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Consultation Document

Sustaining a Living Wales

A Green Paper on a new approach to natural resource management in Wales



Date of issue: **30 January 2012**

Action required: Responses by **31 May 2012**

Overview

This Green Paper seeks views on a fresh approach to the management and regulation of the environment in Wales. The consultation will principally inform the proposed 2014/15 Environment Bill and the proposed Planning Bill. The proposals will be of particular interest to regulated businesses and to those who use and manage our land and water, including the farmers and foresters who together manage more than 75% of the land area of Wales.

How to respond

We welcome responses to this Green Paper in order to help shape our future legislative proposals. We want to know whether there is the appetite for a radical approach and whether the building blocks we propose are the right ones.

You may wish to use our online consultation response form for your response. We also welcome responses on any other issues you think are relevant. Responses provided as part of the previous Living Wales consultation will also be taken into consideration under this consultation and do not need to be resubmitted.

Further information and related documents

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

For further information about the consultation process and related documents, please visit www.wales.gov.uk/livingwales

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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.

Sustaining a Living Wales¹

A Green Paper on a new approach to natural resource management in Wales

1. Purpose

This Green Paper seeks views on a fresh approach to the management and regulation of the environment in Wales. The consultation will principally inform the proposed 2014/15 Environment Bill and the proposed Planning Bill. The proposals will be of particular interest to regulated businesses and to those who use and manage our land and water, including the farmers and foresters who together manage more than 75% of the land area of Wales.

The central proposal is to move to an ecosystem approach² to environmental regulation and management. This will mean considering and regulating the environment and its health as a whole rather than dealing with individual aspects separately. It will mean weighing up and setting priorities for the many competing demands on our natural resources to provide different services to society – ranging from the value of the environment in itself, to food production to land for construction. And it will result in us taking steps at both local and national level that will help to maximise the environmental, economic and social opportunities available to us as a nation.

Overall we expect the new approach will:

- improve the resilience and diversity of our environment and its supporting biodiversity;
- provide simpler and more cost-effective regulation;
- offer greater certainty for decision-makers.

This is an important part of our commitment to sustainable development and to establishing the positive climate for sustainable long-term investment and job creation in both our urban and rural communities that is particularly vital in the current times.

The main questions that we'd like your help in addressing are listed on page 31.

2. Background

Wales' nature, land, water and air are our ultimate resource. With increasing demands being placed by society on the services that our natural resources provide, one of the key challenges we face in the 21st Century is to find ways of securing a healthy, resilient and productive environment now and in the future that delivers for society as a whole, supporting employment and wellbeing.

¹See: www.wales.gov.uk/livingwales for details on the development of 'Living Wales' and **Sustaining a Living Wales**.

² <http://www.cbd.int/ecosystem/>.

For over 60 years, governments have sought to protect, regulate and manage the environment through a series of approaches and for a variety of reasons, with legislation on different aspects of the natural environment evolving separately to address changing pressures.

Town and country planning was introduced in the 1930s and 1940s largely to address concerns about urban sprawl and to protect open land between towns. National Parks and Areas of Outstanding Natural Beauty (AONB) have been designated since 1949 to preserve their special qualities. Pollution controls were progressively introduced to improve air and water quality in the face of heavy industrialisation and urbanisation. Nature conservation legislation was developed to protect specific nature sites and species.

Each of these regimes has had its own legal basis, delivery bodies and systems. These have been overlaid by the implementation of a succession of European legislation on all aspects of the environment over the past thirty years. Some key elements of these systems are summarised at Annex A.

With the new law making powers of the National Assembly for Wales, we now have an opportunity to refresh the systems that have grown up over the years and put in place a more unified, purpose-designed approach. We believe that our aim should be to move to a future system that simplifies and joins-up our approach to protecting and managing our natural resources within our central principle of delivering sustainable development.

We need to set our priorities to better meet the strategic outcomes of our European environmental obligations and to address the fundamental risks and opportunities before us rather than tackling individual symptoms in isolation. By focusing on making the best possible use of natural resources our approach should deliver benefits for society and the economy.

Potential benefits to business and land managers from the new approach include:

- more effective, efficient, simpler and integrated regulatory processes;
- clearer information on environmental outcomes, opportunities and constraints to aid investment decisions;
- a more predictable and consistent framework for environmental decision-making, by reducing uncertainty in planning and other regulatory systems;
- support for new markets in environmental services such as carbon and water management;
- ensuring costs of compliance are appropriate to the extent of environmental risk.

For communities the potential benefits include:

- positive investment in targeted local environmental improvements;
- a greater focus on local needs, opportunities and concerns;
- enhanced local input to decision making;
- improved access to green space and associated health benefits.

For our environment, potential benefits include:

- more targeted investment in environmental improvements;
- positive action to address the fundamental drivers of environmental change;
- increased resilience to pressures from climate change and reduction of the effects of climate change;
- a strategic approach to promoting restoration and recovery of species and habitats;
- a fuller reflection in decisions of the benefits we derive from our environment.

Our challenge is to secure healthy, resilient and productive ecosystems that are managed sustainably and deliver for society as a whole, supporting employment and wellbeing.

3. The Ecosystem Approach

What is the ecosystem approach?

In order to shape a single consistent approach to managing our environment, we propose to be guided by the ecosystem approach that is increasingly being adopted for environmental work worldwide.

The ecosystem approach has been defined by the Conference of the Parties on the Convention on Biological Diversity as: *'A strategy for the integrated management of land, water and living resources that promotes nature conservation and sustainable use in an equitable way recognising that humans with their cultural diversity are an integral part of ecosystems'*. The ecosystem approach provides a framework within which the relationship of protected areas to the wider landscape and seascape can be understood and the goods and services flowing from ecosystems can be valued.

The ecosystem approach requires managing our environment as an integrated system where decisions on one element impact on the performance of the whole and affect the benefits that the environment can provide to society. The ecosystem approach is especially vital in a complex and changing environment where climate change, as well as our direct physical demands on the environment, will result in increasing and changing pressures, risks and opportunities.

Valuing our Environment

The Millennium Ecosystem Assessment³ and The Economics of Ecosystems and Biodiversity⁴ reports highlighted the global value of ecosystems and illustrated how dependent we are on our environment. They identified ways in which working with the environment can provide cost effective solutions in areas such as water management or air pollution.

The UK National Ecosystem Assessment (UK NEA)⁵ was published in June 2011, and describes the benefits that the UK's natural environment provides to society and our economic prosperity. It concludes that 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.

A 2001 study⁶ estimated that the environment contributed £8.8 billion of goods and services annually to the Welsh economy, 9% of Welsh GDP and 1 in 6 Welsh jobs. These jobs were mainly in the leisure and tourism, agriculture & forestry, water abstraction, nature conservation and waste management sectors. In addition to this figure, important services are also provided by the environment to fishing, mining and quarrying, food production and processing, construction and other industries. This study also found that the environment is relatively more important to the Welsh economy than is the case for the other UK nations.

Our aim

In order to embed the ecosystem approach in the future management of the Welsh environment, we propose that the aim for public bodies is to manage the environment as a whole in order:

To ensure that Wales has increasingly resilient and diverse ecosystems that deliver environmental, economic and social benefits now and in the future.

Understanding our environment

To make this change we will need to understand and support the underlying health and functioning of our ecosystems and the services that they provide.

The services we receive from the environment include **supporting services** such as ecological processes, soil formation, photosynthesis and nutrient cycling, which underpin the operation of the system as a whole; **provisioning services** such as food, water and wood; **regulating services** which help us to control climate, floods, waste disposal, air and water quality; and **cultural services** which include

³ [Ecosystems and Human Well-being: Synthesis Report \(Millennium Ecosystem Assessment\)](#) by Millennium Ecosystem Assessment (30 Jun 2005).

⁴ <http://www.teebweb.org/>.

