



# Developing Sustainable Adaptation Responses: A Framework for Integrated Delivery

University of Exeter 24<sup>th</sup> September 2008

Caro Cowan<sup>1</sup>, Dave Thompson<sup>1</sup>, Nick Macgregor<sup>2</sup>, David Viner<sup>3</sup>

1 Natural England

2 Defra

3 British Council London

# Natural England's role



Our statutory purpose:

*“to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations, thereby contributing to sustainable development”*

Objectives – driving forward our delivery work:

- To ensure we have a resilient and natural environment, with high adaptive capacity, hallmarked by a rich diversity of habitat and species
- Provide space and conditions for the natural environment to adapt
- A healthy, resilient natural environment is recognised as the bedrock of successful adaptation

# Sustainable Adaptation



An emerging framework to help decision-making.

- *Action does not exacerbate the causes or consequences of climate change*
- *Action in one sector does not unreasonably limit the ability of another sector to adapt*
- *Decisions are based on a whole systems approach, not focused on individual sectors and considers vulnerability to impacts, and not just the possible impacts themselves.*
- *Decision-makers recognise that a system has multiple values and functions attached to it and acknowledge these are the basis for assessing options for action*

# Four pilot landscape areas

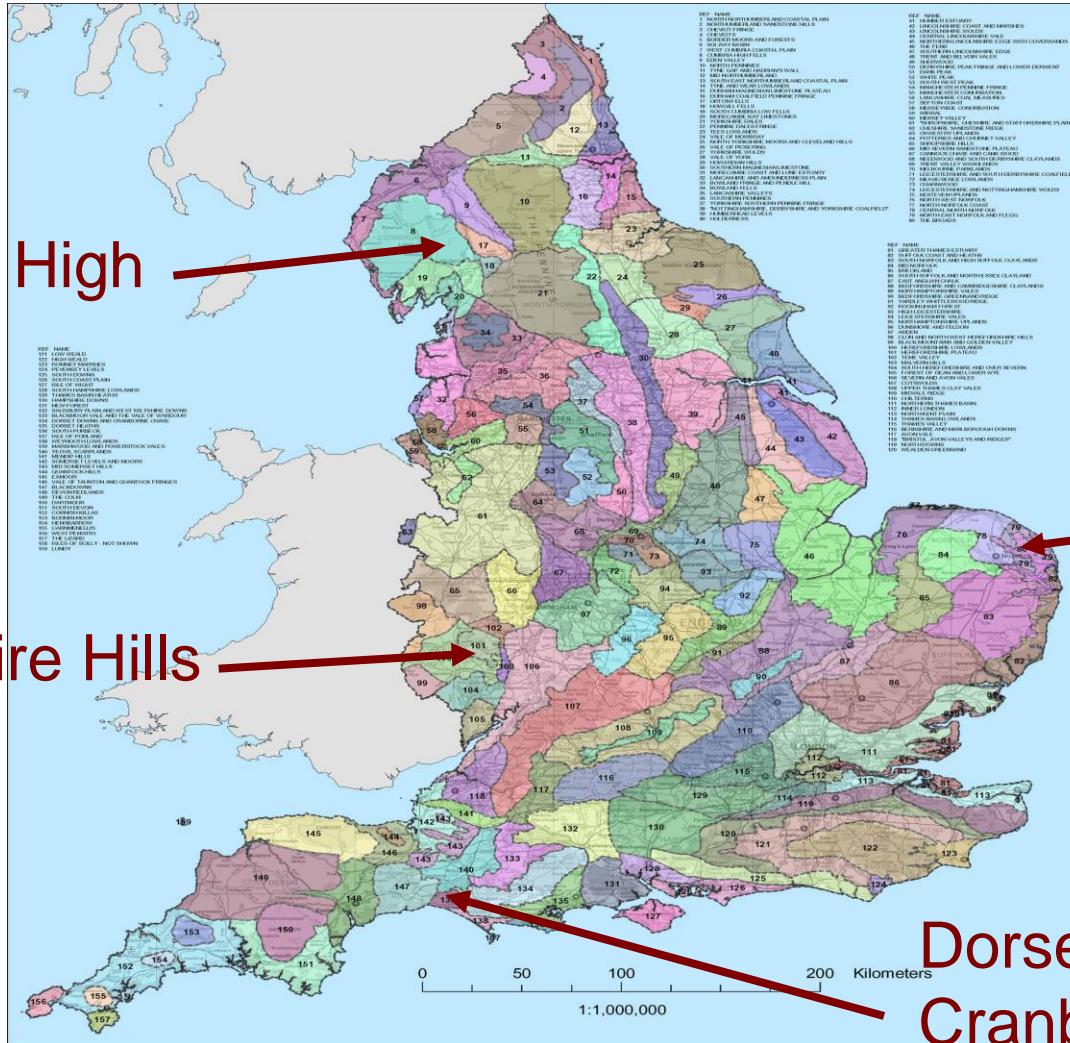


Cumbria High Fells

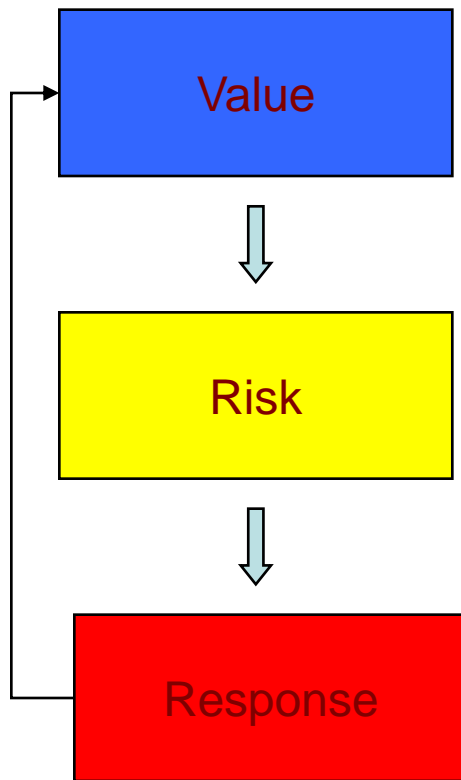
Shropshire Hills

The Broads

Dorset Downs & Cranborne Chase



# A framework for sustainable adaptation

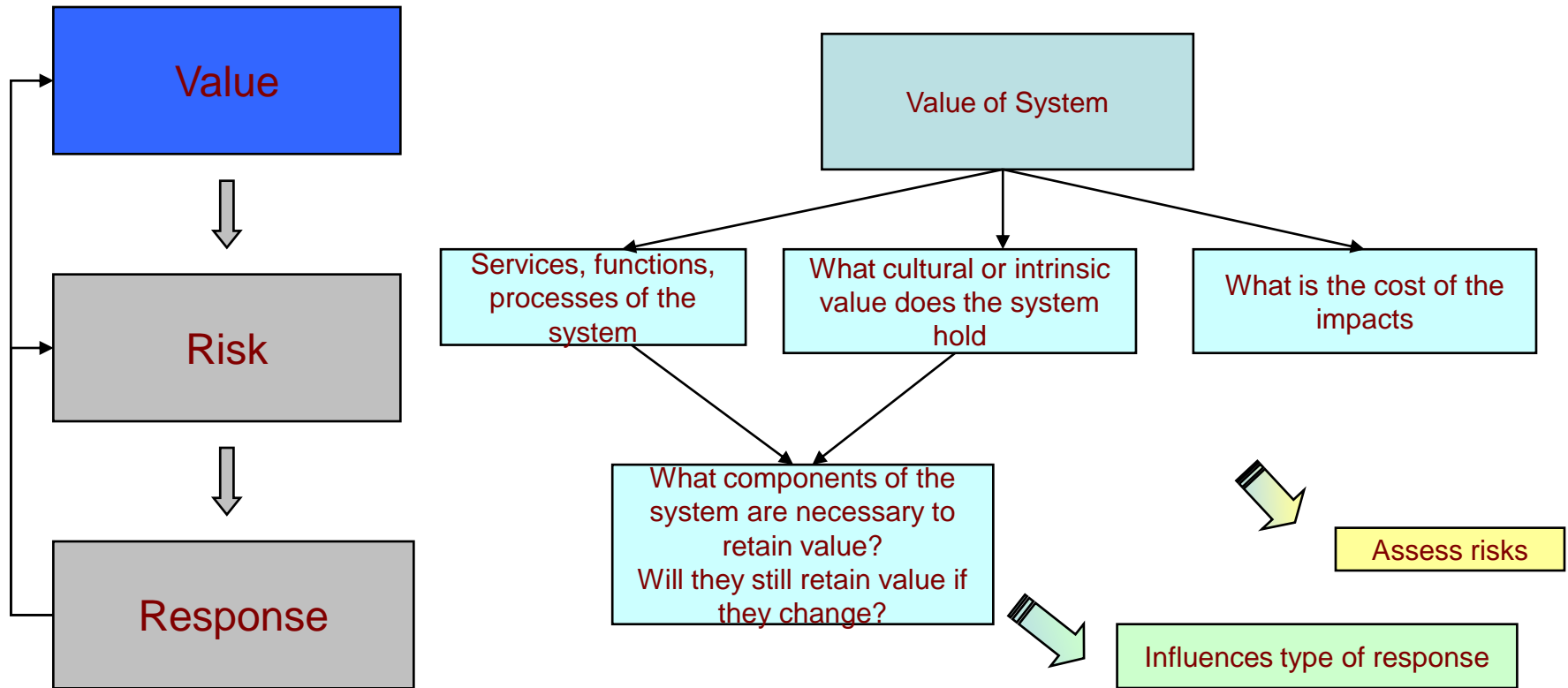


What is/are the value(s) of the system?  
What do we want from it?  
What are the essential components for function  
How does it benefit society?

