PARCIAU CENEDLAETHOL CYMRU
Lle i enaid gael llonydd

NATIONAL PARKS WALES
Britain's breathing spaces

Datganiad Sefyllfa

"Action is needed both to tackle the causes of climate change and to adapt to the climatic changes already underway…The NPAs are already engaged on this agenda and will need to deepen their input into the future…The range of potential impacts make climate change both a vitally important and wide agenda for the NPAs – involving activity across the range of their work – in the coming years."

Policy Statement for National Parks and National Park Authorities (Welsh Assembly Government)

National Parks Wales: 21st Century Pioneers
Climate Change Position Statement

An Introduction: The National Parks of Wales

Wales's three National Parks - Brecon Beacons, Pembrokeshire Coast and Snowdonia - cover about 20% of the country and represent a wide range of landscapes.

The National Parks have two purposes:

- to conserve and enhance natural beauty, wildlife and cultural heritage
- to promote opportunities for the understanding and enjoyment of the special qualities by the public

National Park Authorities (NPAs) have a duty to foster the economic and social well-being of local communities within the National Park in the pursuit of the two purposes. Local communities are valued for the role they have defining and shaping the landscape they have lived in over generations.

A general duty (s62, 1995 Environment Act) is also placed upon any 'relevant authority', such as the Welsh Assembly Government, local authorities, public bodies and public utilities to have regard to the National Park purposes when operating in relation to or within the National Parks.

Wales' National Parks are living landscapes. They are also barometers for wider environmental and social change. Over time climate change will result in changes in natural habitats and the character and appearance of our cherished landscapes.

Position Statement

Parciau Cenedlaethol Bannau Brycheiniog, Arfordir Penfro ac Eryri yn gweithio mewn partneriaeth
Brecon Beacons, Pembrokeshire Coast, and Snowdonia National Parks. Working in Partnership.

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Addressing the Causes of Climate Change

The National Park Authorities have critical responsibilities to help the Welsh Assembly Government achieve their carbon reduction targets and meet their energy policies through mainstreaming awareness of the problem and drawing attention to the responses they have so far undertaken.

We have reduced our carbon emissions significantly and we have committed ourselves to reducing our emissions even further, signing up to national initiatives such as the 10:10 climate change campaign. Our expertise and leadership has also received national recognition and credit for taking the climate change agenda forward.

The planning function provides NPAs with practical tools for addressing climate change. Sustainable practices in approved Park Management Plans and land use policies in existing local plans and emerging local development plans provide and integrated approach to climate change mitigation and adaptation.

Through the sustainable development fund and by working with partners national park authorities have sponsored community orientated investment in energy conservation and generation technologies.

We see this as critical not just from the point of view of minimising the effect of climate change already in motion, but also from the point of view of building energy - and therefore community - security in an increasingly connected but uncertain world.

The relatively low rate of additional development in the National Parks, mean that the bulk of efficiency savings are to be found within the existing built resource; including the historic environment. NPAs, along with National Park communities, must identify designs and modifications that combine the best of the old with the best of the new; creating buildings that are fit for purpose in terms of function and in terms of energy, which can also recall and respect their location and history.

We recognise the barriers facing organisations and individuals who may have less opportunity and motivation to reduce their carbon footprint, we have faced those same challenges. We can help shape public attitudes and enhance the ability of the public to make the necessary behavioural changes, and as public authorities we have a duty to lead by example. We also recognise that policy - at all levels - will need to be incremental, and will engage the public at every stage of National Park policy making, project design and delivery process.

We will continue to use the Welsh Assembly Government's Sustainable Development Fund (SDF) to finance a range of suitable renewable energy projects. SDF, like its predecessor the Environment Development Fund, is a unique resource: it can provide clean match funding for innovative and higher risk projects which often fail to find grant or venture capital elsewhere. SDF has played a major role in supporting local public transport initiatives and promoting alternatives to car use. We will continue to use SDF to support renewable energy projects in partnership with local communities and enterprises, including social enterprises.