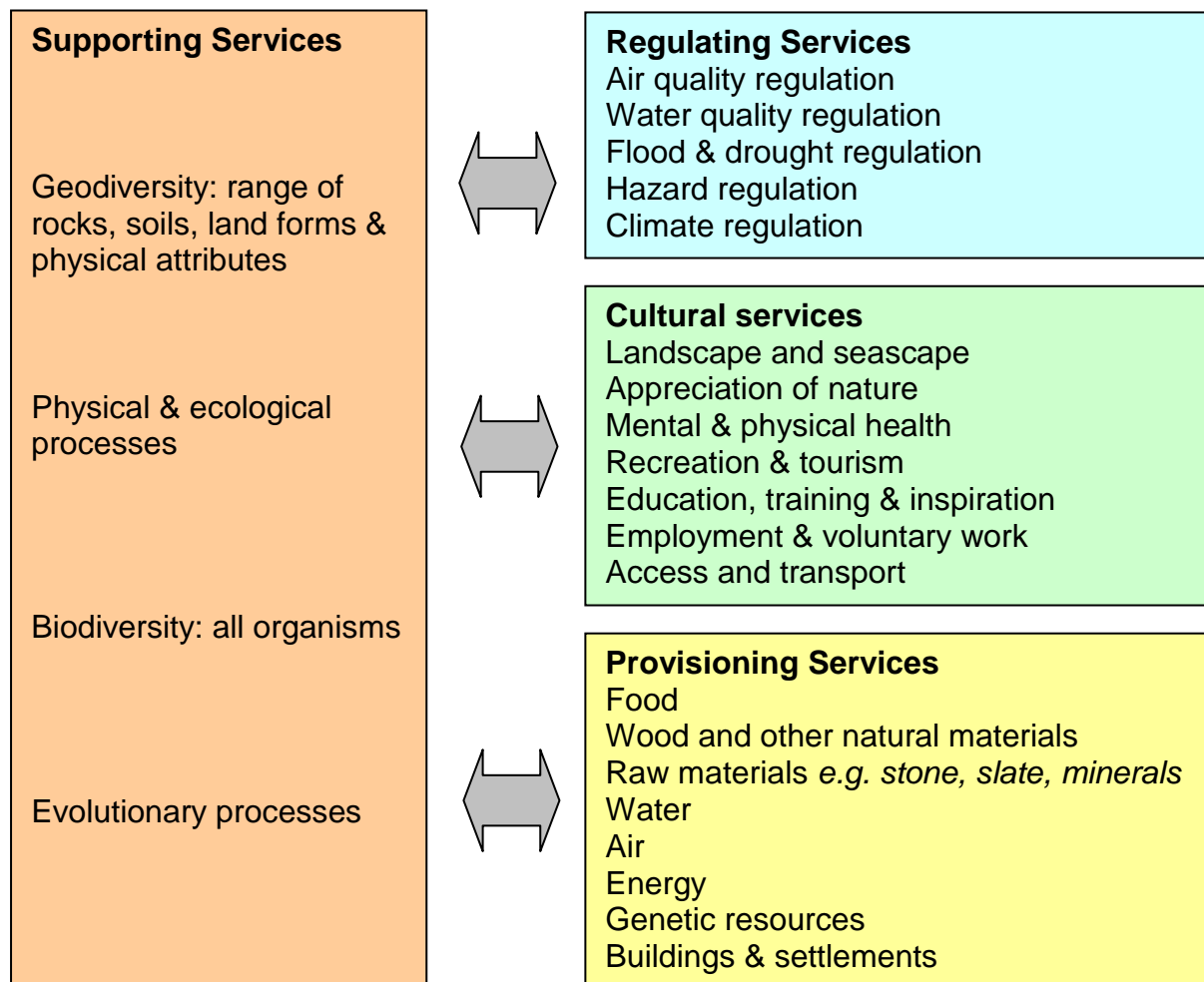
⁵ <http://uknea.unep-wcmc.org/>.

⁶ Valuing Our Environment 2001 (Countryside Council for Wales and the National Trust).

recreational, educational, aesthetic and spiritual benefits we receive from the environment. The diagram below shows some of these services⁷.

While this approach is now widely accepted in the international community, the extent to which it has been adopted at a national level as an operational approach to regulating or managing the environment is limited. This is due to the extent of existing systems and the inevitable challenges of managing multiple issues on an integrated basis. We believe that Wales has a unique opportunity to apply the ecosystem approach as an underpinning framework that will drive all parts of Government. Wales can show the way on tackling these issues because of our scale and evolving governance arrangements.

In the EU, elements of the ecosystem approach have begun to be adopted in the Marine Strategy Framework Directive and Water Framework Directive (WFD) which look at all the impacts upon water and their socio-economic context. At the UK level the Marine Policy Statement⁸, developed and adopted in accordance with the Marine and Coastal Access Act 2009, has set an ecosystem approach for the making of future marine plans to help achieve sustainable development in UK seas.



⁷ Further information can be found at: <http://wales.gov.uk/topics/environmentcountryside/consmanagement/nef/publications/ecosystemserves/?lang=en>.

⁸ <http://www.defra.gov.uk/environment/marine/protect/planning/>.

What does this mean for Wales?

In Wales, we have experience of implementing the Water Framework Directive (WFD) and developing the basis on which we will develop marine plans. We have also begun to take an ecosystem approach to Glastir, our land management scheme, with packages of measures addressing water (quantity and quality) and soil carbon as well as nature conservation.

The key changes to our current regulatory and management approaches that will be required to move towards this new approach are broadly:

- holistic management and integrated regulatory approaches that can reflect the diversity and complexity of the environment and our interdependency with it;
- identifying the best ways of working with nature to provide environmental, social and economic benefits;
- developing the habitats we need for the future rather than simply defending those we have now;
- having a strong spatial or place-based dimension because the best use of land or water will vary hugely from place to place;
- partnership approaches that enable wider community engagement.

Embedding the new approach will take a number of years and will require legislation. At this stage we do not know exactly what changes we will need to make to our regulatory processes and policies, but we have identified seven main stages to test and develop the details:

- improving our understanding of ecosystems and their services and how we value them to inform current policies and future decision-making (current work);
- finding ways to simplify and integrate our existing resource management processes, either within or across sectors, for example in relation to flood risk, water management and environmental permitting (2012 onwards);
- piloting ecosystem based local resource management planning by exploring how we might bring together the range of existing plans and designations into more unified plans or processes and identifying potential barriers or opportunities (from Spring 2012);
- developing proposals for national spatial priorities for the protection, restoration, use and management of the environment. Use these to inform future actions, guiding future infrastructure development and the setting of priorities for waste, water, energy and flood (2013 onwards);
- Simplify institutional structures and regulatory processes by replacing regulatory and advisory bodies in Wales with a single environmental body to replace EAW, FCW and CCW (2013/14);
- develop proposals for an Environment Bill to streamline and simplify our approach to managing the natural environment (2014/15); and

- take steps (through the Environment and Planning Bills or other legislative means where appropriate) to rationalise and simplify regulatory systems to implement the new approach (2015 onwards).

How is this linked to Sustainable Development

At the same time that we are considering this new approach, we will also be developing our thinking on how we strengthen our approach to sustainable development. The First Minister's legislative programme includes a commitment to legislate to embed sustainable development as the central organising principle of the Welsh Government and devolved public bodies in Wales.

We will be consulting all our stakeholders as we develop this sustainable development legislation. The fundamental principles of embedding sustainable development as a central organising principle are threefold:

- **Long-termism:** all decisions promote the long term, sustainable wellbeing of people and communities, now and for future generations;
- **Integration:** taking full account of, and where possible integrating, social, economic and environmental outcomes;
- **Involvement:** engaging with, and involving, the people and communities that will be affected by decisions.

The proposed approach set out within this Green Paper is consistent with, and reflects, our current thinking about embedding sustainable development as the central organising principle. We consider that embedding sustainable development and achieving an ecosystems approach are aspirations which complement each other and share common underlying values.

Proposals for how we might make take forward an ecosystems approach are set out in the following sections.

4. Where we are now

State of the Environment

Our present environmental regulations, designations and controls have successfully conserved Wales' highest quality landscapes and transformed the quality of our urban environments and our rivers and lakes. Almost half of the hundred State of the Environment indicators⁹ that are defined and can be monitored are showing continued improvements. We have been especially successful in recent years in tackling waste recycling and improving local environmental quality.

However, some environmental problems remain more intractable, largely where they are rooted in a complex series of underlying or interacting factors or because there are particular local constraints. These include:

- our progress on wildlife and protected habitats remains patchy with a significant number of species and habitats in decline despite efforts to support them;

⁹ <http://wales.gov.uk/topics/statistics/headlines/environment2010/100722/?lang=en>.

- there are a number of areas of Wales with poor air quality;
- some of our rivers and our coastal bathing waters suffer from poor or chemical or biological status;
- surface water flooding has increased across Wales;
- pressures are increasing in the marine environment;
- pressures from climate change on fragile environments are increasing.

Throughout this Green Paper, there are a series of 'challenge boxes' illustrating the complex range of issues we need to address to tackle some of these fundamental problems.

Challenge Box 1 – Water Resources

Even though Wales receives more annual rainfall than many other parts of the UK this does not mean that we can take a continuous and endless supply of water for granted. In Wales rainfall travels quickly to our rivers and during dry periods our river levels can also drop quickly in response. In addition to causing stresses to the water environment and aquatic habitats and species in these rivers, this also creates challenges to ensuring security of public water supply and supporting other water abstractions. Currently the Environment Agency estimate that, in approximately 38% of river water bodies in Wales, water is no longer reliably available for new water abstractions.

The combination of climate change, population growth and potential increasing consumption of water per person are likely to cause additional pressure on our water resources in the future. Current climate change projections indicate that natural river flows in Wales could reduce by 40 to 60% in the summer months by the 2050s¹⁰. We are also likely to experience longer and more frequent dry periods in future. Climate change could be causing significant impacts on our water resources as early as the 2020s, although some of these impacts may be masked by natural variability until the 2030s.

