

Spatial planning meets an ecosystems approach



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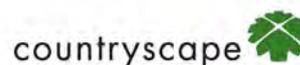
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The Ecosystems Knowledge Network is sponsored by Defra and is being developed by an independent partnership involving the NERC Centre for Ecology and Hydrology, the Natural Capital Initiative, Fabis Consulting, the University of Exeter (Centre for Rural Policy Research) and Countryside.

It is a resource for anyone wanting to share knowledge or learn about the practical benefits of an ecosystems approach. The Network draws together experience from the UK and elsewhere to assist organisations to understand how an ecosystems approach can help us build sustainable communities. It provides the expertise and experience of a growing UK-wide active community.

Opportunities to get involved

There are lots of ways to participate in the Network, which is free to join.

The best starting point is ekn.defra.gov.uk/about/participate, where you will find links to:

- register as a Member and tell us what the Network can do for you;
- a form to propose an activity that is aligned with the aims of the Network. Limited practical and financial assistance is available to support these activities; and
- contact us with details of a relevant project, tool or scheme that will be of interest to other members.

Front cover photo: Ecosystems Knowledge Network members in discussion at the 'Spatial planning and an ecosystems approach' workshop held in Barnstaple on 12th July 2012. © Anita Sedgewick

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Welcome to the second issue of Ecosystems News

Since the first issue in May 2012, the Ecosystems Knowledge Network has grown to include more than 500 people. At the core of the membership are charities, businesses, public agencies and others delivering projects that are applying an ecosystems approach. Others are joining in to find out more about what an ecosystems approach might mean for their work or community.

In each issue of Ecosystems News, we plan to place the spotlight on a topic that is both important to our members and provides a challenge with regard to embedding an ecosystems approach. This time around, we focus on spatial planning, which has recently been brought to the fore in England with the publication of a National Planning Policy Framework. We report on an event that was all about linking spatial planning and an ecosystems approach. This came about in response to a suggestion from Network members in Devon. We hope that the report on this event acts as a stimulus for further debate via the website (see links on Page 12 of this issue).

An ecosystems approach is increasingly recognised as applicable in many contexts, from improving public health to restoring marine habitats. For this reason, the Network team were pleased to be able to follow-up on an invitation from the leaders of the Mayesbrook Climate Change Park project in East London to host a field visit. This allowed members to explore what the approach means in an urban setting. You can read about this – and find a link to further debate – on Pages 21-22.

We welcome contributions from Network members to Ecosystems news and ekn.defra.gov.uk. This issue is no exception in that it includes profiles of projects from Central Scotland and Northern England. It also includes an introduction to new approaches to natural resource management in Wales.

The Network team are keen to enable interaction and exchange of ideas, experience and expertise among members – both in person and via the website. Your suggestions for activities, as well as your ideas for information to share and comments, are all welcome. Please follow the 'How to participate' link at ekn.defra.gov.uk.



Spatial planning meets an ecosystems approach: join the debate

By Robert Fish and Jonathan Porter



One of the prominent themes to have emerged from discussion at the Ecosystem Knowledge Network's Learning Forum back in February 2012 was a concern to explore how an ecosystems approach meshes with other areas of policy development and innovation. What does this approach mean for, say, practitioners working on urban regeneration, or developing health policy, or trying to address social exclusion in their communities? If we are serious about embedding an ecosystems approach into decision making then it seems clear that we will need to 'go native' with these concepts and expose them to scrutiny in professional contexts where working norms and priorities may be entirely different. Participants at the Forum expressed concern that an ecosystems approach might be interpreted by decision makers as an additional set of steps to consider; something therefore best avoided or at least kept at a safe distance. We can't avoid the fact that following the principles of an ecosystems approach brings with it many complexities of understanding and application. This is the case not least because the approach is being propelled forward by a variety of new concepts (e.g. ecosystem services) new techniques (e.g. valuing natural capital) and new models of working (e.g. cross-sectorality and stakeholder participation). This is a heady mix indeed, even for the natural audience of this approach.

"If an ecosystems approach can't speak to the issue of spatial planning then what on earth can it speak to? And if it can't do it now, then when will it?"

The idea that an ecosystems approach provides a powerful way of linking up diverse areas of policy and practice is what lies behind this edition's special focus on spatial planning. Many readers will not need reminding that the National Planning Policy Framework (NPPF) was published in March 2012 and this helpfully points to the need for the planning system to protect and enhance landscapes, natural features, biodiversity and wider ecosystem services. At the same time an ecosystems approach was highlighted by the 2011 Natural Environment White Paper as one way of ensuring the natural environment is protected and enhanced by planning policies. So these are areas of policy development that are speaking to each other, right?

