment by expanding green space and tree

planting, and increasing the numbers of local nature reserves close to urban centres.

- Sand Dunes, Saltmarsh and Sea Cliffs are the most extensive coastal habitats in Wales and are important for a range of regulating services, including coastal erosion protection.
- Wales is currently regarded as a net sink for carbon dioxide in the land use, land use change and forestry sector.
- Wales records some of the highest rainfall levels in the UK. There are large reserves of surface water in Wales that have long served as sources of supply for the UK more widely.
- Provisioning services from agriculture contributed some £418 million or 1.1% to the Welsh economy in 2003.
- Wales is renowned for its attractive landscapes, with three National Parks and five Areas of Outstanding Natural Beauty covering 24% of the country's land surface.
- A 2001 study estimated that the environment contributed £8.8 billion of goods and services annually to the Welsh economy, 9% of Welsh GDP and one in six Welsh jobs, mainly in the leisure and tourism, agriculture and forestry, water abstraction, conservation and waste management sectors. It also found that the environment is relatively more important to the Welsh economy than it is to the other UK nations.

The chapter also set out some of the trends pointing to an overall decline in the quantity and diversity of habitats and species in Wales, and the continuation of these trends. Overall, the chapter reported significant changes to biodiversity in Wales over the past 70 years, with some species thriving or recovering from earlier losses, while others have contracted in numbers.

Habitats

- In 2005, 59% of Biodiversity Action Plan habitats in Wales were in declining condition. However, this decline is slowing at many sites and 65% of BAP habitats in Wales can therefore be classed as improving, remaining stable or showing signs that decline is fluctuating or slowing
- Habitats within the Marine environment exhibit the greatest deterioration, with continued or accelerated decline across 60% of marine habitats compared to only 8% for terrestrial habitats and 33% for freshwater habitats.
- Priority habitats classed as stable or improving increased from 30% in 2002 to 36% in 2008.

- A rapid review in 2006 judged conservation features at 47% of Welsh Sites of Special Scientific Interest (SSSIs) to be in favourable condition, with 53% in unfavourable condition.

- 5% of Woodlands are SSSIs. However, just 9% of these are considered to be in favourable condition and 25% are classed as being in unfavourable but recovering condition.

- Seven in every eight hectares of European designated Natura 2000 sites in Wales (0.5 million ha) are Marine areas, reflecting their high importance for conservation. However, 60% of these sites have been classified as being in 'continued or accelerated decline'.

Species

- Due to the large number of species which have unknown trends in Wales, it is difficult to compare progress in Wales to progress at the UK level

- Fifty-four per cent of Biodiversity Action Plan species were assessed as being in 'unfavourable condition' in 2008, but with considerable variation between species groups. Three species which are showing a continuing/ accelerating decline are lapwing, curlew and golden plover.

- 80% of marine mammals and birds were in favourable or recovering condition, while 80% of amphibians, butterflies and fish were recorded as being in unfavourable condition.

- Seven taxonomic groups (more than 50% of Section 42 species) show increasing, stable or fluctuating/slowing declines (lichens, mosses and liverworts, stoneworts, vascular plants, invertebrates, fish, amphibians and reptiles).

- The most notable negative trends are in the birds (34%) and invertebrates (19%).

- Based on longer-term data from the Breeding Bird Atlas, 43% of bird species have experienced range decreases between 1968 and 1972 and between 1988 and 1991, with just 17% having increased

- Key seabird species have increased during the past 30 years; numbers of wild plants, butterflies of specialist habitats and farmland birds have declined.

Source: UK National Ecosystem Assessment, (2011) **The UK National Ecosystem Assessment: Technical Report.** UNEP-WCMC, Cambridge. http://uknea.unep-wcmc.org/

The State of Nature Report

The State of Nature Report was produced in 2013 by a partnership of 25 of the UK's wildlife organisations, in order to communicate clear, consistent messages about how our wildlife is faring. The report provides an authoritative assessment by the partnership of the status and population trends of animals and plants in the United Kingdom and its Overseas Territories. It looks at how the patterns change between habitats and taxonomic groups and places those patterns of species change in the context of a changing environment, looking at both the key pressures faced and the conservation work being undertaken.

