NORTHERN UPLAND CHAIN
Local Nature Partnership

The purpose of this plan

The principal purpose of this plan is to stimulate new investments in peatland – a key component of natural capital in the northern uplands. Through this we aim to sustain the goods and services that peatland provides for society, and on which many businesses depend. This is one of a series of natural capital investment cases which are being produced for the area covered by the Northern Upland Chain Local Nature Partnership. Major new investment in conserving and enhancing our stock of natural capital would not only be good for nature but good for business, and will be essential for society to function effectively.

The Natural Capital Committee's Third Report on the State of Natural Capital identifies that this great asset to society is in long-term decline:

"Successive natural capital deficits have built up a large natural capital debt and this is proving costly to our well-being and economy. If economic growth is to be sustained, natural capital has to be safeguarded".

Successive Governments, and society at large, have failed to halt the decline in our stocks of natural capital. Our natural capital has been seen as being limitless and free. It has, therefore, been viewed as something which has little or no value to business, yet at least 40% of global GDP is dependent on it (OECD 2012). We have failed to account for our impacts on natural capital, to the point where we have depleted it to such an extent that it will not be capable of supporting society into the future. For example, in China no-one valued the role played by pollinating insects in the pear-growing industry, until those pollinators were gone and the industry had to meet the massive cost of hand-pollinating fruit trees.

We need greater investment in natural capital, targeted in the right places, if we are to realise the economic, social and environmental opportunities that it can bring to us all and at the same time conserve nature for its own sake. This is vital from a business perspective, when wise natural capital investment will help to reduce the risk of future failure driven by lack of attention and investment in the 'natural supply chain' on which businesses depend. The public sector can benefit too, when instead of only making investments in hard engineering, investments in natural capital may be part of a cheaper, more effective and longer-lasting solution, and bring multiple benefits to society.

There is little doubt that we are 'overdrawn at the bank of nature'. Unless we start re-investing, quickly and significantly, the decline in natural capital will continue and the services on which business and wider society depends will be lost to us.

What is Natural Capital?

We recognise several different kinds of 'capital' in society: Economic Capital, the most familiar to people, is the stock of resources (equipment, premises, money etc.) used to carry on a business, whilst social capital is the working relationships and trust available in our communities that make change possible. Natural Capital refers to the stock of resources from the natural world that supports our society. So, woodland, species-rich grassland, wetlands, peatland and other soils are all elements of our natural capital because they provide society with food, fuel, clean air, clean water, and opportunities for recreation. These 'natural services' also depend on economic and social capital, but at their root is the natural capital that makes their delivery possible.

The Northern Upland Chain

The Northern Upland Chain Local Nature Partnership was established in 2012. It covers five Protected Landscapes — Northumberland National Park, North Pennines Area of Outstanding Natural Beauty (AONB), Yorkshire Dales National Park, Forest of Bowland AONB and Nidderdale AONB. The partnership includes representatives from farming and land management; the conservation sector; statutory environmental bodies and the wider community.

To find out more visit www.nuclnp.org.uk

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Investment Vehicles

IUCN UK Peatland Code

The UK Peatland Code is a voluntary standard for peatland restoration projects in the UK, supported by sponsorship on the basis of their climate and other benefits.

The UK Peatland Code and its associated Project Design Document and Restoration Guidelines, gives potential corporate investors in peatland restoration confidence that their financial contribution is making a measurable and verifiable difference to UK peatlands, and enables them to report this to their stakeholders and shareholders.

Investment generated through the UK Peatland Code provides the income required to restore peatlands in order that they then deliver significant environmental outcomes over relatively short timeframes. This investment will turn-around many years of degradation.

Our peatland restoration projects in the Northern Upland Chain provide highly visible and tangible benefits to society enabling businesses to account for their carbon emissions in a tax efficient and validated way and through which they can enhance their brand integrity and value. In turn businesses can also contribute strategically to the long-term protection and enhancement of some of the UK's most iconic landscapes.

For more information about the UK Peatland Code visit: www.iucn-uk-peatlandprogramme.org

The UK Peatland Code will be launched at CSR value in the first instance. We aim to ensure that investment made at this stage can be transferred to a system of peat carbon credits when they become available under statutory regulatory instruments. Investment now will ensure that specific large-scale restoration areas can be targeted using the peatland code, for all the benefits this brings to business and wider society.

Other Payments for Ecosystem Services

For some businesses, e.g. water companies, there are demonstrable direct benefits to the business performance associated with peatland restoration. Northumbrian Water, Yorkshire Water and United Utilities have all invested in peatland restoration, as part of catchment management schemes to reduce pressures on water quality. Other businesses are now able to invest to account for their impacts in a way which creates large-scale and lasting benefits to society.

