

# Rheoli Adnoddau Naturiol

## Natural Resource Management



Llywodraeth Cymru  
Welsh Government

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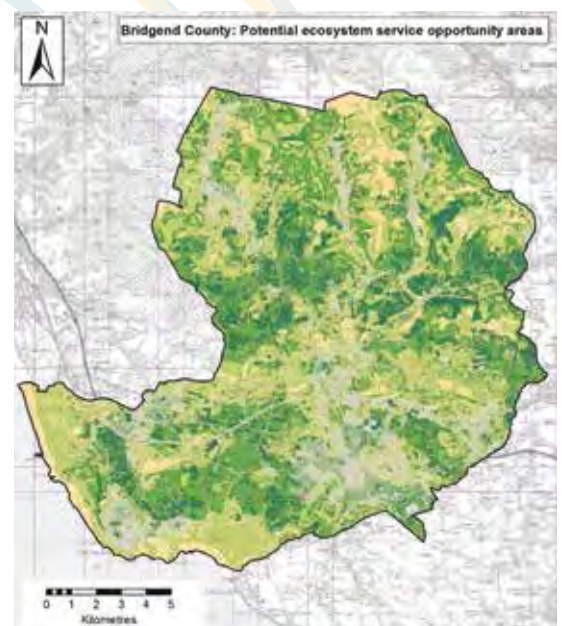
## Natural Resource Management Case Studies

### 1. SCCAN – Natural Resource Planning Support System

The SCCAN mapping system identifies natural resources supplying ecosystem services. These natural services provide benefits to society and the economy as well as maintaining ecological resilience. SCCAN aims to make it easier for decision makers to take the hidden value of ecosystem services into account and to start considering a more integrated management of the environment. Rather than aim to provide final answers, the maps are intended to be used as part of a wider discussion, which brings in other types of information, such as local knowledge from stakeholders. Our aim is to make sure that we make the most of Wales' natural resources, while looking after natural systems and building their resilience. We want to continue to provide the benefits to people, communities and the economy in Wales in the long term.

The aim of the project is to provide decision makers with information about which areas provide what benefits and where the best areas are for improving ecosystem service provision. By supplying this information, it becomes easier for people to take a more integrated approach to their work and consider a wide range of ecosystem services when taking decisions about development or management.

The SCCAN project has been working with local authority planners, in Bridgend, Torfaen and now Swansea Councils, to develop mapping products which meet their needs. Having access to maps which show a range of ecosystem functions allows planners to take informed decisions about built development and opportunities to develop green infrastructure. E.g. Understanding the way that flood water naturally flows through the landscape can point to opportunities to use 'green infrastructure' to slow tackle flooding. Mapping the distribution of local pollinating insects, can uncover the hidden value to allotments of seemingly low value, rough patches of land.



Opportunities for enhancing ecosystem services come from putting layers of information together and showing sites where multiple benefits can be achieved.

SCCAN adopts a neutral, spatial planning approach, essential in bringing together a wide range of stakeholders and interests. It needs to be recognised that technical inputs in the form of maps or economic estimates, are not going to provide final answers. Instead the maps are intended to be used as a starting point for a discussion between decision makers and stakeholders on which services they think matter most in a particular area.

The work is targeted at anyone who is involved in making decisions which have a potential impact on the environment; the work was originally developed to influence decision making at a strategic, national scale, whereas over the last few years, the work has been tested in two local authority pilots. The SCCAN project is aiming to help Natural Resources Wales with its work developing a new natural resource planning system in Wales.

## **2. Optimising the benefits of the Welsh Government Woodland Estate in the Heads of the Valleys and Western Valleys**

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A project was established in 2010 across the Welsh Government's Heads of the Valleys and Western Valleys Regeneration areas which aimed to put the region's forests to work for local communities like never before. The Heads of the Valleys and Western Valleys woodland plans, led by Natural Resources Wales (previously Forestry Commission Wales) worked with a range of strategic partners in the private, public and third sectors using evidence based spatial targeting to identify priority sites of both existing woodlands and new woodland creation opportunities. Priority was given to those sites that have the potential to make a real difference to the lives of the people who live around them and that provide a range of opportunities to help underpin the wider social and economic regeneration of the area.

Against a backdrop of relative social and economic deprivation, including unemployment; skills and wider social, health and wellbeing issues, the project looked at where the woodland estate and new areas of woodland could support a wider range of regeneration priorities. Taking this wider approach to the management of woodlands in this area has enabled the on-going management and capital investments by Natural Resources Wales (previously Forestry Commission Wales) to be re-focused to support enhanced access, and outdoor activities in the right places as well as to explore economic opportunities such as wood fuel production and supply chain potential.