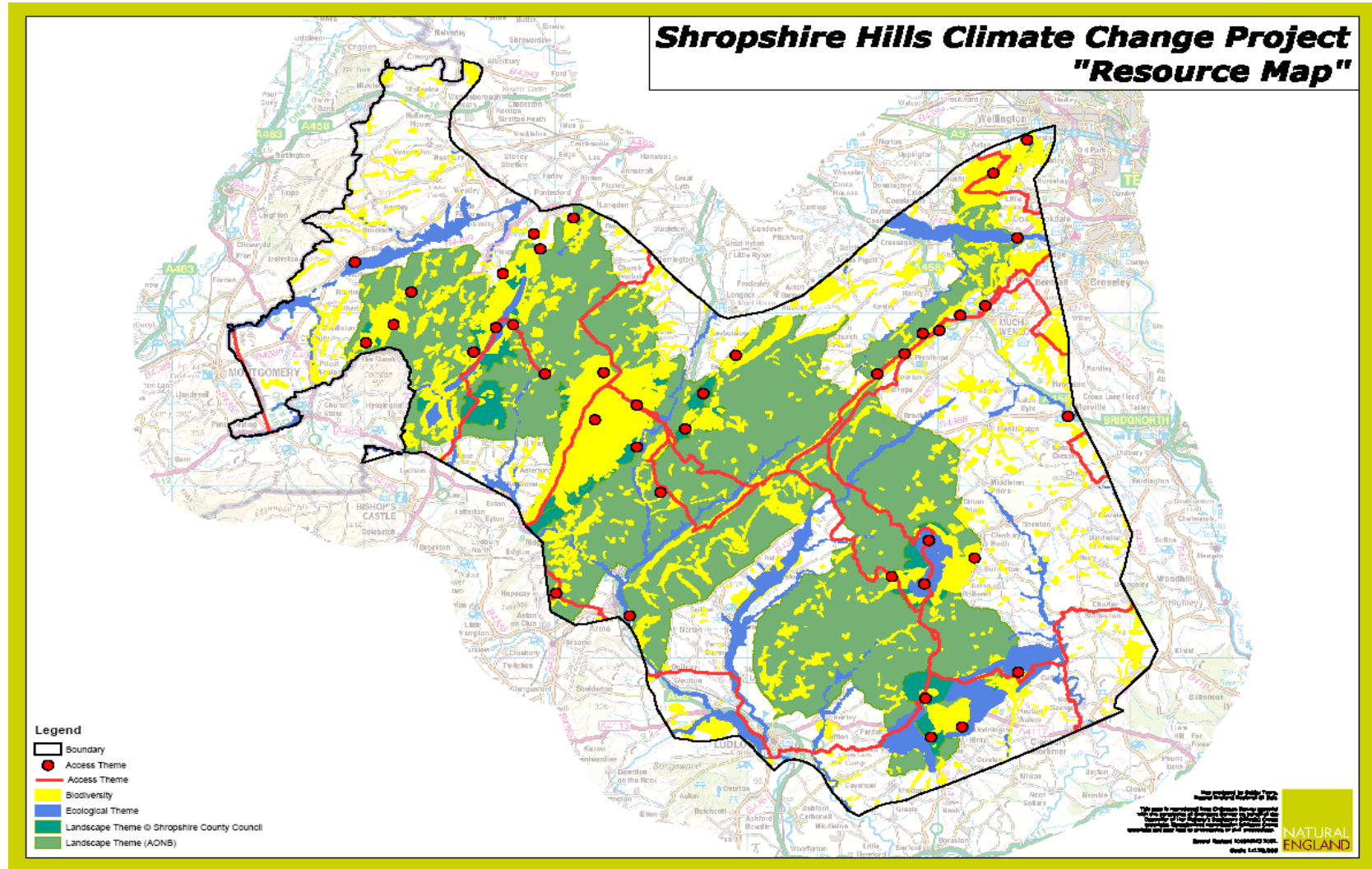
What are the vulnerabilities, threats and opportunities, to the functioning of the system from climate change?

Identify and implement appropriate responses to minimise vulnerability and build resilience so that the system continues to provide the valued services

