

The vulnerability of the natural environment to climate change – adapting to climate change in Lancashire

Sarah Robinson

A decorative green wave graphic at the bottom of the slide, starting from the left edge and curving upwards towards the right.

CLIMATE CHANGE IT'S TIME TO ACT.

Climate Change Northwest

RIISING TO THE CHALLENGE

A Climate Change Action Plan
for England's Northwest
2010-2012

england'snorthwest
FOR A LOW CARBON FUTURE

- 4 Undertake scoping studies to assess future regional risks, opportunities and priorities for:
 - The potential impacts and life cycle costs of a range of energy generation technologies (including micro and macro renewables, cleaner fossil fuels, Combined Heat & Power (CHP), nuclear, biomass and waste-to-energy) to meet future forecast energy demands
 - The potential markets/sector changes as a result of climate change impacts in UK and abroad
 - The potential for green infrastructure, including regional parks, to adapt and mitigate for climate change impacts and commence implementation of findings
 - The potential for flood risk and coastal erosion through catchment and shoreline management plans
 - The potential climate change impacts on the region's landscape, sensitive habitats & species and the contribution of natural systems to carbon sequestration and reduced flood risk
 - The potential climate impact on the region's health services

Action 10.5 - Develop a regional adaptation framework which sets out the regional response to projected climate change impacts and capitalises on opportunities for implementation and demonstration, taking into account, **Adaptation response strategies for the region's distinctive landscapes, habitats and species, and the assessment of the contribution of natural systems to carbon sequestration and reduced flood risk.**

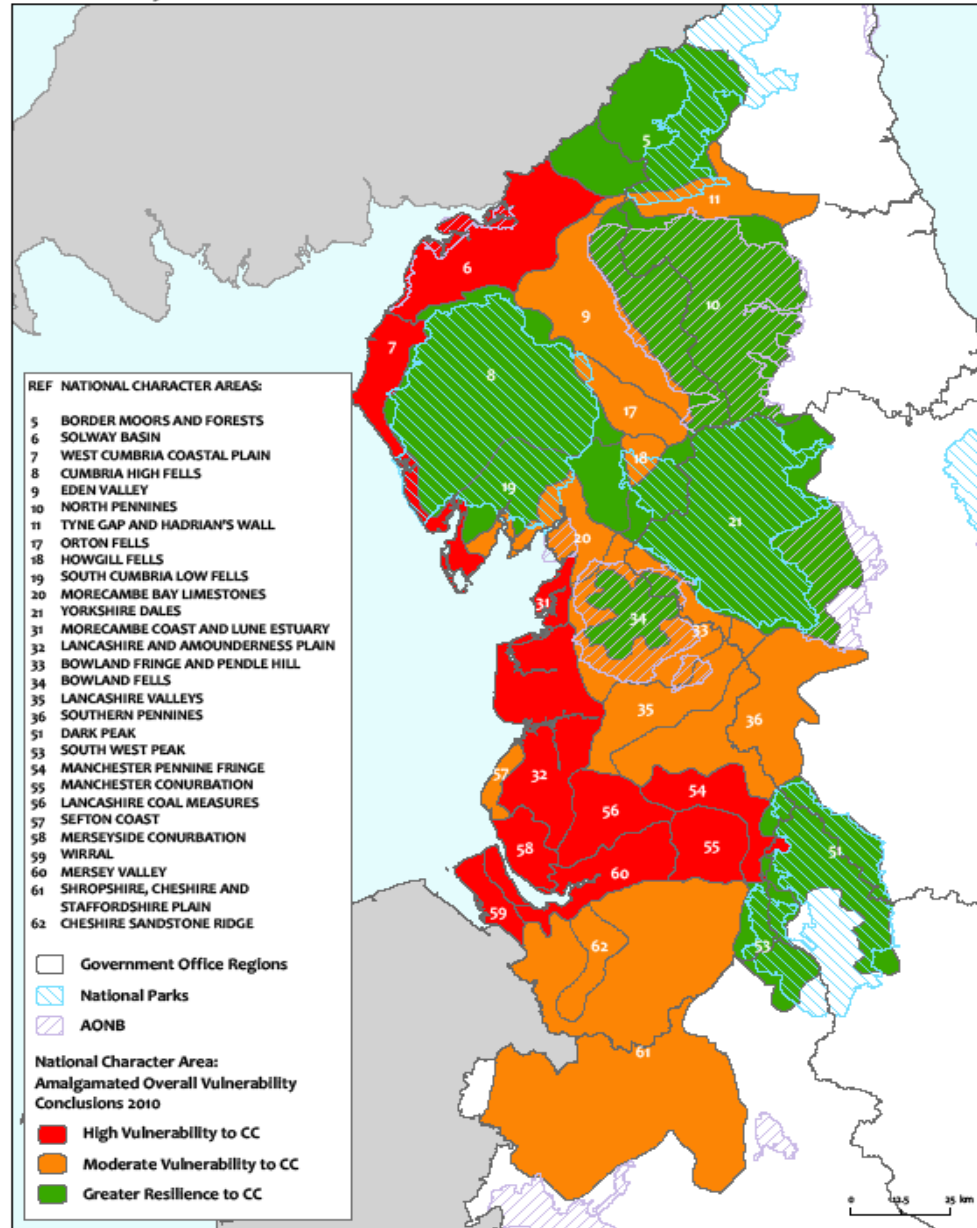
Regional Vulnerability Assessment - methodology



- An assessment of the relative vulnerability of the 29 NCAs in the region using available data
- Based on the evidence that robust landscapes share the following attributes:
 - high permeability;
 - variation in topography – slope, aspect and height;
 - soil diversity;
 - numerous land cover types;
 - diverse and structurally varied vegetation;
 - semi- natural vegetation over a range of altitudes and across coastal zones.
 - diverse water regimes.