With a better understanding of the impacts of these pressures we will be able to work together to take a long term approach to managing water resources sustainably putting in place the right planning regime so that the all the options to meet these challenges can be explored and decisions can be made to protect the environment and secure water supplies in Wales in the future

The UK National Ecosystem Assessment (UK NEA) has indicated that we have managed some ecosystems to improve delivery of services, such as crop production from farmland and climate regulation by woodlands. However, about 30% of all services assessed from all ecosystems were found to be in decline, and others degraded, such as marine fisheries, wild species diversity and soil quality.

¹⁰ Environment Agency (2008) Climate Change and River Flows in the 2050s. Science Report SC070079/SS1.

The NEA looked at scenarios for how our resources might in future be used to meet future needs, suggesting that; to achieve a sustainable approach, we will need to restore a number of our ecosystems. An indication of Wales' current distribution of land and water is provided in table 1 of Annex A¹¹. In total around 85% of Welsh land is used for agriculture or forestry or is common land¹².

Relative importance of broad habitats in delivering ecosystem services and overall direction of change in service flow since 1990

Service Group	Final Ecosystem Service	Mountains, Moorlands & Heaths	Semi-natural Grasslands	Enclosed Farmland	Woodlands	Freshwaters – Openwaters, Wetlands & Floodplains	Urban	Coastal Margins	Marine	
Provisioning	Crops		↔	↑		↓	↗	↘		
	Livestock/Aquaculture	↓	↗	↔	↔	↓	↔	↘	↗	
	Fish					↓	↔	↘	±	
	Trees, standing vegetation, peat	↓	↔	↗	↗	↓	↔	↘		
	Water supply	↔	↓	↓	↔	↓	↔	~		
Cultural	Wild species diversity	↔	↓	↓	↗	↓	↔	↘	↘	
	Environmental settings: Local places	↔	↔	~	↑	↗	↔	↔	~	
	Environmental settings: Landscapes/seascapes	↔	↔	↔	↗	↔	↔	↗	~	
Regulating	Climate	↔	↔	↗	↗	↔	↘	↗	↘	
	Hazard	↓	↔	↓	↗	↓	↘	↔	↘	
	Disease and pests	↔	↔	±	↓	↓	~	±	↘	
	Pollination	↓	↓	↓	↔		↔	↔		
	Noise	↔	↔	~	↗	↔	↘	↔		
	Detoxification & purification	Water quality	↔	↗	±	↔	±	±	~	↔
		Soil quality	↔	↓	↓	↔	↓	↘	↘	
Air quality		↔	↔	↗	↗	↔	↔	↔	~	

<table border="0"> <tr><td style="background-color: #004a99; width: 20px; height: 15px; display: inline-block;"></td><td>High</td></tr> <tr><td style="background-color: #008000; width: 20px; height: 15px; display: inline-block;"></td><td>Medium – High</td></tr> <tr><td style="background-color: #90ee90; width: 20px; height: 15px; display: inline-block;"></td><td>Medium – Low</td></tr> <tr><td style="background-color: #ffff00; width: 20px; height: 15px; display: inline-block;"></td><td>Low</td></tr> </table>		High		Medium – High		Medium – Low		Low	<p>Direction of change in the flow of the service</p> <ul style="list-style-type: none"> ↑ Improving ↗ Some improvement ↔ No net change ± Improvement and/or deterioration in different locations ↘ Some deterioration ↓ Deterioration ~ Unknown
	High								
	Medium – High								
	Medium – Low								
	Low								

¹¹ UK NEA – Chapter 20: Status and Changes in the UK's Ecosystems and their Services to Society: Wales.

¹² WAG A Statistical Focus on Rural Wales – 2008 Edition.

Complexity of current delivery arrangements

About a third of the land, three quarters of the coastline and a third of the seas of Wales¹³ are subject to designations for natural beauty or cultural significance (such as National Parks and Areas of Outstanding Natural Beauty) or designations for habitats, geological features and species protection (such as Sites of Special Scientific Interest and Special Areas of Conservation). There are also designations relating to specific environmental purposes (such as Nitrate Vulnerable Zones and Bathing Waters).

Table 2 in Annex A illustrates the principal current designations on land operated at an all-Wales level. There are also a number of non-statutory designations such as Special Landscape Areas and Sites of Importance for Nature Conservation.

In addition to designations, there are a number of formal environment-related plans, many with a statutory basis, that guide policy development and decision-making at different levels. The principal examples are illustrated in table 3 of Annex A.

These systems of designations and plans are completed by a wide range of regulatory regimes. Permits, licenses and other authorisations cover a wide range of activities which affect the natural environment from water abstraction to wildlife licensing. There are also requirements which attach to designations (for example “appropriate assessment” under the Habitats Directive) or to the processes leading to the making of regulatory or policy decisions (Environmental Impact Assessment and Strategic Environmental Assessment).

In addition to these broadly environmental systems, there is the land use planning system for the use and development of land; requiring local planning authorities to have Local Development Plans in place. There is also the agricultural support system for agricultural and forestry land under the Common Agricultural Policy, and for Fisheries under the Common Fisheries Policy.

The overall picture is a complex one which can be difficult to navigate and administer coherently. This complexity makes it difficult to link different issues to reflect the essential connectedness of the environment and so the present system is unlikely to be fully effective in delivering resilience of the environment as whole.

For those seeking permissions through the system, it can mean delay and the need to address a series of successive hurdles. This piecemeal approach also means that it is frequently difficult to recognise all the consequences of the proposed interventions, resulting in the unintended loss of specific, sometimes vital services, such as flood control or climate control or carbon sequestration. This can subsequently impose higher costs than are really necessary.

¹³ <http://wales.gov.uk/consultations/environmentandcountryside/marineprotectedareas/?lang=en>.

Many of these systems deliver key European environmental obligations. Nevertheless, we believe there is scope for early improvements for example by:

- aligning the requirements we place on individual sectors, for example, in ensuring that the potentially conflicting demands we currently place on the water sector are considered as a coherent whole;
- simplifying the way regulatory permissions are granted by continuing to reduce the need for separate permissions for the one activity.

In the longer term we will develop proposals for:

- how we assess whether our proposed ecosystem approach is working through monitoring, surveillance and enforcement;
- how we could align the requirements of EU directives into a single or integrated regulatory, planning and monitoring regime;
- how we could provide a clear spatial context for regulatory decisions that join up across the differing regimes and designations.

We believe there is significant scope to tackle environmental challenges by streamlining current regimes to focus on getting better outcomes for the environment as a whole, while also providing greater clarity and reduced costs and additional benefits for society.

5. Improving Delivery

The Welsh Government is determined to simplify environmental governance in Wales and thereby reduce the bureaucratic burden on organisations and individuals. Our proposed new approach to environmental regulation creates an opportunity for major simplification with a wide range of benefits. The main elements of these proposals are:

- Simplifying institutional arrangements by creating a new Welsh Single Body which will bring together the functions of the Countryside Council for Wales and the Wales functions of the Environment Agency and Forestry Commission.
- Simplifying and improving regulatory processes while maintaining standards, using the opportunities provided by both institutional change and the legislative programme (Sustainable Development, Environment and Planning Bills).
- Building on existing public financial support for land management through schemes such as Glastir, by looking to develop new market instruments, rewarding land managers for delivering outcomes such as better Carbon management.

These measures will be set alongside improvements to environmental planning, our evidence base, and improved policy co-ordination across Government (see sections 6-8 below).

This programme for change will need to be set in the context of our EU obligations, and we would need to implement it with care and good management over different sectors, places and timescales, learning as we go.

Simplifying our Institutional arrangements

Our current principal statutory delivery bodies have origins in very different legislation and times. The Forestry Commission (which has a GB remit) dates back to 1919. The Environment Agency (which works in England and Wales) was established in 1996 from an amalgamation of the National Rivers Authority, Her Majesty's Inspectorate of Pollution and local authority waste regulation. And the Countryside Council for Wales was established as a Wales-only body as a result of the integration of the Countryside Commission and Nature Conservancy Council in 1991.

In 2010 we consulted on proposed work to refresh institutional arrangements. The work has looked principally at the potential benefits of restructuring the activities of the Countryside Council for Wales, the Environment Agency and the Forestry Commission to enable them to take a more integrated and sustainable view of environmental management based on the ecosystem approach as set out in the new framework.

Over the past year we have been considering whether there is a business case for the creation of a single environmental delivery body for the protection and management of natural resources in Wales broadly incorporating the functions of these three bodies. We have concluded that there is a persuasive strategic and economic case, at the scale of Wales, to bring together this work on effectiveness, efficiency and accountability grounds.

Work is now ongoing to plan and begin the process for establishing the new body. We anticipate that consultation on the purpose, governance and responsibilities of the new body will take place early in 2012. This work will be informed by, and inform, the ongoing programme to develop 'A Living Wales'.

Improved regulation

A key message from recent informal consultation was the desire to achieve better implementation by simplifying and merging existing systems of regulation. This appears to be preferred to creating yet another layer of legislation; to ensure better outcomes for the environment alongside improved efficiency for the regulators and the regulated.