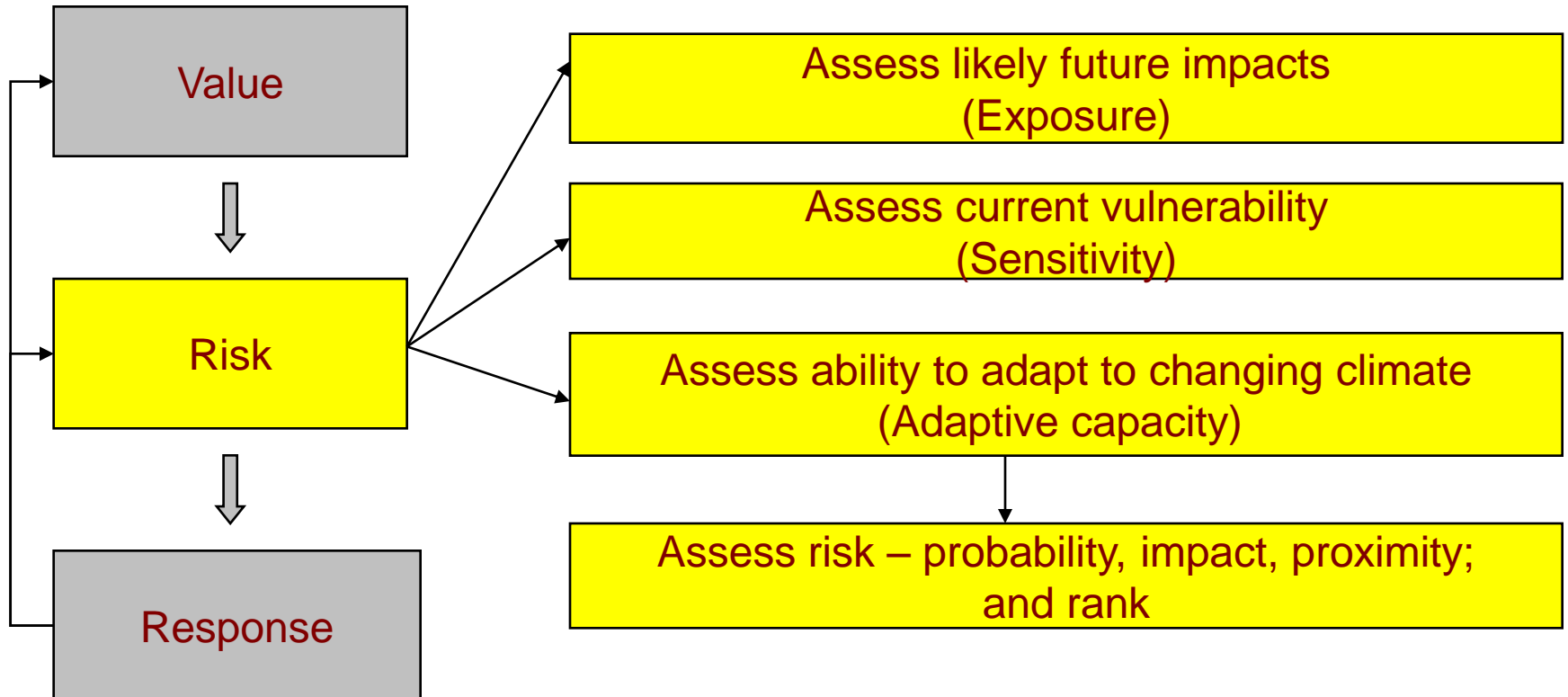
# Determine Value of System



# We have identified and mapped the key valued environmental assets

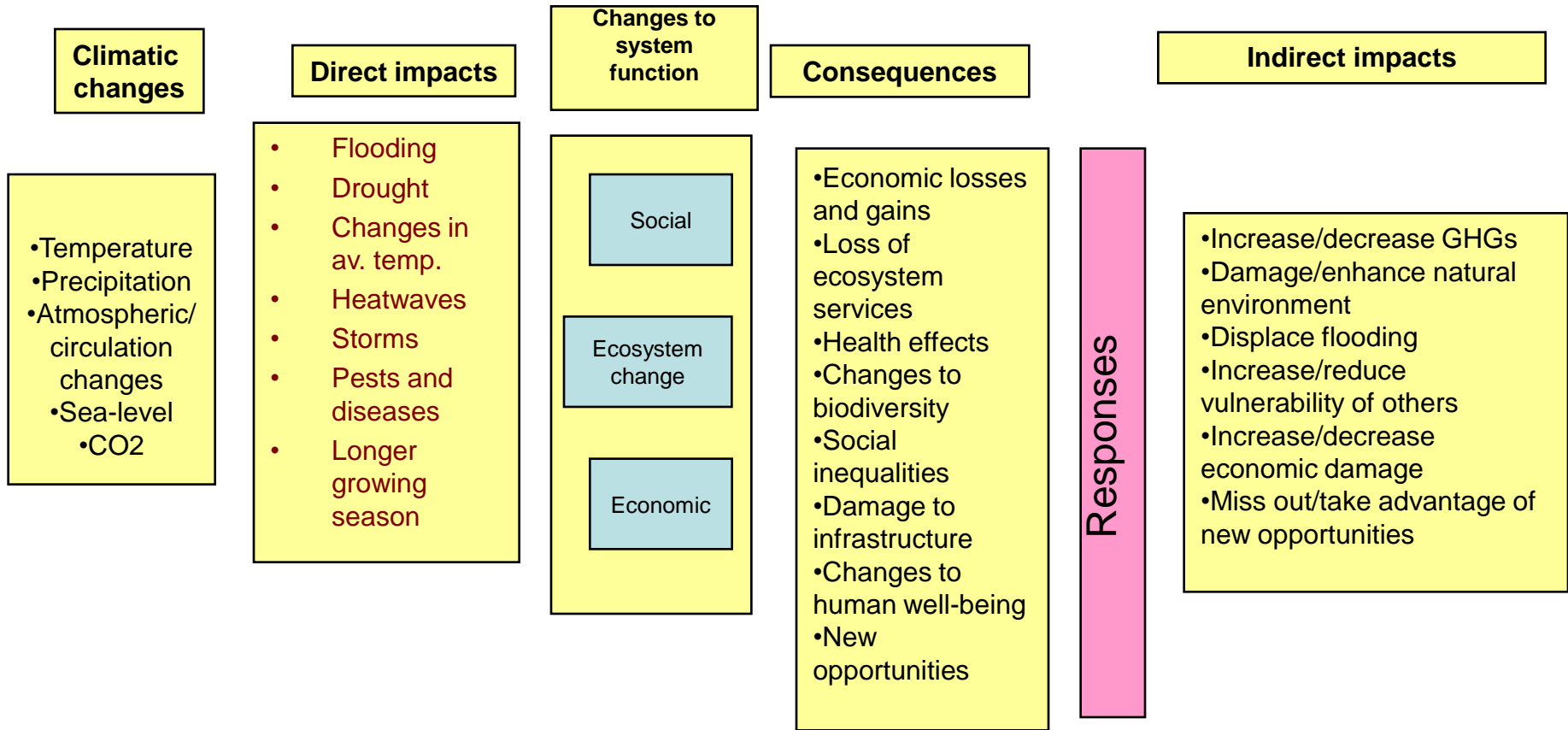