On the 12th July the Network project team, led by Rob Fish and Jonathan Porter, had the pleasure of convening an event on this matter in Devon. The event was held in Barnstaple and let us put on record our thanks to our colleagues in North Devon Council and North Devon UNESCO Biosphere Reserve. The event drew on the practical experiences of a range of local and national stakeholders concerned with understanding the added value of building an ecosystems approach into planning processes and involved a mixture of presentations and group discussion including a real exercise in strategic spatial planning, maps and all. In the materials that follow you will learn some more about the discussion and activities that took place on the day and we invite you to explore our web resources on this topic where you will find other related materials. It's something of a marker of good knowledge exchange that the event raised as many questions as it answered, and so I encourage Network members to pitch in and share their own insights and reactions here on our discussion forum. That's what the Ecosystems Knowledge Network is all about.

It's quite clear that in the issue of spatial planning and the NPPF, an ecosystems approach is presented with an interesting test of its ambitions. If it can't speak to this issue then what on earth can it speak to? And if it can't do it now, then when will it?

The following article '*Uniting spatial planning and an ecosystems approach*' highlights some of the issues raised during the spatial planning event in Devon.

You can also read more and comment on the topic on the [spatial planning pages](#) of the Network website. (<http://ekn.defra.gov.uk/apply/planning>)

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Uniting spatial planning and an ecosystems approach

Highlights of a workshop held in Barnstaple on 12th July

To help Network members assess how an ecosystems approach and spatial planning can work together in practice, the Network team organised a workshop in Barnstaple, North Devon, on 12th July 2012. This brought together 31 Network members representing diverse areas of expertise, including land management, planning and ecology.

North Devon provides a particularly useful setting to explore how an ecosystems approach may help planners in their work. Firstly, it has a unique set of designations for land, sea and sky; the established UNESCO Biosphere Reserve; the first designated Marine Conservation Zone and a Dark Skies Reserve. Secondly, North Devon Council (NDC) is working on a new local plan, which sets planning policies in a local authority area. The local plan will be based on best practice guidance and the NPPF.

During the morning session, NDC's Head of Planning, Mike Kelly, outlined how planning can contribute to and enhance the natural and local environment. Sustaining, rather than eroding, natural capital will ensure that land use creates a coherent and resilient ecological network at a landscape scale. Ecosystem services are mentioned in Paragraph 109 of the NPPF. He stated that while it is easy to take ecosystem services for granted, the cost of providing them by other means will be far more expensive than protecting them in the first place.

"The central thrust of government policy is about sustainable growth so we need to recognise economic opportunities for growth and putting it on a green footing."

Mike Kelly, Head of Planning, North Devon Council.

Mike Kelly explained that the challenge for planners is how to integrate principles and objectives into planning policy in the context of a wider ecosystem services approach, how market and non-market values of ecosystem services are recognised, how opportunities to deliver that value through the planning system are identified and how working at different scales is knitted together.