We believe that the creation of a new body, combined with the Sustainable Development, Environment and Planning Bills provide an opportunity to take a fundamentally fresh look. We will therefore be commissioning work to identify how we might bring together existing regimes as far as possible to allow for single permits or consents. One question we will pose in this work will be; what would our approach to implementing EU law look like in the environment field if we had to apply it all anew now rather than having implemented it gradually over thirty years?

In our reviews we will build upon the experience gained through previous work such as the development of the Environmental Permitting system, which has simplified the system of regulatory applications, amendments and variations for both business and the regulator. It also allows regulators to focus resources on medium and high-risk operations whilst continuing to protect the environment and human health.

We believe there is considerable scope for risk based approaches such as has been adopted for drinking water regulation to be applied across other areas of environmental regulation. This could provide the advantage of concentrating interventions and resources where they can make most difference.

We also need to look at our processes. The majority of comments so far received have been about how the law was implemented rather than what that law was. We will review the implementation of current regimes to ensure that the legislation is used in the most effective and efficient way to deliver ecosystem benefits alongside European requirements. In the short term we will further assess recommendations from consultation responses for improved implementation and enforcement of existing legislation to improve environmental outcomes.

The Law Commission held a consultation on its 11th Programme of Law Reform in 2010. The programme includes a wildlife law project that seeks to provide “a modernised and simplified framework” which balances the interests of those subject to the legal regime. The Law Commission intends to consult on its provisional proposals in summer 2012, and is committed to consulting fully with Welsh stakeholders. Much of the existing law is common to both Wales and England. We hope that the project can complement and contribute to the Welsh Government's development of proposals for legislative changes under the Natural Environment Framework. The Law Commission and Welsh Government will work closely together as the Commission develops its proposals.

In taking this thinking forward, we will be mindful of the need for the end result to be simpler, clearer and quicker for those it affects, and that steps taken are commensurate with the risks to ecosystem health. In particular, any changes must be able to provide for sustainable use of ecosystems for social, economic and environmental purposes.

Challenge Box 2 – Water Regulation

The water sector is highly regulated, it is required to comply with a wide range of different requirements and deliver a number of other policy objectives. In many cases these different objectives are competing with one another for limited resources to deliver them and, in some cases, are pulling in opposite directions or driving actions that do not deliver good overall environmental outcomes.

We want to find ways to bring together requirements to enable holistic, long term planning that will deliver better environmental outcomes and allow investment to be planned and funded over a realistic timescale.

The structures within the water industry, for example the periodic price review overseen by Ofwat, provide a mechanism that could enable integrated planning for environmental, economic and social outcomes. We will be exploring possible options in this area in more detail in our Water Policy consultation.

We will review each of our individual policy areas to consider how requirements might be rationalised and integrated as we come to update them. This includes our policy consultation on National Parks and Areas of Outstanding Natural Beauty, our Flood and Coastal Risk Management Strategy, our approach to wildlife licensing and continued progress in developing integrated permitting.

In the light of this programme of work, we will work with the European Commission and European Environment Agency to pilot our proposed approach and then bring forward changes to secondary or primary legislation that will implement the changes.

Managing Land – Agriculture, Forestry and Market instruments

Agriculture

Agriculture, predominantly livestock farming, is by far the principal land use in Wales, accounting for around three-quarters of the land area and has a very important contribution to make to long-term ecosystem health.

In Wales, we have designed our land management scheme, Glastir to reward farmers for the delivery of specific environmental goods and services; aimed at combating climate change, improving water, soil and habitat management, and maintaining and enhancing biodiversity, as well as the development and management of woodland on farms.

The higher level or ‘targeted element’ of Glastir is intended to deliver significant improvements to the environmental status relating to water, soils, habitats and species that might also require changes to current agricultural practices. In order to achieve these specific improvements and outcomes, financial support from the Welsh Government will be targeted at locations where action will lead to the required result.

The Rural Development Plan for Wales will continue to be a key mechanism for delivering the new approach to land and water management. We want a strong productive farming sector producing high quality produce to meet the ever rising demand for food. Our approach recognises the role of farming and the need to encourage farmers to diversify income by paying for management of the environment where appropriate opportunities arise.

At present, we are limited by European Commission requirements that payment for farm-based land management actions must reflect costs incurred and income foregone. As we learn more about the full societal value of the ecosystems that farmers manage, it may become clear that such services are under-provided under the current arrangements. In that event we would use the insights from applying the ecosystem approach to argue for a more economically rational regime for paying farmers and land managers for delivery of environmental outcomes.

A vision for rural Wales was agreed with farmers unions and others in Spring 2011 as part of a series of the 'Living Wales' workshops¹⁴:

Thriving rural communities with profitable businesses as part of a sustainable environment, where society values ecosystem services such as food, timber, water, etc provided by a well-managed Welsh countryside.

Challenge Box 3 – Tackling Diffuse Pollution

This is a common problem in urban areas, and the assessment of our river and water quality under the Water Framework Directive has made the total impact of diffuse pollution from a range of sources clearer. Land use management practices, in different forms, have a significant impact including direct rural and agricultural pollution, forestry and land drainage. It is clear that we need to take a holistic approach that addresses the different sources of pollution.

The Environment Agency has carried out detailed river walks in three rural catchments highlighting the issues leading to failures in those catchments. These results make clear the significant role that land management and farming practice do play in causing diffuse pollution.

Changing farming practices, such as appropriate fencing off waterways from animals and changing the way slurries and fertilisers are applied, can help to reduce diffuse pollution while potentially also reducing long-term costs for farmers. Some of these practices are long standing and there is a significant engagement and behaviour change component to the action that we need to take alongside clear, effective regulation and appropriate incentives.

Sustainable Development principles underpin all aspects of the current Rural Development Plan with significant resources (some 71%) targeted at land management. The next Rural Development Plan (2014-20) will have a similar focus. Sustainable Development will also be a key consideration in how all the European Programmes work together under the new Common Strategic Framework.

Forestry

Our strategy for woodlands and trees, **Woodlands for Wales** provides a good start in seeking to strike a new balance between the directly and indirectly productive aspects of forestry in Wales. We will look to build on this in the light of growing experience with the ecosystem approach.

The expertise of foresters in long term planning and management of land, together with the prospect of considerable growth in woodland creation to deliver climate regulation and many other objectives will be a central element to natural resource management.

¹⁴ The 'Living Wales' workshops are available on request from: nature.conservation@wales.gsi.gov.uk.

As with agriculture, there are genuine opportunities for the market to ‘pay for ecosystem health and services’. Subject to compliance with relevant European obligations, examples might include; water companies improving water quality by investing in woodland creation or woodland management around reservoirs and in catchments or corporate sponsors investing in woodland creation as a recognised method for sequestering carbon emissions. We will support innovation in this area, to help achieve improved delivery of our policy aspirations by a wider range of stakeholders. We also see a continuing role for forestry grant schemes to provide the right incentives for positive woodland management and improve the competitiveness and economic performance of our forestry sector.

We also have the Welsh Government’s own woodland estate, which amounts to approximately 125,000 hectares (6% of the land area of Wales) on which to further explore the challenges of delivering an ecosystem approach in practical terms. This resource is already providing benefits for Wales but we are committed to the idea of more active management of our estate so that we can further develop ecosystem service benefits in the coming years.

Market Instruments

Most of the costs of poor land management are currently not captured financially, even though their burden on the public and the public sector can be substantial (e.g. through flooding); likewise positive values of land management to society are often currently not captured financially. This means there are very few incentives to manage land more sustainably for wider purposes. There is considerable opportunity to capture financial benefits for land managers if appropriate and effective systems of economic regulation can be put in place. In particular, there is potential value in water and carbon management as an income source, and we will explore the opportunities for reform in the context of relevant European and other requirements.

Challenge Box 4 – Soil Carbon

Welsh soils hold a significant stock of carbon, cycle nutrients essential for plant growth and buffer and dilute pollution. Ensuring that carbon remains in our soils by keeping our uplands wet, and ideally trapping more carbon by re-wetting areas that have been drained, rather than have carbon escape to the atmosphere, is a key climate change policy aim but one that will become more difficult as we experience drier weather.

Done well, action on upland wetlands can also help to address water quantity and quality, enhance the prospects for nature and provide benefits for land managers.

By taking an ecosystem approach to water management (quantity and quality) we open up the prospect of more payments for land management where that is appropriate and will provide a more cost-effective route to securing improvements. This will also secure positive outcomes for the water industry. We will continue work with Ofwat and the water companies to implement the approach in the current investment round and to ensure that these options are fully reflected in future investment rounds.

We will explore with partners new opportunities for managing carbon that could attract future investment from carbon markets, including building on the Forestry Carbon Code.

Identifying new ways of working with natural processes will allow greater emphasis on positive investment in the environment, including large scale habitat creation and restoration. It should also reduce total costs in identifying the best answer to a particular pressure by being able to look wider than a single regulatory regime. Opportunities will be provided for new or existing businesses to get involved and we will specifically consider the potential role of 'commuted payments' such as offsetting and conservation credits where these can offer the best solution.