North West Region: Natural Environment Vulnerability to Climate Change

Overall Conclusions 2010 Map: by Amalgamation of Three Vulnerability Assessment Results



Based upon the Ordnance Survey mapping with the permission of the Controller of Her Majesty's Stationary Office. Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Natural England 10002001, 2010.

NW Region approach to obtaining meaningful detail/ data



NW Vulnerability Approach



Higher Risk

Solway

Lancashire & Amounderness Plain

Moderate Risk

Morecambe Bay Limestones

Bowland Fringe

Sefton Coast

Greater Adaptive Capacity

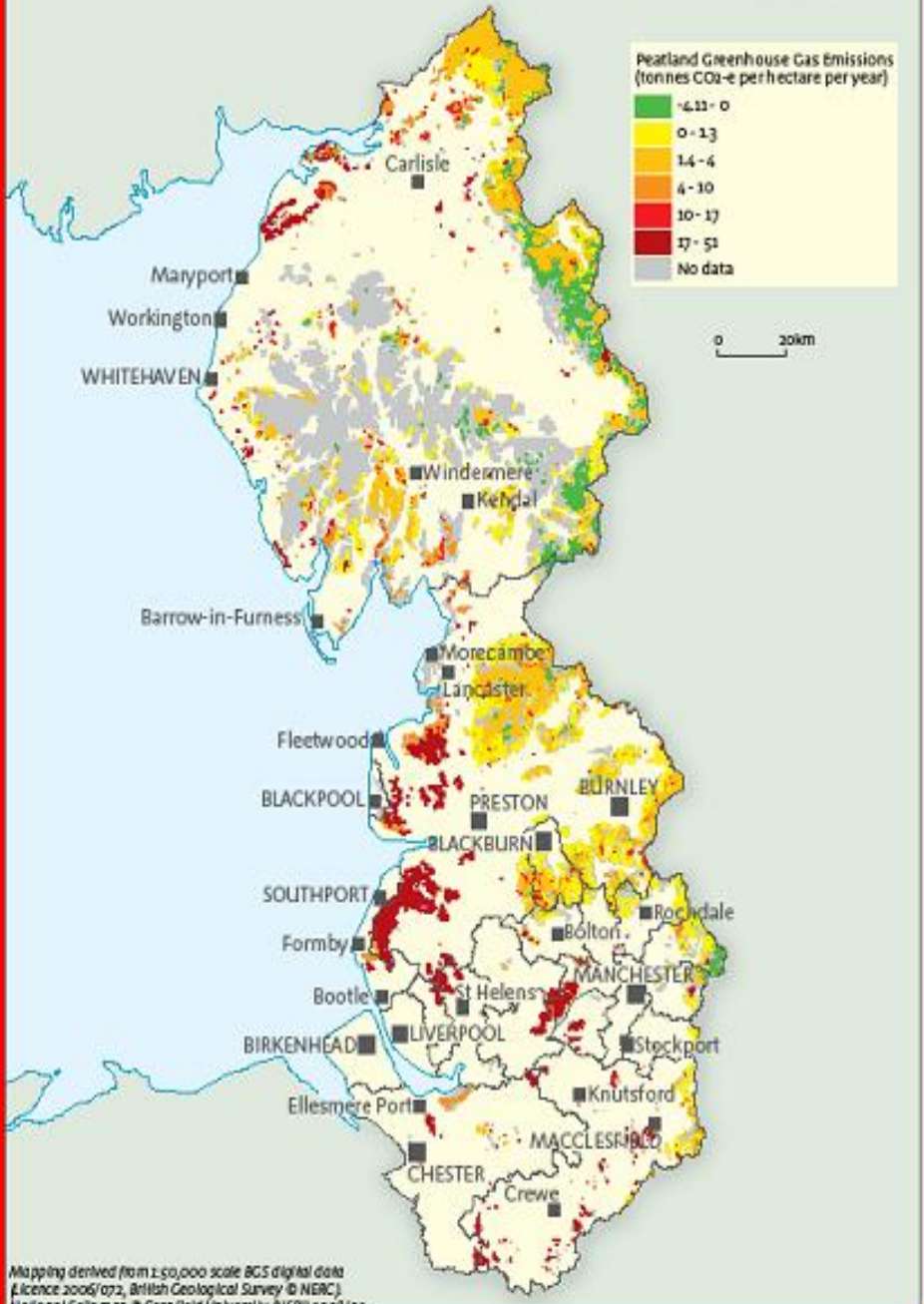
Bowland Fells

North Pennines

Local Vulnerability Assessments & Mapping informs Regional Vulnerability



NORTH WEST



Outline methodology

- 1. Identify Valued Natural environment assets – landscape type & function, biodiversity assets & ecosystem services**
- 2. Vulnerability and Adaptation Template**
 - i. Key Assets/ Characteristics
 - ii. Change in climate Variable
 - iii. Impacts
 - iv. Vulnerability
 - v. Response
- 3. Response Screening template**
 - i. Proposed adaptation response
 - ii. Impact
 - iii. Modification of response
- 4. Integrated Adaptation strategy (priority actions for this area)**

http://www.climatechangenorthwest.co.uk/?page_id=16
63

Available Publications.

An Assessment of the vulnerability of the Natural Environment to climate change in North West England using the National Character Areas.

Produced by Natural England for the Northwest Climate Change Partnership in October 2010.

- [Executive Summary](#)
- [Full Report](#)
- [Appendix](#)
- [Northwest Vulnerability Map](#)
- [Presentation](#)

National Character Area Reports

- [Cumbria High Fells NCA Report](#)
- [Solway Basin NCA Report](#)
- [Morecambe Bay NCA Report](#)

For more information please visit the [Natural England Climate Change website](#).