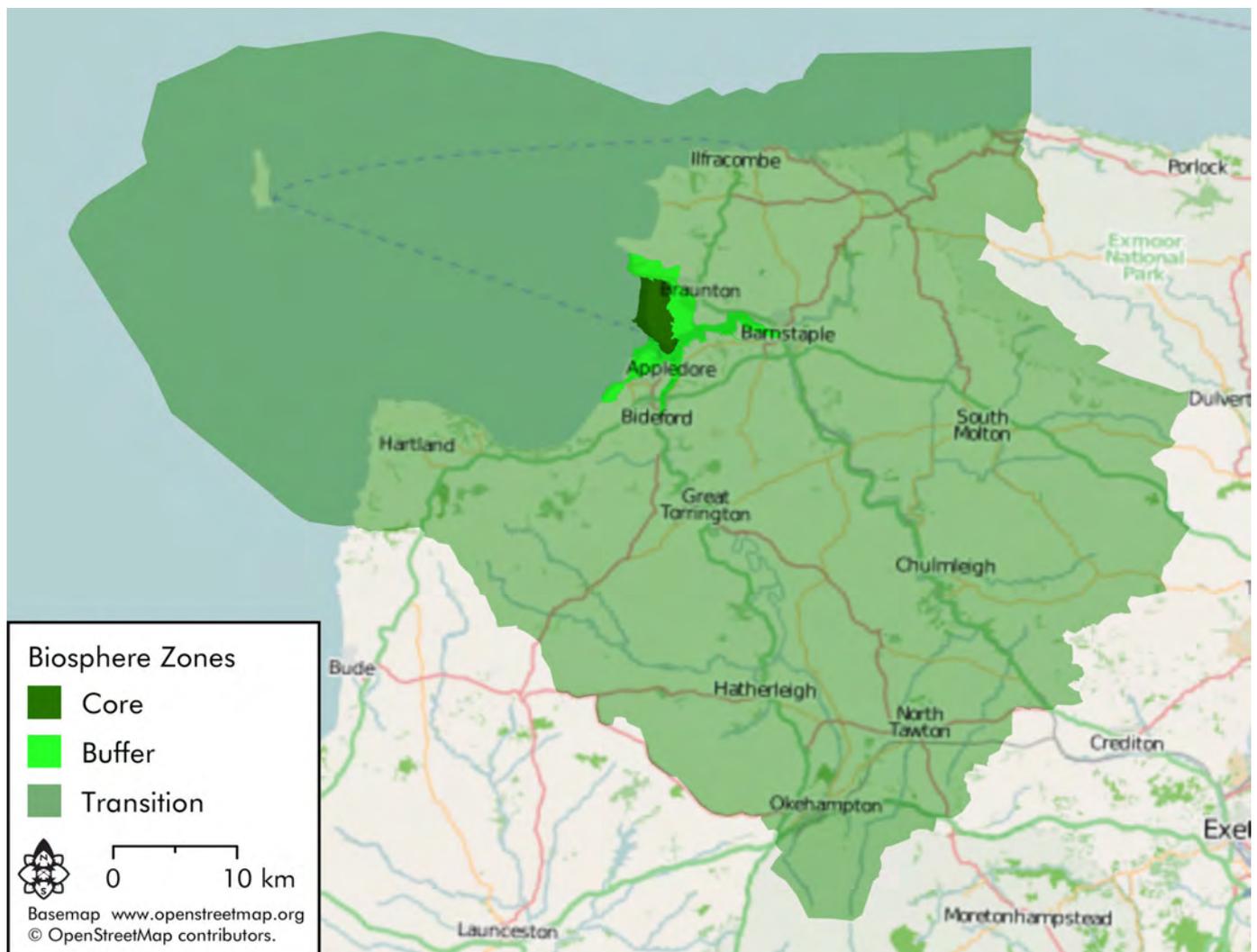


Discussing the challenges of linking spatial planning and an ecosystems approach © Anita Sedgwick, Ecosystems Knowledge Network

"It's not primarily about protecting the natural environment...it's about creating a dynamic relationship between human settlements and the natural environment...and exemplifying sustainable development across an area."

Juliet Bidgood, Vice-chair of North Devon's UNESCO Biosphere Reserve

Vice-chair of North Devon's UNESCO Biosphere Reserve, **Juliet Bidgood**, explained to participants how the area is being managed. Covering 3,850 square kilometres, the Reserve occupies nearly 60% of Devon and is home to 155,000 people. It was designated in 2002 for its mix of landscapes and wildlife, rich cultural heritage and local communities with an interest in its future. As shown in the map below, a 'Core Zone' lies at the heart of the Reserve. Wildlife conservation is the top priority for this area, which includes the famous Braunton Burrows dunes. This is surrounded by a 'Buffer Zone' - primarily the Taw and Torridge Estuary - where activities compatible with maintaining ecosystem function (such as eco-tourism) take place. The rest of the Reserve is a 'Transition Zone', which is a much larger area of land and sea to be managed in line with sustainable development.



Map of North Devon's Biosphere Reserve, UK, with the various parts of the reserve highlighted.

The main land-based industries in this area are agriculture, tourism and related services. The following are among the challenges facing the Reserve:

- Due to its rural character and economic situation, many people living in the area are vulnerable to fuel and food poverty.
- The area included within the Reserve is already facing pressure for more physical and social infrastructure from the existing population, and this will only increase as the population grows. Over the next twenty years, a further 8,000 homes are expected to be built in North Devon and 60 hectares of land will be used for employment opportunities.
- The area included within the Reserve is also at risk from climate change and ecological degradation, with increased flooding and extreme weather events expected in the future. Managing flood risk is a priority in the area; lack of attenuation in the uplands has seen locations such as the village of Umberleigh suffer severe flooding. Increased silt and pollutants running into the local rivers has affected water quality.

These varied challenges have given Biosphere Reserve managers and the local authority an opportunity to take the lead on community and sustainable development, to create local green economies and to use an ecosystem services approach to reduce exposure to risk.

Developing the North Devon Biosphere Reserve

The Reserve is managed by the Biosphere Reserve Partnership; consisting of local authorities, public agencies, forestry, farming and fisheries representatives, business and community groups, arts organisations and education providers. The broad range of partners involved allows them to examine the economic value and environmental function of landscapes and resources at an ecosystem scale. National initiatives such as biodiversity offsetting and Nature Improvement Areas are helping to consolidate site-by-site actions. Understanding and actions can be linked at the landscape, community and individual scales.