6. The Environmental Planning Framework and Designations

As we have seen, the context for decision-making on the use of natural resources is provided by a range of different nature, environmental and landscape designations, management plans and regulatory consents. These have grown in extent and complexity over recent years and provide a patchwork of different demands and constraints. As we move to more unified delivery under an ecosystem approach, we are likely to identify the need for more fundamental changes to our current systems.

We believe a central element will be to develop integrated local resource management planning to inform the sustainable use of our natural resources as a whole. The planning would be the responsibility of the new body and would aim to integrate rather than add to existing management plans and to provide context for regulatory and development planning decisions. This will be set alongside a more strategic approach to the role of designations informed by both national and local resource management priorities.

In this section, we explore further developments of this thinking and how we will test whether the proposals are taking us in the right direction.

Resource management planning

In order to be able to assess the wider environmental issues and outcomes coherently, environmental regulators and managers will need a common framework for decision-making. In order to provide this common framework, we believe that we will need to develop a clear spatial context for management of natural resources as a whole.

At the local level, we propose to test how best to make the connections between existing local environmental plans and designations and identify new opportunities and approaches by developing a series of area pilots, operated by statutory delivery bodies in partnership with local stakeholders.

We would aim to provide a consistent framework for the statutory bodies' decisions, ensuring that any tensions between potentially competing aims are as far as possible resolved up front. Adopting a coherent spatial approach could provide a new opportunity to engage with local communities and landowners on what matters to them about the places in which they live and work and their aspirations for the future.

In the light of initial pilots, we will consider what the future framework should be to guide local resource management. This could range from the use of insights into ecosystem functions within existing regimes, or a published local operational plan to inform the work of our statutory delivery bodies, or a single statutory local resource management plan replacing or integrating a range of existing environmental plans. It could be a wider statutory plan that could also have a formal status in decision making.

The current approaches are set out in law, many at the EU level, so we will need to ensure that any new approach will still meet EU requirements. The current approaches work to different timescales, spatial patterns and levels of detail, so the pilots will also identify specific barriers to taking a more joined-up approach and a timetable for change.

The pilots will develop thinking for a future Environment Bill and in particular the extent to which it might be possible to combine existing systems into a new approach in law.

In piloting this approach, we are very mindful that all our existing plans and processes are setting a context for individual landowners and decision-makers. It will be their decisions about the future use of land and sea that will be crucial.

The new approach needs to be clearly driven by identifying opportunities for the sustainable use of that land and water in partnership with landowners, farmers, fishermen, businesses and local communities.

Setting a national context

Local resource management planning will help decision-makers to connect competing demands at the local level. We believe that we will also need to bring together a coherent context at the national level to guide a joined-up approach. This would ensure that each of our individual environmental aims are set in the context of the others and are relevant to national targets and objectives.

We currently produce a number of national environmental plans and policies that set a spatial context for decisions about the environment but we do not bring these together into a single framework – although the existing Wales Spatial Plan does seek to provide a broad context for decisions.

Our main spatial policies in the environment currently cover renewable energy, flooding, water quality and resources, waste infrastructure, landscape and nature conservation. We propose to explore the scope for a single spatial framework for natural resource planning in Wales, bringing together this existing work, resolving conflicting aims and identifying opportunities for improved outcomes by linking common aims more clearly.

We would aim to set out priorities for these issues clearly at the national level so as to provide greater clarity for developers, investors and decision-makers. Set alongside our proposed new National Infrastructure Plan for capital projects this would bring together and set out strategic priorities for major infrastructure in Wales.

Countries such as The Netherlands have a long track record of this form of national resource planning¹⁵ and we will draw on international experience in considering how best to take forward our approach. The approach is likely to parallel that which we are already developing for Marine Spatial Planning and we will need to consider the extent to which the two plans could be linked.

Potentially important roles for a new national resource plan include informing national infrastructure planning and providing a framework for investment in positive environmental improvement, including providing certainty for the use of new market instruments where appropriate opportunities arise (see Market Instruments in section 5).

This will be particularly important as climate change and other inescapable impacts mean we will increasingly need to find new places for habitats to replace those which will be lost and to help species move and adapt to change. Positive habitat creation is likely to be an important way of tackling longer term pressures on species¹⁶.

Challenge Box 5 – Flood Risk and Coastal Risk Management

With increasing pressures from our changing climate, we are looking at fundamentally different approaches to managing flood and coastal erosion risk. Traditional defences, while remaining part of our armoury, risk putting the communities behind them at a greater threat when flooding does occur. We are therefore putting much greater emphasis on the management of the flood risk as whole, starting with retaining more water in uplands and slowing its rate of movement, allowing more areas of lowland to flood naturally to dissipate impacts. We are also addressing the causes of urban surface water flooding by making urban areas more permeable and promoting sustainable drainage systems to take excess water out of the drains.

A national resource management plan could also identify key environmental constraints that need to be addressed in order to enable sustainable exploitation of socio-economic opportunities. By investing in measures which would increase the capacity of key ecosystems, we could reduce pressures on those which may be reaching environmental limits.

A national plan might also provide a firm and well-evidenced basis for taking a regulated approach to appropriate compensatory or off-site measures, as part of development proposals, where that will produce the best environmental outcome at least cost.

We would aim to scope a national resource management plan in 2013 with a view to this forming an important part of the context for post 2014 EU programmes. These would focus on the EU2020 objectives of sustainable growth, resource efficiency and addressing climate change alongside the target to; 'halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020 and restore them, in so far as feasible, while stepping up our contribution to averting global biodiversity loss.'

¹⁵ <http://english.verkeerenwaterstaat.nl/english/topics/spatial-planning/>

¹⁶ www.ukbap.org.uk/Library/BRIG/CBCCGuidance.pdf

The interface with land use planning

One of the important challenges in taking forward the new approach is the interface of environmental regimes with the land use planning system.

At present, the town and country planning system is an important arbiter on a number of environmental areas as it is the system which grants the principal regulatory consent (i.e. planning permission) for development of land. The use of land for agricultural and forestry purposes is outside the scope of planning control although proposals for any change of use of land currently used for agriculture or forestry will normally require planning permission. Proposals for building, engineering and other operations will also often require permission. As town and country planning legislation extends down to low water mark, it does not currently apply offshore.

Difficulties can arise when both land use and environmental consents are required or where no planning permission is required but there are impacts on the natural environment. We propose to look at the boundaries of environmental systems and land use planning to make sure that decisions are taken coherently and by the most appropriate part of the system. The aim would be to simplify and to make sure necessary controls are effective.

In the longer term we will consider the relationship between environmental regulation and planning decisions and how these could either work better together or where a decision might better be taken primarily by one or other system.

As we develop natural resource management planning, we will need to consider the future legal status of the resulting plans, including whether they should be given a specific status in relation to the land use planning system and/or environmental management regimes. There are potential advantages to giving a formal status to resource plans to ensure they are given due weight in deciding on the future use of our land and water. However this will have implications for the way they are prepared and the level of detail at which they operate.

Marine Spatial Planning is a recent example of the application of formal status to plans of this type; public authorities' authorisation and enforcement decisions affecting the UK marine area must normally be taken in accordance with relevant marine policy documents and authorities must have regard to those documents when taking any other actions relating to the UK marine area¹⁷.

¹⁷ See Marine and Coastal Access Act 2009, sections 58 and 59.

Challenge Box 6 – Managing High-Pressure Environments

We have a number of local environments, especially on our industrial south coast, where the combination of natural and human-induced pressures is pushing the limits of existing environmental management approaches.

For example, in Port Talbot management of air quality is challenging because of a combination of atmospheric conditions and the variety of different sources of pollutant emissions from industrial processes, transport and construction, as well as the impact of pollution from elsewhere in Europe.

Addressing these issues requires an approach that works beyond conventional individual regulatory regimes to look at the outcomes for the environment as a whole and potentially innovative ways of reducing pressures.

An independent advisory group has recently been set up by the Welsh Government to review the current land use planning system and consider how best to deliver planning services in the future. This group will help provide an evidence base for the proposed Planning Bill which will focus on improvements to the structure for delivery of planning functions as they currently exist. The Natural Environment Framework Programme will inform this work and outcomes from the advisory group will feed into the Natural Environment Framework Programme.

In addition the Welsh Government will work with UK Government Departments to ensure that the Natural Environment Framework is taken into consideration with respect to decision making on non-devolved matters such as development consent orders for nationally significant infrastructure projects under the Planning Act 2008.

Designations

Some designations are required by European Directives or international instruments. However within the context of our international and European obligations, we believe there is scope for streamlining the current designations (Annex A).

Appropriate protection for habitat and species will remain a fundamental building block of any new approach but we will want to look at how the current systems may need to change to deliver better environmental enhancement, tackle increasing pressures and support multiple outcomes in a dynamic environment.

We believe the overall aim of designations should in future be focused on helping to deliver greater resilience and diversity for the whole of the Welsh environment, not only to identify and protect specific examples of quality environments. In the first instance this means considering how we use designations strategically for positive habitat and species benefits as part of an ecosystem approach.