We are aware of the environmental social and economic opportunities which suitably scaled and sited marine renewables, hydro-electricity, anaerobic digestion and wood-fuel production create. Community scale renewables have an important role reducing emissions and securing energy supplies. If correctly deployed they may provide other benefits, including habitat protection; improved biodiversity; reduced fuel poverty; increased civic responsibility and diversified regional, rural economies.

Addressing the Effects of Climate Change[1]

NPAs are working with farmers and other land managers to promote ecological resilience in the wider countryside - maintaining and creating semi-natural habitat and promoting ecological connectivity and integrity. We try to enable this to happen as a part of agricultural production and in doing so, support farm income; reduce food miles and contribute to better nutrition and food security. We believe that planning for an increase in regional and local food production and consumption is essential, to reconnect people with the food they eat and to build in resilience to fluctuating food and energy prices

We regard the management and restoration of soils, water and woodland resources as critically important. Soils and habitat play key roles in the carbon and water cycles, regulating the ecosystem services on which we all depend. NPAs promote and support the role of well-managed landscapes by providing increasingly 'commercial' ecosystem services such as carbon sequestration, water resource management and renewable energy generation. National Parks are not alone in this of course, but their designation present unique opportunities, and an associated responsibility, to pioneer sound ecosystem management. For example, we work with stakeholders and partners towards an adaptive, with-nature approach to fluvial and coastal flooding.

We believe that biodiversity is a dynamic system. We accept that 'native' wildlife will adjust as habitats respond to a dynamic climate. Given the nature and speed of the anticipated changes we have a duty to keep open the various options for wildlife. NPAs have contributed to successful and long-running wildlife conservation programmes that have made significant contributions to outcomes within the Wales Environment Strategy and to those of the emerging Natural Environment Framework. Our work will continue to complement and inform national agri-environment schemes in the wider countryside.

A central activity of the NPAs involves the management of some of Wales' finest and most heavily used recreational 'facilities' - including rights of way, beaches, upland paths, cliff-climbing and access points to water. We will continue to share these opportunities to enjoy and appreciate the Parks with the widest possible audience. While climate change may accentuate some existing management pressures, and bring new patterns of use, we will respond accordingly, via a process of adaptive management, and avoid putting additional pressure on sensitive landscapes.

In Summary

The Welsh National Park Authorities have and will continue to take steps to address the threats that arise from a warming climate.

We believe that the protected areas of today, and the UK in general, will look very different within the next 25 – 50 years. Managing the inevitable - but necessary - transition will not always be simple, and will require difficult decisions being made.

The nature of the NPA challenge however remains the same: to retain the National Parks' qualities, values and utility while its landscape character continues to evolve.

We believe that a landscape scale response is required to meeting future challenges.

We welcome the climate change leadership and guidance provided by the UK and the Welsh Assembly Government, especially the carbon reduction targets that are now enshrined in law. We look forward to identifying opportunities to mainstream our work, promoting our achievements, experience and best practice beyond National Park boundaries.

[1] Some areas of work relate to both causes and effects - e.g. management of soil carbon.

Case Studies

The Green Valleys (Wales) Community Interest Company (TGV CIC)
Brecon Beacons National Park

In January 2010 The Green Valleys Community Interest Company became a winner in a £1 million prize the 'Big Green Challenge', offered by The National Endowment for Science, Technology and the Arts (NESTA), winning £300,000. The competition recognized the UK's most innovative community responses to climate change. TGV seek to promote a 100% reduction in greenhouse gas emissions in the valleys of the Brecon Beacons through a 'bottom up' approach. The CIC have developed a financial model enabling installation of renewable energy systems on individuals or the communities' behalf, with revenue split between the landowner and The Green Valleys CIC who use their share to develop other hydro installations.

The potential for small scale hydroelectric generation in the Brecon Beacons and Mid Wales is vast and underutilised. TGV initiated a round of surveys for hydro installation. When developed, the 63 viable schemes identified will power over 1,100 homes, equating to nearly 12% of the domestic electricity requirements of the the Brecon Beacons National Park. The net effect will be £1 million per year revenue for the local economy. TGV believe that there is at least 5 times this available on small scale streams in the area.