Working towards a zero-carbon Biosphere will be helped by developing an economic case for community-owned energy supply; linking 'energy villages' and community woodland projects; and engaging public and private support. The Biosphere Reserve Partnership wants to increase the amount and variety of food grown locally. This will provide people with food that has fewer food miles as well as helping to support the local economy. It also plans to link existing woodlands, create riparian buffer zones to reduce silt run-off and plant steep slopes to attenuate flooding.

The Biosphere Reserve Partnership aims to consolidate and share good practice further through a sustainable community network and Biosphere Learning Laboratory. This will involve engaging business, appointing 'biosphere ambassadors' and initiating 'eco-schools'.

The approach taken in implementing the Biosphere Reserve fits naturally with spatial planning as both are sub-regional. NDC has been taking a landscape-scale approach to planning and has avoided simply drawing a 'red line' around planning application areas. The authority is keen to look at the 'bigger picture'.

At the event in Barnstaple, Alister Scott, Professor of Spatial Planning and Governance at Birmingham City University, described how the different histories, approaches and philosophies of the natural and built environment sectors (see Figure below) mean that these areas do not always connect as well as they could. Spatial planning works across different scales and sectors and covers culture change, making places, partnership working, long-termism, connections, values and inclusion. Ecosystem services endorse the same principles and have some common language.

Alister Scott's team has been investigating whether a meaningful link could be formed between the natural environment 'lens' and built environment 'lens'. As part of this, the team spoke to policy-makers and practitioners in spatial planning, and advocates of an ecosystems approach (including practitioners and researchers). They concluded that both spatial planners and advocates of an ecosystems approach need to stop using sector-specific language and think instead about what they are trying to achieve.

Natural environment lens

1. Incentives
2. Natural Environment White Paper
3. Habitat and landscape
4. Defra
5. Ecosystem approach
6. Classifying and valuing
7. Ecosystem services assessment
8. Landscape scale delivery areas
9. Nature Improvement Areas
10. Local Nature Partnerships

Built environment lens

1. Control
2. National Planning Policy Framework
3. Local and neighbourhood
4. Dept. for Communities and Local Government
5. Spatial Planning
6. Zoning and ordering
7. Sustainability Assessments
8. Development/Neighbourhood Plans
9. Enterprise Zones / Green Belts
10. Local Enterprise Partnerships

Scott, A.J. (2012) Exposing, Exploring and Navigating the built and natural divide in public policy and planning. In Practice (Institute of Ecology and Environmental Management), Edition 75, pages 20-23. Note: some of the initiatives named in the above figure relate to England only. In many cases, parallel schemes apply in other parts of the UK.

During the event, it was clear that in the case of North Devon the local authority already recognises how landscape-scale planting upstream can reduce erosion and pollution downstream. It was also apparent how increased management of woodlands can lead to more alternative fuels being used. Green infrastructure strategies, the future Marine Spatial Plans and land management strategies have all been incorporated into spatial planning considerations.

Some approaches that support ecosystem service delivery, such as green infrastructure, Sustainable Urban Drainage Systems, renewable energy and working wetlands, are already well established but North Devon Council is keen to expand them further. This will create higher standards of energy and water efficiency and will influence water storage and run-off rates both upstream and downstream of development sites.

Of course, many challenges remain in the application of an ecosystems approach in spatial planning. For example:

- Delivery of ecosystem services has to be prioritised as an opportunity, against competing infrastructure demands.
- Land that is beyond the control of planners needs to be secured in order to deliver ecosystem services. For example, given that farming has a strong influence on the quality of land and landscapes, it will be important to involve farmers in delivering an ecosystems approach.

Getting to grips with practical issues

The afternoon session saw participants getting to grips with some of the practical issues of spatial planning using the North Devon UNESCO Biosphere Reserve as a case study.

The purpose of the afternoon exercise was to consider how to secure the long-term sustainability of the Biosphere Reserve's communities and diversify the rural economy, bearing in mind North Devon Council's commitment to develop the area to complement or enhance its high quality environment.



Discussing the challenges of linking spatial planning and an ecosystems approach © Anita Sedgwick, Ecosystems Knowledge Network

Participants were given maps of the area along with cultural and natural designations and Landscape Character Assessments. They were asked how the challenges of spatial planning in the Biosphere Reserve could be tackled, what difference an ecosystems approach could bring and what the key barriers and obstacles would be to the uptake of an ecosystems approach. The full range of ecosystem services that were relevant to spatial planning were considered, including provisioning, regulating, cultural and supporting services.