We also need to consider the relative role of designations, which has long been a principal tool of nature conservation, alongside the much wider set of incentives and regulatory measures that are available to us.

In developing our spatial thinking, we will commission work in 2012 to consider how designations might be re-aligned, updated or rationalised to improve their ability to deliver outcomes for the environment.

As part of this work, we will consult on a refreshed policy statement for National Parks and Areas of Outstanding Natural Beauty later this year, drawing out the potential implications of taking an ecosystem approach. A review of the delivery of planning services within National Parks and AONBs will report in spring 2012.

Challenge Box 7 – Declining Bird Populations

Much of our native wildlife is declining. Charismatic species such as the curlew have declined markedly within our current generation. These declines may be largely the result of persistent loss and fragmentation of suitable habitat driven primarily by land-use change and incremental changes to management practices.

In order to address these declines, we are likely to need a range of interventions beyond the traditional habitat designations and agricultural funding, as well as greatly improved understanding of what within the whole ecosystem is leading to the pressures.

The new framework will require us to adopt the flexible management needed to retain critical ecological resources (adaptive management), improve our understanding of what within the whole ecosystem is leading to the pressures and to look for opportunities to integrate action for species into wider actions, such as those to manage flood risk, water resources or carbon reserves.

We will need to develop our approach to rationalisation of designations by working closely with the European Commission. The outcome of this work will form an important part of new legislation. This will be based on positively securing wider resilience and diversity rather than placing environmental protection in a role, where it is too often placed, in direct opposition to development.

Marine planning

Marine Spatial Planning is already framed within an ecosystem approach. We will look to bring lessons from the marine systems to terrestrial work (and vice versa) and explore ways to ensure coherence between marine and coastal planning as part of the development of natural resource planning.

Our position is set out in ***Our Seas – a Shared Resource*** (2009) and taken forward by the ***Marine Policy Statement*** and our consultation document ***Achieving Sustainable Development for Welsh Seas: Our Approach to Marine Planning in Wales*** (2011). We are committed to the UK vision for ‘clean, healthy, safe, productive and biologically diverse oceans and seas’ and the UK high level marine objectives for achieving this vision, which set out the broad outcomes for the UK marine area, and reflect the principles of sustainable development.

Marine planning now has its own basis for the ecosystem approach, as set out in the UK Marine Policy Statement and derived from the requirements of the Marine Strategy Framework Directive (2008/56/EC, transposed for the UK by the Marine Strategy Regulations 2010). This means an approach which satisfies the following conditions:

- ensures that the collective pressure of human activities is kept within the levels compatible with the achievement of good environmental status (as defined by the Directive);
- does not compromise the capacity of marine ecosystems to respond to human-induced changes; and
- enables the sustainable use of marine goods and services by present and future generations.

As proposed in the consultation ***Achieving Sustainable Development for Welsh Seas: Our Approach to Marine Planning in Wales***, we intend developing a national marine plan for the Welsh inshore area and a national marine plan for the Welsh offshore area. We will also consider as part of the Natural Environment Framework, whether more localised marine plans would be useful in future years.

A key aim of marine planning is to provide a practical integrated policy framework for decision making in the marine area, particularly regulatory decisions which generally already have to be made in accordance with the Marine Policy Statement. We will look to align this with the developing approach to terrestrial natural resource management.

We believe a clearer spatial approach to environmental management will be much more effective in securing a truly sustainable approach to the use of our natural resources.

7. Evidence

Overview

Wales is fortunate in having relatively widely available information on the status and trends of much of its natural environment. We have a complete survey of our terrestrial habitats, now being repeated using remote sensing, and Wales is the only country in Europe to have mapped its intertidal habitats – but there remain gaps in our knowledge, particularly in the marine environment.

We know more about species and habitats on protected sites than outside them and more about ‘popular’ groups such as birds and higher plants than about less popular or less obvious ones. We are also aware of many of the pressures on our natural environment and are starting to develop a better understand of the consequences of biodiversity change on the services and benefits to society. But there is still a great deal we do not understand.

One of the challenges for decision making is around the level of specific evidence that we have to inform a decision. For example, in some cases we have to rely on proxy or modelled data to assess the risk of harm in a particular catchment or stretch of river. Whilst practical limitations on gathering and assessing evidence must be recognised, we want to develop an approach to evidence that means that decisions are based more frequently on knowledge about the real impacts in a particular area.

Challenge Box 8 – Shellfish Health

The Environment Agency Wales has been leading a multi-stakeholder study of the causes of cockle mortality in the Burry Inlet off Llanelli.

The second phase of this work is nearing completion and has identified a range of pressures and found that some of them, such as changes in water quality, are less significant than first feared.

Taking forward work to strengthen the health of the fishery will require a range of approaches across the different regulatory regimes, including potential piloting of different approaches in different parts of the fisheries to see which are most effective in helping the cockles reach maturity.

We will continue to work with our partners, statutory bodies, academia and wider research providers including the UK Government to discuss and develop an appropriate evidence base for the Natural Environment Framework through for example the work of the Joint Nature Conservation Committee¹⁸ and the Wales Environment Research Hub¹⁹. An assessment of research needs in relation to the Wales Environment Strategy has been carried out by the Wales Environment Research Hub (2009)²⁰.

Geographical information

Geographical information systems allow a large amount of data to be shown together on a geographical basis and will be a vital component of the new work. Maximising access, analysis and use of such information for the public and organisations within Wales is crucial. Wherever possible we will improve inter-operability of the systems of the different bodies and the availability of data to be presented and interrogated publicly.

Monitoring and Surveillance

We have a developed network of monitoring stations for different elements of the environment, coupled with direct engagement and monitoring of performance with our funded schemes such as the agri-environment schemes. A key challenge will be to direct the resources we have towards what is most important for Wales, rather than different organisations pursuing particular issues separately.

¹⁸ <http://jncc.defra.gov.uk/>.

¹⁹ <http://www.werh.org/nef.php.en>.

²⁰ <http://www.werh.org/documents/REVIEW5.pdf>.

Volunteer recorders play an important role in information gathering and assessment in Wales. A key element of the new approach will be an increased emphasis on practical evidence gathering; getting practitioners out into the environment to find out what is happening and take evidence based action as a result.

For example, in the context of the Water Framework Directive, Environment Agency officers have recently taken time and resources to physically walk key catchments to track sources of diffuse pollution and have then been able to take action based on actual evidence of what was happening on the ground. We want to expand this type of approach and harness the expertise and local knowledge of partner organisations to help understand the real issues on the ground and help deliver solutions. At present the Environment Agency is exploring proposals from Afonydd Cymru on joint working in relation to the Water Framework Directive.

Tapping into the expertise and commitment of local staff and other partners in this way can also help to engage communities more widely in stewardship of their local environment.

This approach will work best in combination with technology which can be used to assist in strengthening our monitoring of the performance of the underlying ecosystem in addition to providing compliance with internationally required standards and requirements. Remote sensing by aircraft or satellite has already been applied to improve our understanding of land cover in Wales and we would expect to see greater use of these techniques to strengthen our knowledge of wider environmental performance and increase our knowledge of the marine environment.

We will review the totality of current monitoring and surveillance as part of the Natural Environment Framework to ensure it adequately provides strategic as well as specific information.

Working with the Natural Environment Framework external reference group and the Sustainable Futures Commissioner, we will revisit the existing targets and indicators from the Environment Strategy for Wales to ensure that these are consistent with the ecosystem approach.

In developing a more risk-based approach to appropriate decisions, as we have suggested above under *regulation*, it will be important to build monitoring into the implementation of projects. This will be especially important in situations where there are some inevitable limitations on our evidence base such as in the marine environment. In these circumstances, monitoring requirements might form part of time-limited consents or designations. It will also be important to build evidence on relative resilience to change, both physical and climatic, as resilience will be a key test in future policy.

8. Involving People and Communities

We will continue to engage people in the detailed work of developing and delivering the new framework, both at the national and local level. The approach will only work on the ground with the full engagement and commitment of all stakeholders and partners, including local people, land managers, farmers, foresters, planners,

charities, businesses, third sector organisations and developers, key influencers and decision makers, interest groups, local authority elected Members and other community leaders.

We will continue to work closely with all stakeholders that are active in the marine environment to strengthen representative engagement on marine planning policy and to encourage the industries who use marine resources to take sustainable approaches based on resilient ecosystems.

As part of the Natural Environment Framework programme, we have established an external reference group to help advise on and share ownership of the new approach²¹. This draws on a wide range of interested sectors to ensure it represents all the pillars of sustainable development and to help the work to be fully informed by environmental, economic and social concerns.

We will explore the scope to use new geographical systems, coupled with modern mobile technology, to encourage people to collaborate in recording information on natural resources to inform management plans. The success of the **People's Collection** for online history shows the potential of the medium to engage everyone in Wales with their environment in this way. We will use the launch of the all-Wales coastal path next May as a platform for widespread public involvement in the value of our natural environment.

We will continue to work with people and communities to encourage positive choices that will promote more sustainable choices in our consumption and behaviours.

