

Climate Change

challenge for the National Park

Global challenge

Climate change is probably the greatest environmental challenge facing the world today; the impact on the Yorkshire Dales National Park (YDNP) could be very dramatic.

The main cause of climate change is thought to be increasing greenhouse gas emissions (mainly carbon dioxide), which cause global warming, increasing the average global temperature through their 'greenhouse effect'.

Rising global temperatures are likely to bring changes in weather patterns: we can expect wetter winters and drier summers, with more frequent and more intense extreme weather. Sea levels are predicted to rise.

The natural environment is likely to be affected in every way, through wildlife, habitats, soils, water and the atmosphere. Minimising the impact of climate change can best be done by reducing the generation of greenhouse gases and by increasing the amount of greenhouse gases being stored naturally in trees and soils for example.

In the National Park, the built environment, including many of our heritage features, is likely to be affected considerably. Added to this, climate change is likely to have significant impacts on the local economy, on farming and tourism in particular. Some of these potential impacts will have specific effects on the National Park (outlined later).

The National Park Authority (Authority) is working hard to reduce its impact on climate change through its programmes of work and changes to its business operations (see later).

'We need to adapt and be adaptable as science develops concerning the best way to tackle climate change and manage our resources.' YDNPA Position Statement on Climate Change.



How much do you know about climate change?

Play our online game at www.yorkshiredales.org.uk



YORKSHIRE DALES
National Park Authority

EDUCATION SERVICE

Education file

Challenge for the Yorkshire Dales National Park

While it is hard to give specific examples, current thinking predicts a number of potential challenges, for example:

Water and rivers

- Increased winter precipitation and summer droughts
- Increased risk of flooding
- Increased demand for water
- More stringent controls on water use.

Biodiversity

- Risks from extreme weather (such as fire, flood)
- Loss of some species and increases in others.
- Changes in tree species distribution and age structure
- Effects on breeding birds and mammals (such as flooding).

Agriculture

- Effects on crop production and livestock
- Changing demand for certain crops
- Increase in irrigation.

Buildings

- Structural damage from floods, subsidence, erosion
- Greater demand for localised energy generation
- Increased expectation for energy conservation
- Changes in building design are likely to occur.



Read all about it in the spring and autumn issues of our residents' newspaper 'Dales 2008' - in the 'Living in' pages at www.yorkshiredales.org.uk

Challenge for the National Park Authority

Changes to business operations

Action plan

The NPA has produced a corporate 'Climate Change Action Plan' which aims to make the organisation carbon neutral by 2012, in keeping with the position statement of the English National Park Authorities Association (ENPAA).

Yoredale

The new NPA office at Bainbridge, 'Yoredale', includes a number of environmentally – friendly features. These include the installation of a ground source heat pump under the car park to capture the low-grade heat from the ground, which is used to provide underfloor heating to the offices .

Business miles

Carbon emissions from NPA operations were reduced by 12% in 2007/8. Officers' business mileage was reduced by 9% in 2007/8 and further reductions are expected.

Wood chip boiler

A new 80KW wood chip boiler has been installed at the Grassington office and is set to save up to 20 tonnes of carbon dioxide a year – over 6% of NPA emissions in 2007/8.

Challenge for the National Park Authority

Changes to programmes of work

Peatlands

The majority of carbon stored in the UK is locked up in soil; peatland soils are the largest single store holding around 3 billion tonnes. Artificial drainage (gripping), damage from fires and over grazing can all erode peat and reduce the carbon stored in peatlands. The NPA is working with partner organisations across Yorkshire developing a major project to support the restoration and good management of peatlands.

Woodland

Trees are a very good carbon store. The Dales Woodland Restoration Project has helped to fund the planting of over 160 hectares of native woodland by farmers and landowners and is aiming to plant around 75 hectares each year until 2020. Find out more in the 'Looking after' pages at

www.yorkshiredales.org.uk

Sustainable Development Fund

The NPA Sustainable Development Fund (SDF) has supported lots of projects across the National Park, aiming to minimise greenhouse gas emissions. These include:

- small scale renewable energy schemes, including hydro-electricity, at many locations, such as Yore Mill, Aysgarth.
- the Clapham bio-diesel project, a local community project which produces green diesel from used vegetable oil.
- installation of a woodchip fired central heating boiler and distribution pipe at the Sunhill Conference and Activity Centre and business units at Rylstone,

Find out more about SDF projects in the 'Living in' pages at www.yorkshiredales.org.uk

'Green' visitors

Are you planning a visit to the National Park? It always helps to consider your environmental impact. Find out how to be a green visitor in the 'Enjoying' pages at

www.yorkshiredales.org.uk

'Green' living

A Climate Change Development Officer (employed by Craven Local Strategic Partnership, based with the NPA) works with business and communities across the Craven District, encouraging local action to reduce greenhouse gas emissions and minimise environmental impacts. To find out how to minimise the environmental impact of your own lifestyle visit

www.cravencdc.gov.uk/TacklingClimateChange



Yore Mill, Aysgarth Falls:
small scale hydro electricity
generation project.
(©YDNPA)

Case study: Yorkshire Peat Partnership (YPP)

Vital peatlands

Around 1.5 million hectares (ha), 15% of the earth's blanket bog, are found in the United Kingdom. The Yorkshire and Humber region contains about a third of England's blanket bog (around 65,500 ha), most of which is in the Yorkshire Dales National Park. This concentration of blanket bog within the UK, and the huge environmental benefits it provides, make it our equivalent of tropical rainforest. Ensuring that these peatlands are kept in good condition is essential.

Carbon store

Peatlands are the UK's largest single store of carbon, holding 3 billion tonnes - more than the forests of Britain and France combined. Recent study (defra) shows that of the 296 million tonnes of carbon stored in England's peat soils, 41.5 million tonnes are in the YDNP. Pristine peat bogs actively capture carbon from the air. It is estimated that peatland in England and Wales could absorb around 400,000 tonnes of carbon per year (equivalent to the carbon from 1.1 billion car miles). Badly managed, the same area loses the same amount. 80% of carbon currently lost from soil is from upland peat.

Peatland problem

Blanket bog in England is in a very degraded state. A recent National Park-wide habitat survey showed 46% of blanket bog in Sites of Special Scientific Interest (SSSIs) to be in 'unfavourable or declining' condition, while 61% of the area of blanket bog outside SSSIs was in 'poor' condition. Peatland decline reflects a range of causes including historic atmospheric pollution, drainage (grips), grazing, burning, recreational erosion and changing climate.

Restoration

The Yorkshire Peat Partnership will co-ordinate restoration projects delivered by organisations across Yorkshire and the Humber. The YPP seeks to restore at least 21,000ha of degraded peatland across the region by March 2013, around 16,000 ha of this within the National Park. The partnership is funded primarily by the Authority, the Yorkshire Wildlife Trust and the Environment Agency. The programme of capital works, estimated at over £7 million over four years, that this will deliver will be funded by Natural England through Environmental Stewardship.



Heather moors: classic peatland, Swaledale (©YDNPA)



Moorland drainage 'grips'. (©YDNPA)



YORKSHIRE DALES
National Park Authority

For more Education Service information:

Write to Yorkshire Dales National Park Authority,
Colvend, Hebden Road, Grassington, Skipton,
North Yorkshire BD23 5LB.

Call 0300 456 0030, email education@yorkshiredales.org.uk
or visit www.yorkshiredales.org.uk

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