Payments for Ecosystem Services – Water Companies and Peatland Restoration

Yorkshire Water, Northumbrian Water and United Utilities have supported peatland restoration projects in North Yorkshire, Lancashire and the North Pennines. This investment has helped to reduce the problems the companies face when dealing with excessive water colour at their treatment works. "Making this investment in the ecosystem services that healthy peatland provides improves the environment, gives us sustainable water resources and saves us and our customers money in the long term. Investing through the established peatland projects of the North Pennines AONB Partnership and the Yorkshire Peat Partnership gives us confidence that our money is spent wisely and professionally" Neil Pinner, Yorkshire Water; David Alborough, Northumbrian Water; Peter Gill, United Utilities.

Are you interested in investing?

To find out how to invest in peatland restoration for the benefits it brings to your business and to wider society, please contact: Northern Upland Chain LNP, c/o North Pennines AONB Partnership, 1 Martin Street, Stanhope, County Durham. DL13 2UY.

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A Natural Capital Investment Plan

for peatland in the Northern Upland Chain

Healthy peatlands remove carbon from the atmosphere and lock it up in the soil.

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Natural Capital Investment Case
Upland Peatland Restoration

Introduction

The valuations and investment cases presented in this plan have been compiled with the support of professional economists with significant experience of providing such material for public and private sector clients, including the UK Government[1]. The work has been done in line with the Treasury Green Book methodology for public policy appraisal, and is based on existing accepted metrics and methodologies for calculating natural capital values established in recent years. The case for restoring the habitat is that this change in its condition generates a range of natural services. Of these, only carbon benefits are given a monetary value at this stage.

Benefits of peat

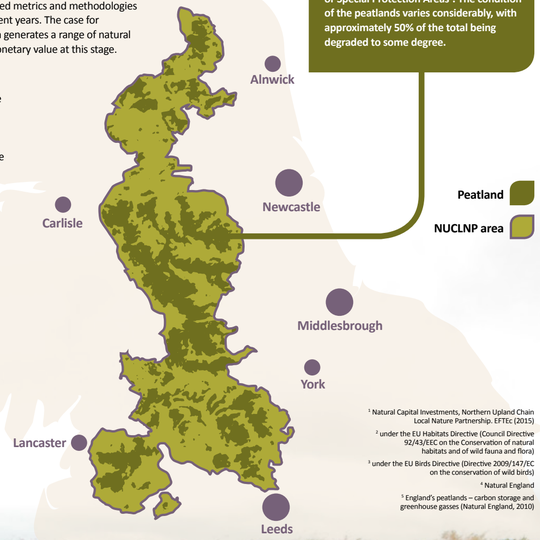
Peat is our best natural store of carbon – there is more carbon stored in the peatlands of the UK than in the forests of the UK, France and Germany combined. But damaged peatlands not only fail to provide the natural services that they could, but actively contribute to climate change by releasing carbon back into the atmosphere. Healthy peatlands bring multiple benefits to society:

- Peatlands are our biggest natural store of carbon. Healthy peatlands also remove carbon from the atmosphere. By helping to restore peatlands, businesses can help in the drive for a low carbon economy.
- Keeping peatlands in good condition reduces the likelihood, frequency and/or the severity of flood events. Over time, this can reduce insurance premiums.
- Healthy peatlands reduce water colouration and sedimentation in rivers, helping to reduce water treatment costs, protect fisheries and improve river quality.
- Deep peat ecosystems support globally rare and threatened wildlife.
- Upland farming needs healthy, vegetated peatlands for grazing livestock.
- Upland peatlands are wild and iconic landscapes, rich in archaeology and culture, and part of why our uplands are so important for tourism.

Where is our peatland and what is its condition?

There are 253,500ha of peatlands within the area covered by Northern Upland Chain LNP. The map shows their extent (including a combination of blanket bog, upland heathland and upland flushes, fens and swamps).

Almost all of the peatlands are part of designated Sites of Special Scientific Interest, Special Areas of Conservation[2] or Special Protection Areas[3]. The condition of the peatlands varies considerably, with approximately 50% of the total being degraded to some degree.



[1] Natural Capital Investments, Northern Upland Chain Local Nature Partnership. EFTEc (2015)

[2] under the EU Habitats Directive (Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora)

[3] under the EU Birds Directive (Directive 2009/147/EC on the conservation of wild birds)

[4] Natural England

[5] England's peatlands – carbon storage and greenhouse gasses (Natural England, 2010)

Without investment, degraded peatlands will release their stored carbon into the atmosphere.

The case for investment

Summary

- Improving the condition of 130,000 hectares of degraded peatland will provide £460 million net benefit to society over 40 years, just from reducing the amount of carbon being released into the atmosphere.
- Further significant benefits are likely to accrue from improved biodiversity (estimated at £300 million over 40 years); reduced water colouration; reduced downstream flooding; improved grazing and more cost-effective land management – but these have not been quantified at a large enough scale to be valued at this stage.