Measures to conserve natural resources are more likely to succeed if local communities have understanding and ownership of them, share the benefits, contribute their knowledge and are involved in decisions.

We will work with partners to identify ways in which we can reconnect people and communities with the natural environment.

9. GOVERNMENT

We will need to ensure that underpinning government arrangements for decisions on the natural environment are fit for purpose. At present these often share the characteristics of the wider system in looking at different aspects in isolation.

Welsh Government policy integration

To help ensure that all our actions are based on an understanding of ecosystems and their services we have developed a policy tool to inform decision makers. The Natural Environment Framework basic decision support tool will be used across government in order to build consideration of ecosystems and their services into emerging policy, plans, programmes or projects. The tool will be an integral part of

²¹ See Terms of Reference and Information Flow Diagram at <http://wales.gov.uk/topics/environmentcountryside/consmanagement/nef/publications/?lang=en>.

the new arrangements which will be implemented and monitored by the Welsh Government Delivery Unit.

The tool uses an ecosystem approach to link the Welsh Government's five principles of sustainable development into a simple framework for achieving integrated, multiple outcomes, in line with the statutory duty of the Welsh Government to prepare, review and report on its Sustainable Development Scheme 'One Wales: One Planet'²².

The Welsh Government will work with UK Government Departments to ensure that the Natural Environment Framework is given appropriate consideration with respect to decision making on non-devolved issues.

Clear duties

There are no specific duties placed on public bodies to consider ecosystem impacts. Instead there are a series of specific duties across a range of legislation which have varying degrees of connection with ecosystem impacts and are all expressed in different terms. These include not only environmental duties but also wider sustainability and government duties such as the 'general duty to improve' introduced by the Local Government (Wales) Measure 2009.

A specific example identified in feedback so far is the need for strengthening and clarification of the duty on public bodies under the Natural Environment and Rural Communities Act 2006 section 40.

In developing the proposed Bills over the next few years, we want to rationalise and simplify existing duties on public bodies where the opportunity arises to do so. We believe there could be scope to replace or integrate a number of detailed duties with an overarching new sustainable development duty – reflecting our commitment to sustainable development as our central organising principle for government.

We will work with WLGA, WAO and others to develop specific proposals for consultation next year as part of the preparation for the Sustainable Development Bill and alongside the Welsh Government's wider work on simplification. We will ensure that the thinking and development of proposals to take forward the management of the natural environment continue to inform the thinking on the Sustainable Development Bill, and *vice versa*, so that we have a single, coherent and consistent approach to both agendas.

Statutory Assessments

Current formal assessment approaches are intended to identify impacts of major decisions on the environment. Over recent years we have moved towards a more cohesive look at the full range of impacts when undertaking strategic appraisals to more fully ensure that the environment is considered alongside social and economic impacts. The opportunity now is to consider how this might evolve to reflect an ecosystem approach.

²² See Vision at: www.wales.gov.uk/livingwales.

We will review current approaches to test them against the emerging new understanding. We will also explore the potential benefits of establishing a core Strategic Environment Appraisal team within government, perhaps on the model of that of the Scottish Government, to develop and drive new and consistent approaches.

We will consider how we might draw together various environmental assessments – such as Strategic Environmental Assessment, Environmental Impact Assessment, appropriate assessment under the Habitats Directive and others including Health Impact Assessment, Economic and Equality Impact Assessments – under an overall Sustainable Development Framework with a strong ecosystem approach at its core.

Some of these assessments implement key EU Environmental Directives, and any reforms will have to ensure that the objectives of those Directives continue to be delivered. Nevertheless, we believe that there is scope to join up and rationalise these often separate processes. Our aim would be to ensure that they integrate ecosystem sustainability issues from the outset in order to protect the supporting, provisioning, regulating and cultural services provided by ecosystems.

Such an approach also lends itself more readily to the support of plan, programme and project development. This would improve the extent to which the assessment process can shape the plan, programme or project while it is still under consideration, rather than being merely an assessment of separately formed proposals after the fact.

Integration of policy and delivery across public services

The policies, decisions and actions of public service organisations have major impacts on ecosystems. The Welsh Government's approach to public service reform, including local single integration plans and the new public service regional footprint, will strongly support the collaborative spatial thinking and delivery required by the ecosystem approach. The steps we are taking to improve local democratic scrutiny will also support more integrated planning and implementation at this level.

Local government, the National Health Service of Wales and the other major public service partners will have a crucial role in devising and implementing ecosystem approaches through housing, public health, education, regulation and permitting and other areas. For example, educational bodies and institutions can make a substantive contribution through pursuing the Education for Sustainable Development and Global Citizenship agenda.

We will continue to work with local authorities and the Welsh Local Government Association and other public service partners, to integrate an ecosystem approach into their work on sustainable development, including working with the Wales Audit Office (WAO).

We will also continue to pursue opportunities to link access to green space such as parks and community woodlands and access to waterways, estuaries and seas with improvements to public health and well-being. In our urban areas, we will look for positive action to increase greening and access to allotment provision in areas with limited access.

International impact

The Welsh Government is committed to playing a full part in meeting EU and international commitments and to working as part of UK and EU in the application of an ecosystem approach, particularly in cases where we have cross-border challenges. We also recognise the role Wales plays in the provision of water, flood regulation and other ecosystem services to England and vice versa.

Wales exports many of its ecosystem impacts to countries who provide us with goods and services. The Stockholm Environment Institute has calculated the average Welsh person's ecological footprint as equivalent to 5.16 global hectares²³. This is the equivalent of 'three-planet living' for the average Welsh citizen. For example, data shows that Wales imports considerably more foodstuffs in all categories than it exports, except in the case of animal feedstuffs. We need to address these impacts and bring lessons from our own experience of ecosystem management to wider international debate.

We will continue to support work through the Welsh Government's *Wales for Africa* programme, the network of regional governments for Sustainable Development²⁴ and The Climate Group that will support regional and international action on this issue. We will foster public actions that support these aims and will continue to learn from other countries around the world.

The Natural Environment Framework will contribute directly to our existing commitment to **One Planet Living** to ensure that we are supporting improved natural resource use at home and abroad.

Next Steps

We want your input and your views either in writing (by post or email) or by participating in our future events. If you have specific evidence that would be especially welcome.

For more information on how you can get involved or take action to help the environment see: www.wales.gov.uk/livingwales.

For more information or to arrange a workshop please contact: nature.conservation@wales.gsi.gov.uk

Following the consultation period on this document we will consider your responses alongside data from other recent consultations to develop a coordinated plan of action. An indication of the possible timetable for the next phase of the programme can be found in Annex B.

²³ Welsh Assembly Government Sustainable Development Indicator.

²⁴ <http://www.nrg4sd.org/>.

Consultation questions:

We welcome responses to this Green Paper in order to help shape our future legislative proposals. We want to know whether there is the appetite for a radical approach and whether the building blocks we propose are the right ones. You may wish to use the following questions to structure your response, but we welcome responses on any other issues you think are relevant:

General Questions

Please indicate whether you agree, disagree or need more information for each of the following points:

- Developing a new approach to environmental protection based on ecosystems?
- Developing the concept of local resource management planning for natural resources to provide a simpler approach for stakeholders?
- Developing a national resource management plan?
- Streamlining regulatory regimes to achieve better outcomes for the environment and simpler systems for people?
- Developing interactive geographical information systems to make information more accessible and engage people more widely?
- Developing our approach to monitoring and data gathering to increase the emphasis on practical evidence gathering?

Detailed questions:

- If you agree or disagree with the proposals above, what are your main reasons?
- What do you think should be the main priorities for our work in simplifying and integrating designations, policies and regulatory regimes?
- What would you define as the main success criteria for natural resource management?
- What would be the success factors for the new Welsh Single Body in delivering the new approach?
- Have we reflected the opportunities for business, enterprise and economic development with the natural environment? If not, what have we missed?
- Have we reflected the opportunities for social and well-being benefits for the people of Wales with the natural environment? If not, what aspects have we missed?
- Where should the boundaries lie between land use planning and environmental management planning and consenting?
- What skills and tools would we need to make the new approach successful? Can you help us develop these?

- How could we ensure that offshore (marine) and onshore resource management plans work together?
- How could national or local resource management plans help preparation of local development plans?
- Should local ecosystems outcomes be included in local single integrated plans?
- What steps could we take to create a market in those environmental services that are currently undervalued?
- What other changes to legislation or systems are needed?

Various other annexes and background documents, including a list of definitions are available via the web.