# Assess Risk



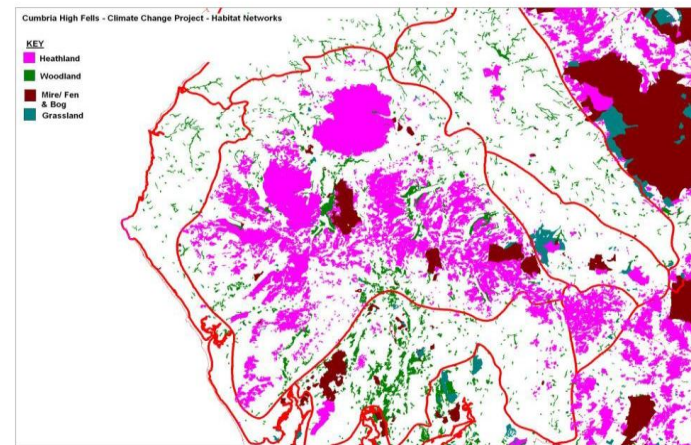
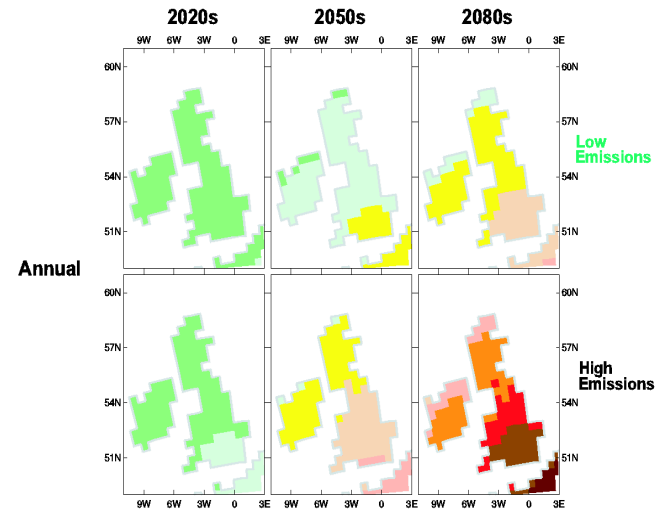
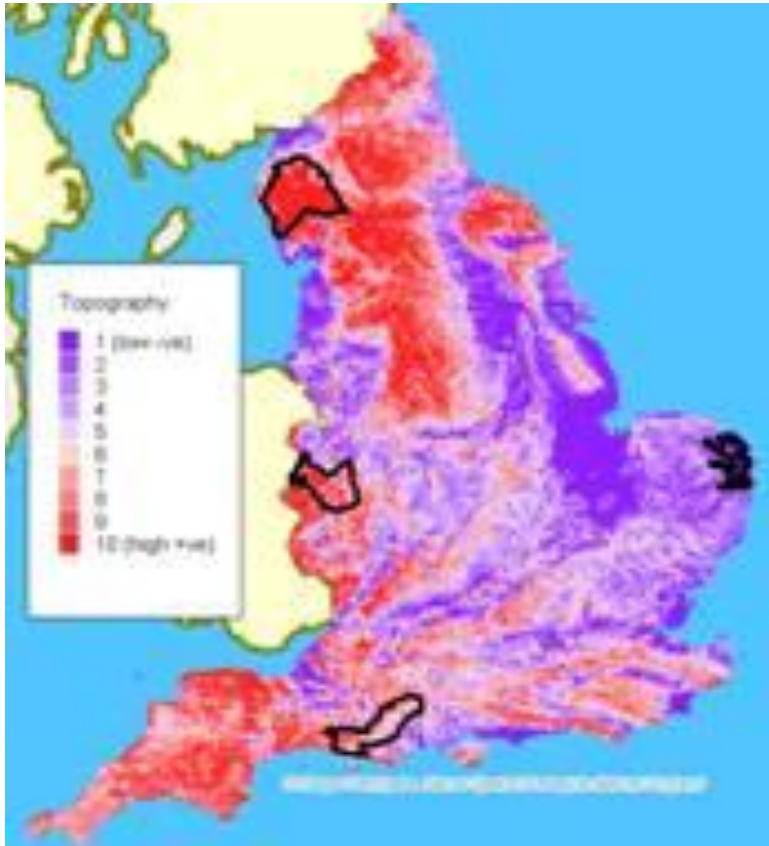