Participants were asked to focus on where the key 'hotspots' were for the provision of ecosystem services, what further information would be needed to get a better understanding of service provision in the area, where the opportunities were for economic development and how ecosystem service provision could support this. They also discussed where residential and commercial development could be placed to enable ecosystem service provision, where the potential conflicts and trade-offs occurred, and how conflicts could be resolved.

"The whole essence of an ecosystems approach is that biodiversity and geodiversity are working across all services so it underpins everything."

Mark Everard, workshop participant

Not surprisingly, given the variety and number of participants, a wide range of questions and issues were raised. The diversity of the ideas generated shows the huge potential of the ecosystems approach in spatial planning. The following are some examples of the ideas put forward for North Devon:

- Some participants suggested that new housing should be dispersed, not just concentrated in towns. This reflects a shift away from previous approaches, which have focused development on specific areas, increasing the disparity between these areas and less developed ones. Dispersed patches of development in local communities were felt to better meet the needs of those communities.
- Community engagement and education was seen as key by many participants. The Biosphere Reserve could be used as a natural classroom, including a new centre for alternative technology and sustainable management of water cycles. It was felt that educating people would increase their understanding of the Biosphere Reserve and ecosystem as a whole.
- The need for both a local and a landscape-scale approach was explored by participants. In particular, they felt that it is important to start at the local level and make decisions from the bottom up, not from the top down. However, while people value things that are local to them, many participants raised the point that issues such as water quality and flood risk need to be managed at the catchment scale. The point was made that ecosystem services have a wider impact beyond their actual location.
- It was felt that it was more effective to work within natural boundaries such as river systems, even though planning tends to focus on administrative boundaries. However, it is important to recognise that specific areas are important to local people and not just to take a catchment-scale approach.

A full list of the suggestions is available on the Ecosystems Knowledge Network web pages – see link on Page 12 overleaf.

Join the debate!

The recent event in North Devon provided a rich and wide-ranging context for discussion about the relationship between an ecosystems approach and current development in spatial planning.

Presentations from the day are available via the **spatial planning pages** of the Network website (<http://ekn.defra.gov.uk/apply/planning>). These include presentations by:

- Andrew Austen, Head of Planning at North Devon District Council
- Juliet Bidgood, vice-chair of the North Devon UNESCO Biosphere Reserve.
- Alister Scott, Professor of Spatial Planning and Governance at Birmingham City University

We invite all members to continue this debate by sharing their views and experiences on what difference an ecosystems approach might make to spatial planning and what barriers and obstacles might need to be overcome in embedding these principles and objectives into planning policy.

Updates on related initiatives

The **Ecosystems Knowledge Network** website contains information on a wide range of programmes and initiatives that are supporting the embedding of an ecosystems approach throughout the UK. In this issue of Ecosystems News, we provide an update on two of these.

UK National Ecosystem Assessment

By highlighting the value of ecosystem services to society and the economy, the UK National Ecosystem Assessment (UKNEA) is making an important contribution to embedding an ecosystems approach. Following publication of the UK NEA Report in 2011, a programme of follow-on work started in spring 2012. This additional work aims to make knowledge about the status and trends of ecosystem services relevant to decision-making at different spatial scales. One part of the follow-on phase that is particularly valuable for members of the Ecosystem Knowledge Network is an exercise to identify and develop tools for use by a range of key user groups to enable them to make best use of current knowledge and know-how.

Suggestions for how to get involved in, and benefit from, the ongoing work of the UK National Ecosystem Assessment are available at ekn.defra.gov.uk/resources/programmes/uknea.

Local Nature Partnerships and Nature Improvement Areas in England



Thorpe Marsh, situated within the Humberhead Levels Nature Improvement Area. © Mick Townsend.

Local Nature Partnerships (LNPs) and Nature Improvement Areas (NIAs) are being set up in England following last year's Natural Environment White Paper.

With their focus on partnership working and the multiple benefits received from good management of the land, **Local Nature Partnerships** will help to implement an ecosystems approach across diverse landscape types. Many of the LNPs are working across geographic boundaries and administrative borders to find innovative ways of pooling and sharing limited resources. They involve diverse partners, including charities, businesses, local authorities and public agencies.

Forty-one LNPs were announced by Defra this summer. Defra is working with a further nine areas that applied for LNP status, to discuss their potential for taking forward later in 2012.

Twelve **Nature Improvement Areas** (NIAs) have also been established following competition from 76 partnerships across the country. NIAs are focused in areas where there is a lot of opportunity to deliver ecological networks with benefits for both wildlife and people, and where a shared vision among many partners exists, including those from the public and voluntary sectors. The experience and learning from these areas will help to evaluate what works. If they achieve their intended outcomes, Defra hopes to hold a further competition in the next spending review period.