Annex A

Table 1: Wales' current distribution of land and water

UK NEA Broad Habitat	Total area (ha)	Percentage (%) of terrestrial area	Percentage (%) of total area
Mountains, Moorlands & Heaths	227,735	11	54.86
Semi-natural Grasslands	270,002	13	
Enclosed Farmland	1,066,998	52	
Woodlands	289,216	14	
Freshwaters Openwaters, Wetlands & Floodplains	22,770	1	
Urban	94,894	5	
Coastal Margins	56,452	3	45.14
Other	34,292	2	
Marine	1,594,175	-	

Table 2: Illustrative natural environment designations in Wales

Designation	No.	Total area (to nearest 100 hectares)	% of Wales' land area ¹	Primary basis of designation in Wales	Primary objectives of designation
National Parks	3	410,300	19.3	National Parks and Access to the Countryside Act 1949; Environment Act 1995	Landscape designation: conserve and enhance natural beauty, wildlife and cultural heritage and promote public enjoyment and understanding
Areas of Outstanding Natural Beauty	5	84,400	4	Countryside and Rights of Way Act 2000	Landscape designation: conserve and enhance natural beauty
Sites of Special Scientific Interest	1,047	260,600	12.3	Wildlife and Countryside Act 1981	Conserve and enhance flora, fauna, or geological or physiographical features of special interest: principal nature conservation designation in Wales

Designation	No.	Total area (to nearest 100 hectares)	% of Wales' land area¹	Primary basis of designation in Wales	Primary objectives of designation
National Nature Reserves (including 1 Marine Nature Reserve)	73	26,900	1.2	Wildlife and Countryside Act 1981	Preserve flora, fauna and other features of national special interest and provide opportunities for research and study
Local Nature Reserves	82	5,900	0.3	National Parks and Access to the Countryside Act 1949	Preserve flora, fauna and other features of local special interest and provide opportunities for research and study
Special Areas of Conservation	92	628,800 ²	7.5	EU Habitats Directive	Maintain and restore, at favourable conservation status, habitats and species of European importance
Special Protection Areas	20	213,400 ³	4.8	EU Birds Directive	
Ramsar sites	10	27,100	1.1	UN Ramsar Convention	Conserve and ensure "wise use" of wetlands of international importance
Nitrate Vulnerable Zones				EU Nitrates Directive	Identify areas vulnerable to nitrate pollution in which mitigating action is required
Designated Bathing Waters	88			EU Bathing Waters Directive	Ensure effective monitoring, classification and management of bathing water quality
Drinking Water Protected areas				EU Water Framework Directive	Identify areas where water is abstracted for drinking water purposes and ensure quality of that water
Biosphere Reserve	1			UNESCO programme	Facilitate measures to reconcile conservation of biodiversity with sustainable use
Heritage Coast	14			Non-statutory government initiative based on Countryside Commission recommendations in 1970	Facilitate conservation of natural beauty and public enjoyment and appreciation
Shellfish Waters	26			EU Shellfish Waters Directive	Enable the protection of shellfish populations and maintain shellfish quality
Air Quality Management				Environment Act 1995	Address areas where air quality

Designation	No.	Total area (to nearest 100 hectares)	% of Wales' land area ¹	Primary basis of designation in Wales	Primary objectives of designation
Areas					objectives/standards are not met
World Heritage Sites				UNESCO Convention	Facilitate the protection, conservation and presentation of the cultural and natural heritage
Landscapes of Historic Interest in Wales	58			Non-statutory CCW, Cadw and ICOMOS initiative	Recognise the value of historic landscapes, and raise awareness of their importance

- ¹ Designations often overlap. Excludes marine designations. Percentages given to one decimal place.
- ² 469,600 ha is marine.
- ³ 111,500 ha is marine.

Table 3: Illustrative list of Environmental Plans and Strategies

Plan/strategy title	Basis of plan/strategy	Lead body	Primary purpose of plan/strategy	Extent
Environment Strategy for Wales	Non-statutory national strategy	Welsh Government	Provide strategy for environmental policy	All Wales
River Basin Management Plans	EU Water Framework Directive	EA/Welsh Government	Deliver an integrated approach for the protection and sustainable use of the water environment	All Wales each river basin (three in Wales)
National Flood and Coastal Erosion Risk Management Strategy	Flood and Water Management Act 2010	Welsh Government	Set out national objectives and measures for management of flood and coastal erosion risks	All Wales
Shoreline Management Plans	Not a statutory plan, but forms part of implementation of EU Flood Directive	Coastal Groups, which are local authority-led	Ensure risks of coastal processes are understood and planned for	All Wales coast (four covering Wales)
Catchment Flood Management Plans	Not a statutory plan, but forms part of implementation of EU Flood Directive	Environment Agency	Establish Policies to deliver sustainable flood risk management for the long term.	All Wales on river catchment basis (ten covering parts of Wales)
Local Flood Risk Management	Flood and Water Management Act 2010	Local authorities	Set out objectives and measures to	All Wales covering every local authority

Plan/strategy title	Basis of plan/strategy	Lead body	Primary purpose of plan/strategy	Extent
Strategies			manage local flood and coastal erosion risk	area
Water Resource Management Plans	Water Industry Act 1991	Water Companies	Manage and develop water resources so as to ensure future water supply	All Wales (three covering parts of Wales)
Drought Plans	Water Industry Act 1991	Water Companies	Set out measures for managing drought	All Wales (three covering parts of Wales)
SAC management plans	EU Habitats Directive	Countryside Council for Wales	Set out measures to maintain or restore favourable conservation status	Designated Special Areas of Conservation
Noise maps and action plans	Environmental Noise Directive	Welsh Government/Local authorities	Reduce excessive ambient noise levels	Designated sites
Air Quality action plans	Environment Act 1995	Local authorities	Achieve air quality standards and objectives	Designated air quality management areas
AONB Management Plans	CROW 2000	Local authorities	Further the purposes of the designation	AONBs
Rights of Way Improvement Plans	CROW 2000	Local authority	Improve the rights of way network	All LAs
Forest Management Plans	Non-statutory plans	Forestry Commission	Contribute to sustainable forest management	FC managed forests
Regional Waste Plans	Waste Framework Directive	Local Planning Authorities – working regionally	Provide land use planning framework for waste management	All Wales (3 regions)
National Park Management Plans	Environment Act 1995	National Park Authority	To further the purposes of the designation	National Parks
Local Biodiversity Action Plans	Convention on Biodiversity	Local Authority/Local Partnership	Support UK Biodiversity Action Plan by identifying local priorities	All Wales

Annex B

Proposed Time Line for next Phase of the Natural Environment Framework Programme

Throughout 2012 and early 2013:

- The Natural Environment Framework workshops and presentations will continue to be available. Contact nature.conservation@wales.gsi.gov.uk to arrange one for your department, organisation or association.
- Additional background papers will continue to be made available via the web including; literature review regarding valuing ecosystems; report on effectiveness of current regulatory approaches, Wales' ecosystems services and scales and monitoring and surveillance next steps.
- Marine Conservation Zones: iterative public consultation exercise.
- Development of an integrated approach in sustainability appraisals which embeds an ecosystem approach.
- Collaboration with Law Commission project on Wildlife Legislation.

Early in 2012:

- Consultation on a refreshed policy statement for National Parks and Areas of Outstanding Beauty.
- Consultation on proposals for new single environmental delivery body.
- UK National Ecosystem Assessment Stage II.
- Water Policy Consultation.

Spring 2012:

- Additional background papers available via the web including full set of illustrative examples covering environmental, economic and social significance of Wales' ecosystem.
- Report on review of the delivery of planning services within national parks and AONBs.
- First area pilots start work on the ground.
- Launch of widespread public engagement at Wales Coast Path launch (May).

Summer/Autumn 2012:

- Government Response to ***Sustaining a Living Wales*** Green Paper consultation.

From late 2012 onwards:

- Reviewing implementation of current regimes to ensure effective and efficient delivery.
- Review of each policy area to consider how ecosystem requirements might be integrated as we update them.

Later in 2012:

- Legislation workshop to consider how our implementation of European legislation might look in Wales if it had been possible to design it from scratch to address the full suite of environmental directives and regulations.
- Commission work to begin to consider how designations might be re-designed, updated or linked to improve delivery of environmental outcomes.
- Initial scoping of single spatial framework and national principles for local natural resource planning.
- Development of all Wales engagement including GIS.
- Sustainable Development Bill consultation on legislation to embed sustainable development as the central organising principle in all of our actions across Government and all devolved public bodies.

Spring 2013:

- Proposed vesting date for a new Single Body.
- Commission work to identify how we might bring together existing regimes to allow single permits or consents.
- Planning Bill White Paper Consultation.
- Designate Marine Conservation Zones.

Autumn 2013:

- Sustainable Development Bill: legislation to embed sustainable development as the central organising principle in all of our actions across Government and all devolved public bodies.
- Outcome of Law Commission project on wildlife legislation

Target date – 2014:

- Consultation on national marine plans for inshore and offshore areas.
- Environment White Paper outlining possible legislative changes.

- Sustainable Futures Commissioner revisits the existing targets and indicators from the Environment Strategy for Wales to ensure that these are consistent with the ecosystem approach.
- Review of current monitoring to ensure it is adequately provides strategic as well as specific information.
- Provide a clear spatial context fro regulatory and other decision making.
- Begin designing steps to rationalise and simplify regulatory system to implement new approach.

Target date – 2015:

- Environment Bill.

Target date – 2016:

- Planning Bill.