For each of these priority sites a local Action Plan has been created, adhering to the concept of sustainable development, by working with local communities, public agencies and businesses to ensure they address local regeneration needs.

Each priority area's Action Plan has a slightly different focus, depending on the communities' needs or the opportunity the environment of a particular area presents. However, within the portfolio of Local Action Plans a group of common project themes (a selection listed below) has emerged, all contributing to creating healthier, more prosperous and skilled communities:

- Developing the recreation/access product (infrastructure and marketing) to encourage tourist visits and local use (ensuring high quality, safe and welcoming woods accessible directly from communities). Using the environment to creating green infrastructure links.
- Using woodlands and green space as a venue for education, skills and training.

- Exploiting Renewable energy opportunities through social enterprise e.g. wood fuel, firewood, and micro-hydro. Providing training and job creation opportunities, alleviating fuel poverty and creating sustainable communities.
- Exploring the potential of wood in the construction sector as a means of providing training and employment opportunities,
- Urban and peri-urban woodland creation schemes (street trees, SUDS schemes, community woodland creation). Local food growing initiatives.

Alongside the wider ecosystem services and benefits provided by these woodlands, the project has helped to identify new areas for woodland creation which will assist the delivery of the Welsh Government's target to increase woodland cover across Wales by 100,000ha over the next 20 years and contribute to our efforts to 'lock up' more carbon dioxide to help tackle climate change.

The intention in the creation of these plans was that they should be created in partnership; be strategic; be sustainable; be evidence based; be people based and place based. They should involve joined up delivery by the private, third, public sectors and communities, and involve regional co-ordination and local delivery. They should be an example of how national, regional and local drivers can be brought together in a single integrated process and as such, it is hoped that the approach taken in the creation of these plans is an example of the types of working methods the Welsh Government wants to adopt in relation to natural resource planning and regeneration.

### 3. FishMap Môn

FishMap Môn is a collaborative pilot project between Natural Resources Wales, recreational and commercial fishers in North Wales. It is funded through the European Fisheries Fund and Welsh Government and Project Partners include the North Wales Fisherman's Cooperative Limited, Bangor Mussel Producers Limited and the Welsh Federation of Sea Anglers. The Project aims to inform the sustainable management of the Welsh marine environment by collecting and mapping information about fishing activity and combining it with information on seabed habitat types and their sensitivity to fishing activities. The Project area is located between Nefyn to the west and the Great Orme to the east and extends out to the Welsh 12 nautical mile limit mainly around Anglesey.

#### Benefits & Outputs of FishMap Môn

##### **Contributing towards an evidence based approach to marine management**

The Project has broken new ground in mapping commercial and recreational fishing activity gathered from over 600 fishers. It provides stakeholders and managers with a unique level of detail about where different fishing activities take place and learning will inform further activity mapping across Wales as part of processes such as marine spatial planning.

##### **Contributing towards the management of natural marine resources**

Through assessing the impact of various fishing types upon seabed habitats, the Project has piloted approaches to assist in creating a balance between preventing damaging activities and identifying activities that can be undertaken sustainably.

### **Developing a ground breaking interactive tool**

The interactive, web based 'FishMap Môn Guidance Tool' will allow stakeholders to view fishing activity maps and fishing scenarios in combination with seabed habitats and their sensitivity.

### **Learning lessons in collaborative working and stakeholder engagement**

Natural Resources Wales has worked in close partnership with local commercial and recreational fishing partners. Through working together, Project Partners have agreed upon Terms of Engagement and have learnt valuable lessons in collaboration.

## **4. The Pumlumon Project – The Wildlife Trusts Living Landscapes Initiative**

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Established in 2007, the Pumlumon Project is pioneering the development of an upland economy built around wildlife, ecology and long-term sustainability across 150 square miles of the Cambrian Mountains. The project has been working with landowners to deliver practical land management measures that benefit wildlife alongside the management of the land for water, carbon and wider social and economic benefits. This has involved the re-wetting and restoration of blanket bog.

Though, at a relatively early stage in the project's life, the proposed benefits are substantial. On the environmental side, over 5,000ha of species rich habitat will be under positive management, 3,730ha of land will be 'carbon safeguarded' meaning 2,565,750 tonnes of carbon can be stored alongside floodwater storage benefits. The project will provide capital grants towards soil, nutrient, water and habitat management works, in addition to creating high quality, added-value products for local markets such as 'Conservation Beef'.

The project is looking at developing markets and funding for these ecosystem services which can be used to restore the remaining project area.