# Threats and opportunities from climate change

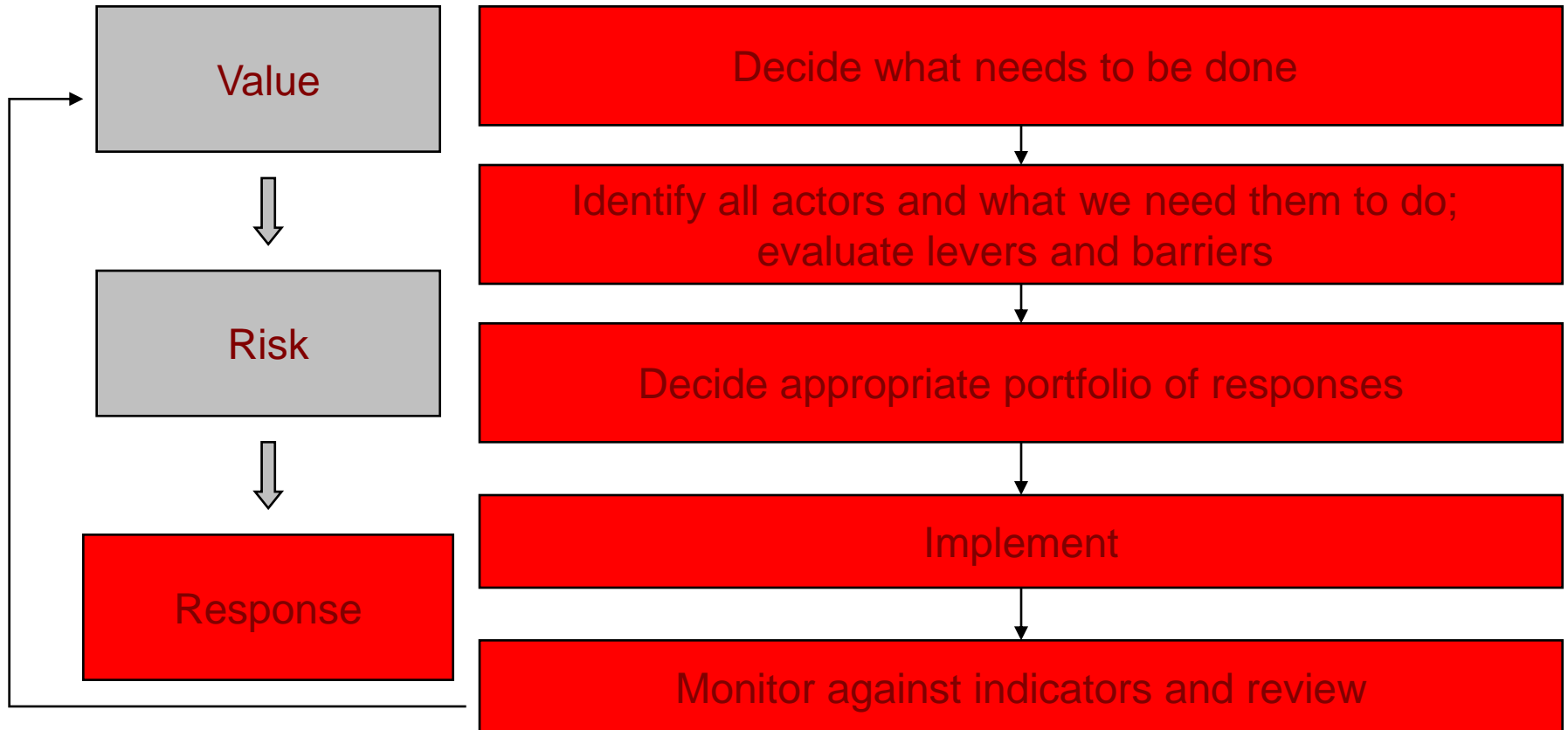


Threats and opportunities

# Assessing exposure, sensitivity and adaptive capacity for natural environment



# Adaptation Response



# Response strategies: delivery of conservation objectives

NATURAL  
ENGLAND

- Conserve existing biodiversity in Protected Areas
- Reduce sources of harm not linked to climate
- Develop ecologically resilient and varied landscapes
- Make space for the natural development of rivers and coasts.
- Maintain and enhance habitat networks
- Respond to changing conservation priorities