Full details and the main report can be found at:
http://www.rspb.org.uk/ourwork/projects/details/363867-the-state-of-nature-report

The following headline statistics were published in the State of Nature Report for Wales in 2013:

- Of the 25 butterfly species assessed, a similar number (13) have decreased in abundance in Wales compared to those that have increased.
- 57% of Wales's flowering plants are declining, while 43% are increasing – a similar story to the rest of the UK. The overall pattern of change is similar to that found in England, with species of open, nutrient-poor, basic or acidic areas declining, and those of shaded, nutrient-rich, neutral areas increasing.
- We can assess population trends for less than half of bird species in Wales. Of the bird species assessed, slightly more have increased than decreased. Wintering waterbirds are doing particularly well; however, many farmland species continue to decline rapidly.
- Between 1970 and 1990, twice as many bird species suffered contractions to their Welsh ranges, compared to species whose ranges increased.

Source: Source: Burns F, Eaton MA, Gregory RD, *et al*. (2013) **State of Nature report.** The State of Nature partnership.

The summary for Wales can be found at
http://www.wildlifetrusts.org/publications

Annex 2: The United Nations Convention on Biological Diversity

The objectives of the Convention are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

Further details of the Convention can be found at www.cbd.int

The ecosystem approach is the primary framework for action under the Convention.

The ecosystem approach is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. The following 12 principles of the ecosystem approach are complementary and interlinked:

Principle 1: The objectives of management of land, water and living resources are a matter of societal choices.

Different sectors of society view ecosystems in terms of their own economic, cultural and society needs. Indigenous peoples and other local communities living on the land are important stakeholders and their rights and interests should be recognized. Both cultural and biological diversity are central components of the ecosystem approach, and management should take this into account. Societal choices should be expressed as clearly as possible. Ecosystems should be managed for their intrinsic values and for the tangible or intangible benefits for humans, in a fair and equitable way.

Principle 2: Management should be decentralized to the lowest appropriate level.

Decentralized systems may lead to greater efficiency, effectiveness and equity. Management should involve all stakeholders and balance local interests with the wider public interest. The closer management is to the ecosystem, the greater the responsibility, ownership, accountability, participation, and use of local knowledge.

Principle 3: Ecosystem managers should consider the effects (actual or potential) of their activities on adjacent and other ecosystems.

Management interventions in ecosystems often have unknown or unpredictable effects on other ecosystems; therefore, possible impacts need careful consideration and analysis. This may require new arrangements or ways of organization for institutions involved in decision-making to make, if necessary, appropriate compromises.

Principle 4: Recognizing potential gains from management, there is usually a need to understand and manage the ecosystem in an economic context. Any such ecosystem-management programme should:

a. Reduce those market distortions that adversely affect biological diversity;

b. Align incentives to promote biodiversity conservation and sustainable use;

c. Internalize costs and benefits in the given ecosystem to the extent feasible.

The greatest threat to biological diversity lies in its replacement by alternative systems of land use. This often arises through market distortions, which undervalue natural systems and populations and provide perverse incentives and subsidies to favor the conversion of land to less diverse systems. Often those who benefit from conservation do not pay the costs associated with conservation and, similarly, those who generate environmental costs (e.g. pollution) escape responsibility. Alignment of incentives allows those who control the resource to benefit and ensures that those who generate environmental costs will pay.

Principle 5: Conservation of ecosystem structure and functioning, in order to maintain ecosystem services, should be a priority target of the ecosystem approach.