The Dyffryn Crawnon Community has had surveyed four streams equating to over 60kW generational capacity. They already have one private hydro installed and NESTA will be part funding a community owned scheme in 2010. Revenue from this will provide seed capital for further installations and low carbon initiatives for the community as well as surveying the 10 other streams that are viable for hydro in their community. A proportion of their revenue will also be spent on developing initiatives in adjacent valleys. The local community have created the Dyffryn Crawnon Green Energy CIC to develop the carbon negative aspirations fro the entire community.

Without SDF support the project would still be at a much earlier stage. BBNPA has also contributed Community Development Officer time for 6 months at 2 days a week (40% FTE) and for 18 months at 4.5 days a week (90% FTE) which has been crucial getting The Green Valleys project off the ground.

Over the 18 month period that the Green Valleys has been developed SDF has committed £42,660 to the project in the following areas:-

SDF Spend on Green Valleys Jan 2009 to end March 2010

Project Co-ordinator & carbon audit input	£21,721.97
Hire of Venues etc	£498.94
Website for carbon audit & video of project	£1,450.00
Feasibility Studies for Hydros across the Park	£11,580.00
Setting up of woodland groups with tools, training & insurance	£4,642.42
Legal, planning & abstraction fees	£2,766.67
	£42,660.00

TGV have sought the support of finance partners and a period of due diligence will be completed in Mid April, unlocking initial £500k of commercial finance to go towards capital costs of the projects. TGV have received further funding in light of the SDF support including £320k from NESTA, £2k from Eaga, £12k from the Waterloo Foundation, £10k from Scottish Power, £5k from CCW as well as a number of revenue generating sources. TGV has also led to communities setting up sister Community Interest Companies to deliver locally; Dyffryn Crawnon Green Energy CIC and Llangattock Green Valleys CIC recently announced as the Welsh winners of the British Gas Green Streets program , winning £210k of funding for their own low carbon project). Other local communities are linked and developing projects including community owned renewables, biodiesel clubs, district heating schemes, community managed woodlands and electric vehicles.

Land management for adaptation and mitigation
Conserving the Park
Pembrokeshire Coast National Park

Aims: Working with partners PCNPA wants to optimise conditions for wildlife and lessen the impact of climate change, habitat fragmentation and neglect within the National Park. The aim is to reinstate the network of wildlife friendly corridors and to manage and enlarge the key wildlife habitats that make up the fabric of the countryside. This could give species the chance to establish larger, more sustainable populations, and to establish new populations.

The PCNPA also aims to contribute to the reduction in greenhouse gas emissions from land use systems, and reduce the potential for the oxidation and release of the stored carbon in the organic soils of the park's semi-natural habitats.

Timescale: By 2002 the PCNPA was actively working on around 50 (mostly privately owned) sites. By 2007 this number had grown to around 90 sites over 1000 hectares of land annually. By 2009 this had increased on 170 sites on 2000+ hectares of land annually. The project is ongoing and continues to grow in size.

What we do: The service we provide exists to offer the following practical solutions:-

- advice
- information on grants and other assistance
- free practical assistance with staff and specialist equipment
- help with capital works such as fencing, water supply, gates
- payments for managing land through management agreements
- help to source the right grazing stock and machinery
- continued support even when management is up and running

Helping a farmer prepare a site for the re-introduction of grazing animals

The Pembrokeshire Grazing Network – the NPA sources suitable livestock for grazing, in this case, coastal grassland habitats for the benefit of plants and feeding chough

Woodland management on over 300 hectares of broadleaved woodland produces timber which is made into value-added products at Cilrhedyn Woodland Centre

Results so far: The evidence base is varied in quality and quantity. Preliminary data from the Pembrokeshire Bird Atlas suggests that whilst many species of birds are continuing to decline on intensively managed highly productive agricultural land, the marginal (semi-natural) land is supporting increasing numbers, due in part to PCNPA positive management.

Skylarks are thriving in these areas. The chough population continues to grow steadily as much higher quality feeding habitat is created by traditional grazing and vegetation management on the coastal slopes.