Conserving biodiversity in a changing climate: guidance on building capacity to adapt

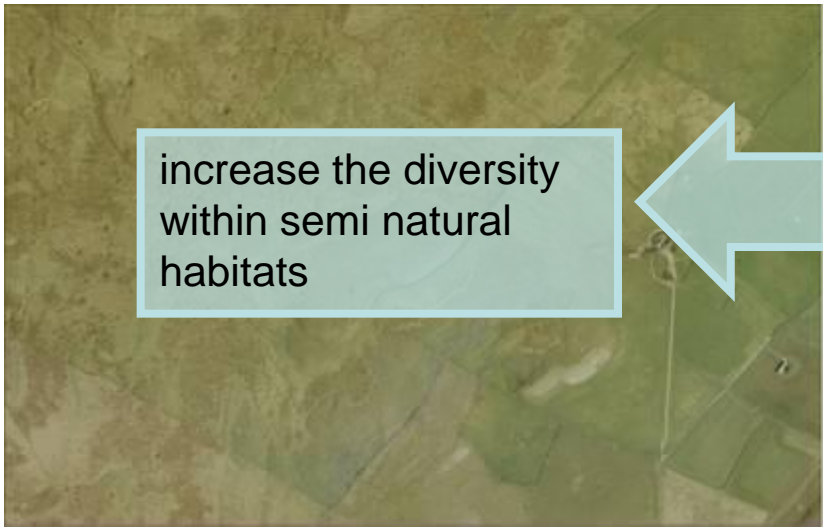


Published by Defra on behalf of the  
UK Biodiversity Partnership

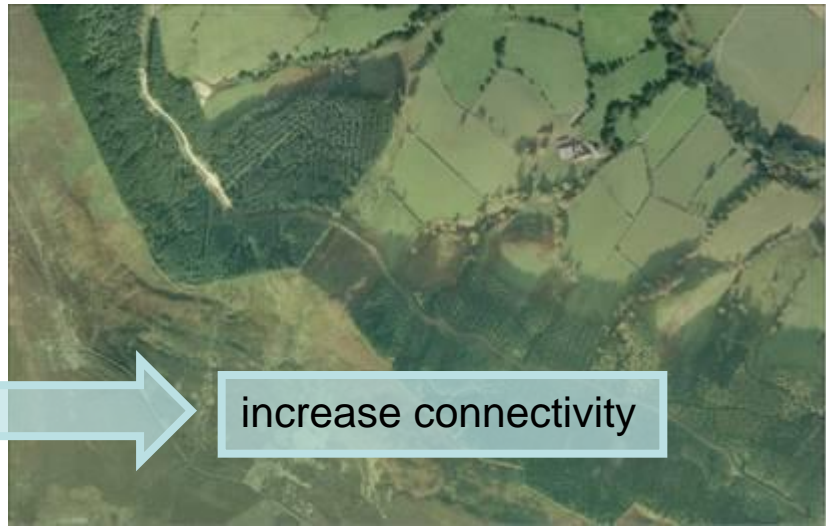


**defra**  
Department for Environment  
Food and Rural Affairs

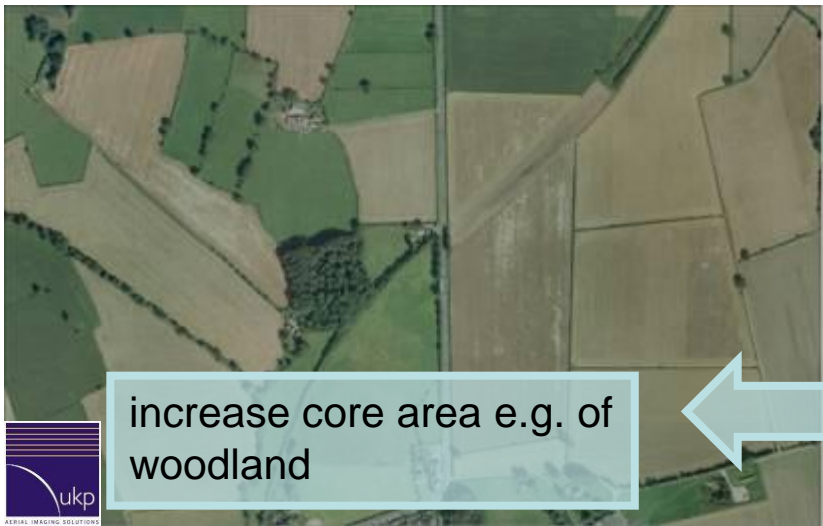
# Use the assessment of threats to develop response strategies