NIAs have been recognised in the National Planning Policy Framework and Defra has recognised a role for Local Nature Partnerships in identifying NIAs and promoting them to local authorities in their areas. Natural England is overseeing the work of the NIA Projects.

Links to web pages that provide more information on NIA's and LNP's are available on the programmes, initiatives and strategies page of the Network website (<http://ekn.defra.gov.uk/resources/programmes/>).

Project profiles

An important part of the Ecosystems Knowledge Network is sharing the experience of projects that are showing what an ecosystems approach means for the management of particular areas of land or marine habitat. In this issue, we profile two of the many projects described on the website.

The Stirling Project (Central Scotland) is tackling a theme introduced at the beginning of this newsletter, namely how is an ecosystems approach embedded in land use decisions? The Keighley and Watersheddles project in Yorkshire illustrates the importance of one of the Ecosystems Knowledge Network's learning themes: bringing people together to value ecosystem services in a way that informs decision making.

To share your experience of a place-based project that demonstrates an ecosystems approach, please visit the Network's **Project Examples** web page (<http://ekn.defra.gov.uk/resources/examples/>).

Stirling ecosystems approach demonstration project



Andrew McBride, SNH, with a group of wetlands ecologists at Flanders Moss NNR, at the launch of the Fen Management Handbook.
©Dougie Barnett/SNH.

An important part of the Ecosystems Knowledge Network is the experience of practical projects that are showing what an ecosystems approach means for managing particular areas of land or marine habitat. The Stirling project is closely related to the theme introduced at the beginning of this newsletter on how an ecosystems approach is embedded in land use decisions.

What does the project aim to achieve?

Our aim is to develop a project that tests an approach to land management decision-making using the ecosystems approach, but more importantly which leads to genuine change on the ground and increases public involvement in land use decision-making.

What is the project area like?

The project area is in southern Stirlingshire, including rural villages and communities, but excluding the city of Stirling. It involves using a range of techniques in an integrated project, including working with communities and land managers to map the ecosystems and identify ecosystem services in the area, helping people to value or prioritise their ecosystem services, reflecting policy drivers and other drivers for future change, identifying a vision and options for the future and the mechanisms and barriers to making this happen on the ground. We are also keen to evaluate the project all the way through to make sure that we learn any lessons from the various stages.



Flanders Moss NNR a raised bog, Argyll and Stirling Area. ©Lorne Gill/SNH.

How do you use an ecosystems approach in your work?

We want to use this project to trial the use of the ecosystems approach to link public policy objectives with the desires and preferences of local people to inform a sustainable and deliverable land-use framework that has the support of both landscape users and managers. Local people will be involved in decisions about land use and what priorities and benefits should be delivered from ecosystems.

Describe one lesson you've learned that other projects might benefit from

There is a wide range of methods available to choose from. For our project we wanted a consolidated approach that puts local people in the driving seat. It would be helpful if we could make the full range of method options available. We'll be publishing our review of available methods shortly and hope others will find this helpful.

What are the main challenges of designing a project like this?

It will be a challenge to find the right language to describe the ecosystems approach and ecosystem services for a non-specialist audience. Working with potentially diverse and conflicting interests may require careful negotiation. We will also need to maintain stakeholder interest and involvement over a number of months, to deliver a tangible and achievable action plan; and measure the success of the project and communicate the learning for others to use.

For more information or for a copy of the report, contact **Zoe Kemp**, Operations Manager at Scottish Natural Heritage, at zoe.kemp@snh.gov.uk or by calling **01786 435 356**.

Project profile: Keighley and Watersheddles



Keighley moor catchment. © Andrew Walker.

The Keighley and Watersheddles project is an innovative ecosystem service valuation that is being used to inform land management decisions. Information about this project, along with summaries of a wide range of projects across the UK, are featured on the Network website as a useful source of ideas and good practice.

What does the project aim to achieve?

This project has just reported its findings. It aimed to value the ecosystem services provided under different land use and management scenarios and to compare these benefits with the potential costs. Two options were tested; supporting ecosystem services by investing in sensitive land management and restoring habitats, and a scenario where public money was withdrawn and only the minimum requirement of environmental regulations were met. The project found that there were significant benefits to water quality, carbon storage and biodiversity from investing in the Keighley catchment. A link to the full report is available within the summary of this project on the **Network website** (<http://ekn.defra.gov.uk/resources/examples/keighley-watersheddles/>).

What is the project area like?