Vegetation structure and habitat diversity on the vast majority of these sites has improved greatly, as has species diversity (particularly plants). Despite this, many species of butterflies, for example, continue to be conspicuous by their absence.

Overall habitats are in much better condition and linkages within and beyond the site boundaries are much improved. The coastal corridor around the Pembrokeshire coast is now an excellent example of a functioning 'green highway'.

The soil carbon content of these habitats is conserved and some grasslands, as they increase in species diversity and the organic matter in the soil increases, are sequestering more carbon dioxide from the atmosphere.

Reversion of a species-poor to a species-rich grassland at PCNPA owned St Davids Airfield. This grassland sequesters large quantities of carbon from the atmosphere; Supports 65 breeding territories of skylarks producing up to 360 chicks per year; Feeding opportunities for a whole range of other species; Provides an income for the land owner through the organic scheme, grazing and hay making.

Partner organisations: The National Trust, Wildlife Trust West Wales, CCW, MoD, Pembrokeshire Biodiversity Partnership, South Hook LNG

Blanket Bog Restoration at Trawscoed, Llanuwchllyn
Snowdonia National Park

Location/Lead Organisation: Trawscoed, Snowdonia National Park / Snowdonia National Park Authority (SNPA)

Before

After

Aims: The blanket bog areas of Snowdonia, (around 30% of the Wales total) store in the region of 750 tonnes of Carbon per hectare.

Over the past decades national policy has encouraged certain inappropriate management systems on these assets, which include moor gripping and conifer plantations. Such actions on these sensitive sites have degraded the vegetation cover and their ability to operate as natural systems has been compromised.

Utilising Rhaglen Tir Eryri funds (Objective One funded programme), the project team identified key sites for habitat/biodiversity, with the aim of restoring the areas back as functional blanket bogs. By utilising several land management tools on these sites from grazing agreements on common land, ditch management and to vegetation control the value of these sites in terms of carbon storage, hydrological properties, biodiversity and landscape was improved.

A conifer area to the south of Bala was planted on such a fragile, wet bog area. The conifer failed to grow and was of no economical value especially after considering extraction costs.

The extraction itself would have been difficult and very damaging to the surrounding wet soils; however leaving the trees in-situ was still damaging the soil structure and hydrological levels of the site as the trees dried out the peat which then releases the stored carbon.
The site is also designated as a SSSI, SPA and SAC, the presence of the conifer meant that the site failed to be in a favourable conservation status.

Actions: Areas of inappropriately planted and unproductive spruce were felled.

Spruce felled, with the brash piled into drainage ditches to slow water runoff the site.

Brash from the trees were used to block the drainage ditches running through the site, which slowed down water movement allowing the area to be re-wetted which allows bog mosses to recover and start the process of accumulating and fixing carbon on the site.

Due to the wet and fragile nature of the soils, all the work had been undertaken by hand to eliminate the need for heavy machinery to transverse the site, by not damaging the remnants of the natural vegetation the site recovered faster following the tree cover removal.

Before

After

Timescale: Work was conducted between March 2006 - January 2007

Results (so far): Removal of conifer from this site and management of the forest fringe has developed the site in terms of value for several upland bird species. Upland vegetation is now re-establishing on site, and Sphagnum mosses growing over some of the brash placed in the wetter grips.

Upland vegetation is now re-establishing on site with sphagnum moss accumulating in the wetter grips.

Re wetting the site also allows bog vegetation to absorb more atmospheric carbon, which over the years will be accumulated as peat and soil carbon. This is an example of how upland systems of Snowdonia can contribute to the eco-system services approach to land management.

Slowing down the rate of water leaving the site aids flood alleviation downstream during wet periods, but also provides a constant base flow during the dry periods aiding in stream biodiversity to adapt to greater seasonality fluxes in weather that will be caused by climate change.

The success of the Tir Eryri Project, a partnership with the Counrtyside Council for Wales (CCW) has seen the practice being adopted on other sensitive sites by other land managers. The programme Rhaglen Tir Eryri was commended by Excellence Wales in 2007.

Partner organisations: Countryside Council for Wales

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