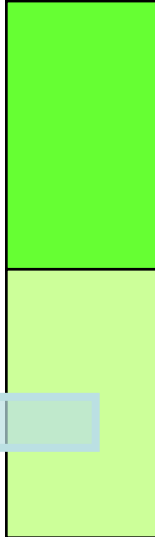
increase the diversity within semi natural habitats



increase connectivity

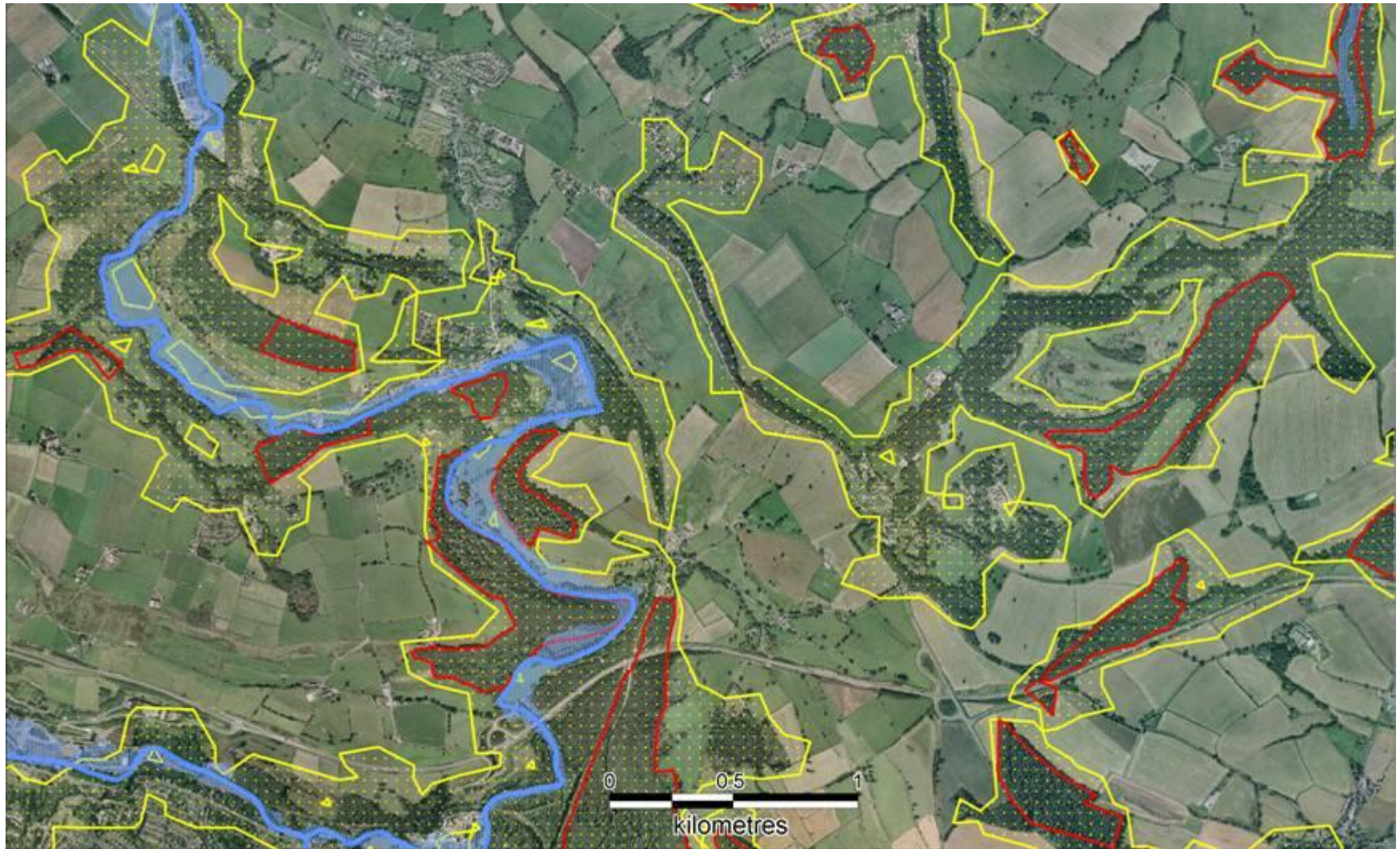


increase core area e.g. of woodland



deliver ecosystem goods & services

# Networks in practice



# Future challenges



- How manage across scale: temporal, spatial, institutional
- What tools do we need to deliver the responses – do we have the right mechanisms available
- Adaptation is a negotiated process – who and how facilitate those discussions
- Lack of a vision for where we want to go – need to have a shared view of what our landscape will look like and how it will be used to enable sustainable decision-making.



**THANK YOU**

[caroline.cowan@naturalengland.org.uk](mailto:caroline.cowan@naturalengland.org.uk)