The Keighley Moor and Watersheddles catchment area delivers between eight and ten million litres a day into the water supply for the South Pennine region. The area is an important landscape and biodiversity resource as well as supporting grouse and sheep farming. The colour quality of the raw

water has been declining over the past two decades.



Gully blocking. © Andrew Walker.

How do you use an ecosystems approach in your work?

All partners who had an interest in, or influence on, the catchment area were consulted. The project was one of three pilot projects running as part of the Delivering Nature's Services programme, the upland ecosystem service pilots. The project aimed to investigate whether investing in the natural environment could bring multiple benefits in a cost-effective way.

Describe one lesson you've learned that other projects might benefit from.

The biggest challenge was to translate the implications of potential land use and land management changes through to potential changes in ecosystem services. This needed close working with economists, natural scientists, Natural England and Yorkshire Water.

It's important to build good relationships with landowners and tenants to ensure that eventual delivery of land management interventions are successful.

What was the most successful aspect of the partnership?

The wide engagement and consultation ensured we captured information on as many potential ecosystem services as possible and better understood the impact of changes in land management on the stakeholders in the catchment.

A link to the full report is available within the summary of this project on the **Network website** (<http://ekn.defra.gov.uk/resources/examples/keighley-watersheddles/>).

For more information contact Alex Scott at Yorkshire Water by emailing

alexandra.scott@yorkshirewater.co.uk

(To share your experience of a place-based project that demonstrates an ecosystems approach, please visit ekn.defra.gov.uk/resources/examples)

Natural Resource Management in Wales

EKN welcomes contributions that share ideas, information and learning that is of value to the wider Membership. In this issue, Russell De'Ath from the Countryside Council for Wales (CCW) shares the findings of a study by CCW's Networked Environment Regions project on how Natural Resource Management Planning could be implemented in Wales.



Greenspace for local communities. © Michael D Smith.

An ecosystems approach is set to become increasingly important in the management and regulation of the natural environment in Wales. The challenges of the growing extent and complexity of designations, management plans and regulatory decisions were explored in the Welsh Government's recent consultation paper *Sustaining a Living Wales: A Green Paper on a new approach to natural resource management in Wales*.

This complexity could be addressed by National Resource Management Plans. These would provide a common framework for assessing wider environmental issues and outcomes, alongside their social and economic implications, and ultimately lead to more balanced decision-making.

However, there are questions over how they relate to, or even replace, existing plans and strategies, at what geographical scale they should be prepared, who is involved in preparing and delivering them, and who owns them. The Networked Environment Regions Project explored all these questions by exploring a number of projects in more depth.

Community involvement and engagement was studied in the Ebbw Fach area of Blaenau Gwent County Borough. The role of local authorities as key delivery bodies was explored by looking at two different projects; Bridgend County Borough Council, where new data on ecosystem services fit within existing mechanisms, such as land-use planning considerations, and Torfaen County Borough Council, where designing an ideal system of governance for natural resource management was explored. A project on the Gwent Levels (one of the largest areas of ancient grazing marsh in Britain) studied how to get wide stakeholder engagement at a larger geographic scale.

Initial analysis of the project findings mean it is possible to estimate what environmental benefits could be generated in the longer term.

- The **Ebbw Fach** project found that sponsor agencies needed to shift their internal culture from focusing on resources, to focusing on people. It was crucial to get local communities and resource users involved in making decisions, along with decentralised management. It was important to focus on the benefits of natural resource management that were actually wanted by the local communities, and not just to make assumptions based on national findings, or what happened elsewhere. It was also important to co-operate and co-ordinate with community-based organisations that represented local interests.
- Mapping work from the **Bridgend** project is being interpreted in Green Infrastructure Supplementary Planning Guidance to see how well the data lends itself to this purpose. If it is positive, then the Countryside Council for Wales will consider how to roll out the methodology nationally.
- The **Torfaen** project had many implications and a full report is to be published soon. The most significant finding was the need to ensure that natural resources were considered on a level playing field with other social and economic outcomes. Evidence should be brigaded to a particular format to provide a common currency. This included where existing resources are provided, what could be recreated elsewhere and what should be protected where it is, where extra provision could be created, what the standards and targets are for provision at both a local and national level and what the threats are to the existing and future ability to provide that resource. Understanding this will help to prioritise which resources should be protected. It will help with future proofing, such as taking into account the cumulative impacts of surface water from the loss of front gardens, and also help to identify where there are opportunities to create a function or service.
- The **Gwent Levels** project threw up an overarching question of how partnerships should form, and at what level. A number of options were discussed, all with pros and cons. These included whether partnerships should be formed around emergent issues, which could lead to a single focus and the creation of silos, whether partnerships should be pre-established to cover specific areas, which could create artificial boundaries and prevent strategic thinking, or whether there should be 'nested' partnerships, which could lead to gaps in who is responsible and a confusion of roles.