Ecosystem functioning and resilience depends on a dynamic relationship within species, among species and between species and their abiotic environment, as well as the physical and chemical interactions within the environment. The conservation and, where appropriate, restoration of these interactions and processes is of greater significance for the long-term maintenance of biological diversity than simply protection of species.

Principle 6: Ecosystem must be managed within the limits of their functioning.

In considering the likelihood or ease of attaining the management objectives, attention should be given to the environmental conditions that limit natural productivity, ecosystem structure, functioning and diversity. The limits to ecosystem functioning may be affected to different degrees by temporary, unpredictable of artificially maintained conditions and, accordingly, management should be appropriately cautious.

Principle 7: The ecosystem approach should be undertaken at the appropriate spatial and temporal scales.

The approach should be bounded by spatial and temporal scales that are appropriate to the objectives. Boundaries for management will be defined operationally by users, managers, scientists and indigenous and local peoples. Connectivity between areas should be promoted where necessary. The ecosystem approach is based upon the hierarchical nature of biological diversity characterized by the interaction and integration of genes, species and ecosystems.

Principle 8: Recognizing the varying temporal scales and lag-effects that characterize ecosystem processes, objectives for ecosystem management should be set for the long term.

Ecosystem processes are characterized by varying temporal scales and lag-effects. This inherently conflicts with the tendency of humans to favour short-term gains and immediate benefits over future ones.

Principle 9: Management must recognize the change is inevitable.

Ecosystems change, including species composition and population abundance. Hence, management should adapt to the changes. Apart from their inherent dynamics of change, ecosystems are beset by a complex of uncertainties and potential "surprises" in the human, biological and environmental realms. Traditional disturbance regimes may be important for ecosystem structure and functioning, and may need to be maintained or restored. The ecosystem approach must utilize adaptive management in order to anticipate and cater for such changes and events and should be cautious in making any decision that may foreclose options, but, at the same time, consider mitigating actions to cope with long-term changes such as climate change.

Principle 10: The ecosystem approach should seek the appropriate balance between, and integration of, conservation and use of biological diversity.

Biological diversity is critical both for its intrinsic value and because of the key role it plays in providing the ecosystem and other services upon which we all ultimately depend. There has been a tendency in the past to manage components of biological diversity either as protected or non-protected. There is a need for a shift to more flexible situations, where conservation and use are seen in context and the full range of measures is applied in a continuum from strictly protected to human-made ecosystems.

Principle 11: The ecosystem approach should consider all forms of relevant information, including scientific and indigenous and local knowledge, innovations and practices.

Information from all sources is critical to arriving at effective ecosystem management strategies. A much better knowledge of ecosystem functions and the impact of human use is desirable. All relevant information from any concerned area should be shared with all stakeholders and actors, taking into account, inter alia, any decision to be taken under Article 8(j) of the Convention on Biological Diversity. Assumptions behind proposed management decisions should be made explicit and checked against available knowledge and views of stakeholders.

Principle 12: The ecosystem approach should involve all relevant sectors of society and scientific disciplines.

Most problems of biological-diversity management are complex, with many interactions, side-effects and implications, and therefore should involve the necessary expertise and stakeholders at the local, national, regional and international level, as appropriate.

The full text of these principles can be found at:
http://www.cbd.int/ecosystem/principles.shtml

The Strategic Goals and Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011 – 2020

Further details of the Strategic plan and the full text of the goals and targets can be found at http://www.cbd.int/sp/

Strategic goal A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

Target 3: By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.

Target 4: By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.

Strategic goal B. Reduce the direct pressures on biodiversity and promote sustainable use

Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

Target 6: By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Target 8: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.

Target 9: By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.

Target 10: By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.

Strategic goal C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Target 11: By 2020, at least 17 per cent of terrestrial and inland water areas, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Target 13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

Strategic goal D: Enhance the benefits to all from biodiversity and ecosystem services

Target 14: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

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

Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

Strategic goal E. Enhance implementation through participatory planning, knowledge management and capacity-building

Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Target 20: By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.