Baseline

The current area of peatlands in the LNP is 253,500ha (including almost 40% of all the deep peat in England). Despite significant successful restoration activities in recent years, an estimated 130,000ha remains degraded.

Threats

Artificial drainage; inappropriate burning practices (e.g. too hot/deep/frequent); overgrazing; inappropriate forestry planting; long term effects from climate change.

Value of investments

Based on modelling developed by Natural England, and applied for the Natural Capital Committee (eftec et al., 2015), benefits of avoided carbon leakage outweigh costs of restoration actions on many types of degraded peat, giving a net benefit to society valued at between £1,000 and £9,000 per ha[4]. The net benefit across 130,000ha is estimated at £460 million over 40 years. Further benefits include the value of improved biodiversity (estimated at £300 million over 40 years) and to reduce pressure on raw water quality (e.g. from colouration) and downstream flooding.

The cost of not investing?

Degraded peat soils in England are releasing 3 million tonnes of CO_2 into the atmosphere each year[5] – the equivalent of the annual emissions from 330,000 households and similar to the emissions from the UK chemicals industry. Without investment in peatland restoration, these emissions will continue to increase. Water quality and colour will continue to worsen and the costs of dealing with it will rise; we will be less able to cope with the expected more frequent and severe floods caused by climate change; there are likely to be greater losses and higher insurance costs. Valuable habitat for wildlife will be lost and more grazing land for animals will turn to bare soil.

Key assumptions/uncertainties

Current peatland restoration activities are already utilising the most cost-effective opportunities and further restoration efforts may have lower returns than those calculated, and/or may not be possible over the whole 130,000 hectares or over the suggested timescales. Site-specific costs and benefits can vary based on remoteness, the depth of peat and level of degradation. However, these uncertainties do not alter the overall conclusion that there are large areas of peatland where restoration will be greatly beneficial to society.

Impact on natural capital assets

The investment would improve the quality and/or condition of: soils (e.g. organic matter); wildlife and habitats (e.g. peatland plants, birds and invertebrates); and, freshwater.

Peatland Value Chain

This value chain highlights the business case for investing in peatland, showing some of the likely beneficiaries and potential investors:

Peatland Restoration - Restoring 130,000 ha of degraded peatland

Beneficial Impacts
Estimated at £460m for avoided carbon emissions; £300m for biodiversity conservation over 40 years. Also protection of raw water quality (water quantity and flood regulation), increased area of grazing/heather from bare peat restoration, increased invertebrate food for birds, including red grouse. Evidence of high cost-effectiveness.

Opportunity Costs
Potential minor loss of grazing and impact on heather immediately around restored grips.

Beneficiaries
Moorland owners, farmers, commoners. Water and waste water companies and their customers. Residents of settlements at flood risk across the north of England. Global population (re carbon benefits). Users of upland landscapes for recreation.

Potential Investors
Private industry through UK Peatland Code/ carbon credits. Water and waste water companies. Private landowners. Local/Central Government, Local Enterprise Partnerships, charitable trusts and philanthropists.

Peatland restoration is simple, cost-effective and proven to work

Increasing carbon storage and sequestration, improving water quality, reducing flooding, supporting farming and sustaining biodiversity.

Investment opportunities

The partners in the LNP have a strong track record of working with landowners to restore our peatlands on a massive scale across the whole landscape. This involves blocking moorland drains ('grips') and re-vegetating areas of bare peat. Over the next five years, private sector investment could add value to funding from Government and the EU LIFE Programme and see thousands more hectares of peatland restored.

Before

After

Restoring bare and eroding peatlands

Large areas of bare peat are fenced to keep out stock. Seed-rich heather 'brash' is then spread to aid regeneration. The remote nature of many of the sites means helicopters are often the only way to get the cut material to the restoration site.

Thousands of hectares of bare peat requires urgent restoration across all five protected areas in the northern Pennine uplands. They can then once again be grazed by sheep, and provide food and habitat for birds.

Restoring natural drainage to degraded peatlands

A functioning peat bog depends on water. Yet, with financial incentives from Government in the 1970s and 80s, tens of thousands of kilometres of 'grips' were dug to drain our peatlands.

Whilst there has been much successful work done in the last ten years, thousands of kilometres of these grips still need to be blocked. We use peat dams every 10 metres to turn drained moors back to functioning bogs, increasing carbon storage and sequestration, improving water quality, reducing flooding, supporting farming and sustaining biodiversity.

Before: A drainage grip at Geltsdale, down to the bedrock.

After: Geltsdale 18 months after restoration.

Main Picture: Bringing in seed-rich heather brash as part of bare peat restoration.

Below: Sphagnum regrowth after brash-spreading on bare peat areas.