The Gwent Levels work so far suggests that there is a lack of strategic overview in how societal choice is informed, as ecosystem service issues neither fit totally within local parameters, nor are they national. A Gwent Levels Partnership or Forum could be informed by all levels of stakeholding, from community to national and beyond. This would challenge silos and network beyond the subject and geographic boundaries to develop an engagement process which takes an inclusive approach to establishing an evidence base. This could build on work in 2011 carried out by the Cambrian Mountains Initiative.

For more information, contact Russell De'ath at russell.de'ath@wales.gsi.gov.uk

Applying an ecosystems approach in an urban setting

Network members visit the Mayesbrook Climate Change Park



Ecosystems Knowledge Network field visit to Mayesbrook Park, East London

Mayesbrook Park is situated in the London Borough of Barking and Dagenham, one of the twenty most deprived boroughs in the UK. It is now being transformed into the UK's first climate change park and the largest river restoration project in London. On 25th June 2012, Ecosystem Knowledge Network members had the opportunity to see the Park for themselves and evaluate how to apply an ecosystems approach in an urban setting.

When Mayesbrook Park was laid out in the 1930s, the river had been diverted into a deep concrete channel behind a high metal fence. This meant that it could only act as a road drain and flood water channel. The two lakes on site became so polluted they could no longer be used for boating and angling. Before the Project started, the 48 hectare park was not used much by local people. It mostly consisted of short-mown grass of little nature conservation value. There were few amenities for visitors.

In response to a realisation that existing local flood management infrastructure was coming to the end of its life, the Thames Rivers Restoration Trust suggested creating a one hectare floodplain area within the Park. This combined the goals of enhancing the visual quality of the site, supporting biodiversity, and attracting more visitors with new opportunities for recreation. It would also help protect the houses bordering the Park from flooding.

Phase 1 of the Project attracted £1.4 million of funding. Practical work on the ground started in April 2011 and included building new channels with meanders, re-grading river banks, restoring the natural floodplain, planting new reed beds, building six Sustainable Urban Drainage Systems, increasing tree cover and woodland, and enhancing two hectares of acid grassland.

Applying an ecosystems approach, along with involving local people and sharing costs and pooling staff, expertise and data, has all helped contribute to the success of the developing Mayesbrook Climate Change Park. It is now a flagship project for the London Rivers Action Plan.

The first part of the funding was secured by clearly demonstrating the benefits the project would deliver. Involvement of the Environment Agency helped to get the necessary approvals for the work to go ahead. Local residents' concerns were addressed by continuously consulting the local community. Councillors were brought on board by demonstrating the ecosystem benefits to them. An ecosystem service assessment and valuation conducted by the Environment Agency and Queen Mary University, London, showed the project could provide benefits worth up to seven times the estimated £4 million cost of the whole scheme (this report is available via the Ecosystems Knowledge Network website at the link below).

Phase 2 of the Project, which is due to start shortly, will include restoring the two lakes. A central building will provide visitor facilities, including a climate change garden and permanent exhibition area.

Lessons learnt

During the session on 12th July, participants discussed how aspects of the project could be applied elsewhere, what challenges it had encountered and how the project process could be improved. All of this helped participants learn what works well in applying an ecosystems approach in urban settings:

- Using accessible language that communicates the benefits we derive from our ecosystems.
- Focusing on the 'benefits' provided by the natural environment helps to enthuse people more than discussion of 'services'.
- Putting considerable time and effort in to build meaningful and resilient partnerships.
- Taking a holistic approach that integrates different disciplines was seen as key to success.

The challenges involved in adopting an ecosystems approach were also discussed. The main challenges were found to be:

- Valuation of ecosystem services.
- How to derive objective measures of value (especially for non-market goods and services).
- Assessing and managing risk arising from new forms of land management.

It was felt that although the Mayesbrook Park Project was carried out in an urban landscape that the experience gained would be relevant in other contexts. Participants considered the core principles of an ecosystems approach that can be transferred between projects:

- The need for strong partnership working; and
- Building ecosystems concepts into education.

Demonstrating to organisations and government how working together in partnership can achieve more with fewer resources was seen as a strong motivator to adopt an ecosystems approach. An event report, including transcripts of the mind-maps produced by participants, is available on the Ecosystems Knowledge Network website.

Join the debate!

Find out more about the lessons learnt and contribute to the debate at the [page](#) on the Network website that describes this event (<http://ekn.defra.gov.uk/about/activities/past/mayesbrook/>)