## **5. Wildlife Trusts Living Landscapes Project in the Eastern Valleys**

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Led by the Gwent Wildlife Trust (GWT), the Eastern Valleys Living Landscape Project is a social and environmental justice programme, covering over 30,000ha. The aim is to engage and empower disadvantaged communities in Blaenau Gwent, Torfaen and Caerphilly.

While being surrounded by wildlife, it is suggested that many of the people living in the valleys are disconnected and see nature as remote and inaccessible. As a result, people often do not accrue the many benefits that contact with the natural environment have been proven to deliver.

GWT has been working with communities in this area to highlight that environmental improvements go hand in hand with personal and economic wellbeing. Links to training and the development of employability skills for the green economy have also been included in this work.

Environmental improvements include restoring the wildlife, the wild beauty of the area and the services that nature provides. GWT aims to build on their successful 'People and Wildlife' project which has engaged over 9 000 people, including 5 000 school and college students.



## 6. RSPB led Restoration of blanket bog in the Berwyn and Migneint Special Areas of Conservation in Wales – including its Lake Vyrnwy Reserve

This area contains the two largest and highest quality active blanket bog areas in Wales. However, large parts of both SACs have been seriously damaged due to activities such as drainage for livestock and afforestation. Identifying these drivers as a significant threat to its nature reserve at Lake Vyrnwy<sup>1</sup>, the RSPB facilitated initial meetings and attracted match funding to enable the project partners<sup>2</sup> to work towards EU Habitats Directive, and UK BAP targets for favourable condition on the blanket bog.

In addition to improving biodiversity, blanket bog restoration provides a large number of extra services. These include improving water quality, reducing run-off rates, colouration and flooding, farming, carbon storage and sequestration, education and recreation.

With EU LIFE Funding and collaboration with UKPopNet<sup>3</sup> the project represented the largest, replicated terrestrial ecosystem experimental research platform in Europe. The project funding ended on 31st March 2011. Future work is reliant on finding other funds through Section 15 agreements, Glastir or similar large scale funding programmes.

Achievements include drain blocking to restore active blanket bog at Lake Vyrnwy – 109,243m (target 90,843m), FCW land (Penaran and Foel Boeth) – 194,374m (target 10,000m), private farms (either owned or grazed outside partner control) – 181,633m (target 0m). Education work has included outreach visits for 815 children, and 1139 children visited the project, as well as more 50 talks and 60 guided walks to farmers, land managers, communities and other interest groups.

## 7. Restored wetland helps reduce flood risk for Pwllheli

A Natural Resources Wales led project to restore a rare wetland habitat on the Llŷn Peninsula that will help to reduce flood risk for people and businesses in Pwllheli, has been recently completed.

The eight-week-long project at Mathan Uchaf near Pwllheli has re-connected spring water to the marshland, rather than draining it away quickly down old drainage systems. The work was carried out as part of the European funded “Anglesey and Llyn fens LIFE Project” which is led by Natural Resources Wales.

This will mean that the water will be held in the ground for up to a week, helping to reduce river levels in the nearby Afon Geirch. This river ultimately flows through Pwllheli’s West End, an area of high flood risk, before entering the sea at Pwllheli Harbour.

Nine acres of old, damaged peat was scraped from the surface of the marshland and used to block a large drain. This slowed the flow of the water from reaching the river and uncovered new, fresh peat.

Keeping the lime-rich spring water in the marshland will improve it as a habitat to support more wildlife like the lesser butterfly orchid, marsh helleborine and dragonflies including the small red damselfly.

This will also mean more peat and carbon will be kept locked in the land, rather than being released into the water as it breaks down, reducing CO2 emissions and improving water quality in the river for fish and other wildlife.

<sup>1</sup> Owned by Severn Trent Water plc

<sup>2</sup> RSPB, CCW, EAW, FCW, EU LIFE Nature fund.

<sup>3</sup> Consortium of research institutes and universities led by York University

## 8. First Milk Cheese Ltd: Nutrient management and off-set scheme

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By using an ecosystems approach at the centre of its decision making, Natural Resources Wales has been working with First Milk (which is 100% owned by British farmers) on its discharge of treated waste water from its Haverfordwest creamery to the Western Cleddau.

The discharge enters European Designated Sites which are areas afforded special protection due to their range of species, habitats and aquatic plants. In order to protect these important habitats, Natural Resources Wales is constantly working to reduce nutrient levels within the Cleddau.

By working with the First Milk, a scheme is now under development which is designed to reduce nutrients entering the river from farms in the wider catchment that supply them with milk.

By taking an ecosystem approach, looking at the wider environment and not the creamery in isolation, Natural Resources Wales is helping to develop an innovative solution to regulation which will protect the environment and the dairy industry in West Wales.