

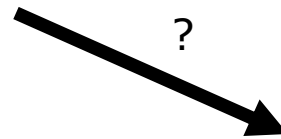
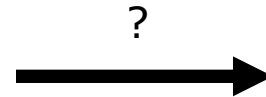


Delivering Nature's Services

The Upland Ecosystem Services Pilots

Ruth Waters and Stewart Clarke

The Ecosystem Approach in practice



Aims

- Looking to use the ecosystem approach to define land management in three areas
 - To demonstrate that investment in the natural environment can result in multiple benefits (carbon, water, biodiversity, recreational and health benefits...) for people and society in a cost effective way
 - The aim is to work in partnership to deliver an optimal range of ecosystem services on a defined spatial area in a cost effective way and link these services to the beneficiaries!
- ... its about agreeing and implementing a vision for a 'place' – the working hypothesis is that a healthy functioning environment is best at delivering multiple benefits.

Beyond water and carbon...



What's new?

These pilots are unique because:

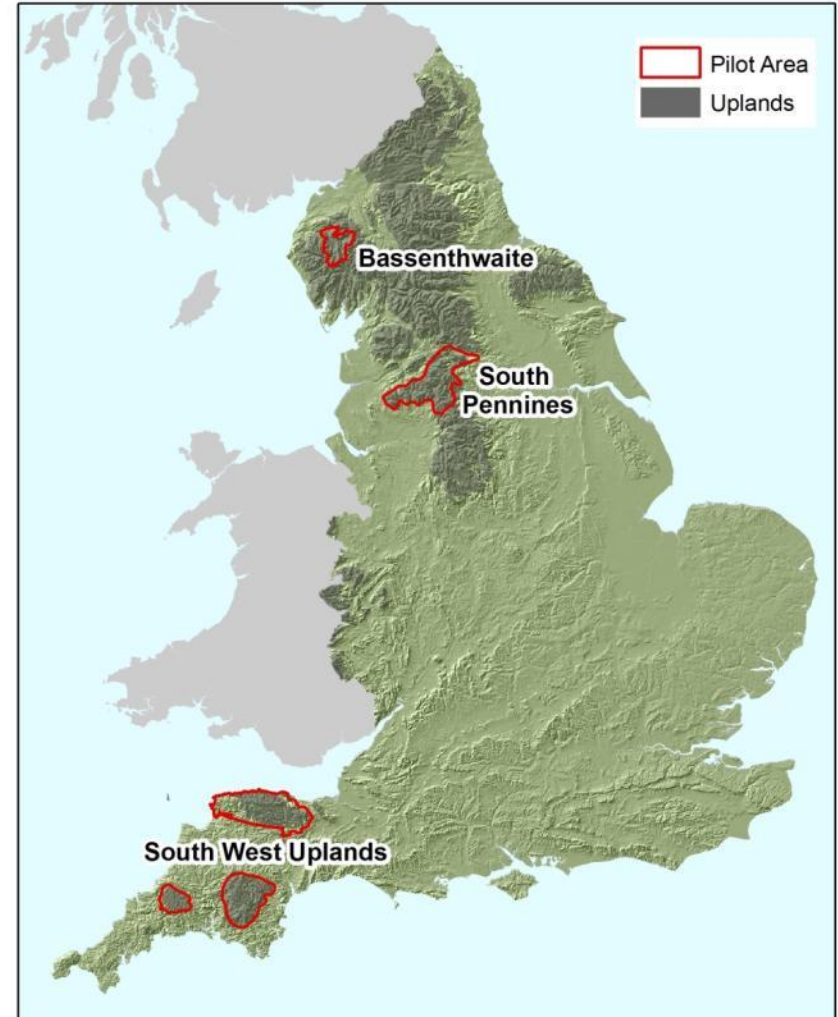
- we are taking an ecosystem approach from the bottom up
- we are designing the delivery of ecosystem services into the projects from the outset;
- they will deliver multiple benefits: environmental, economic, social and cultural;
- we will change land and water management to do this;
- we will develop new institutions and partnerships to link those that provide the services (the land managers) to those that benefit from them.

How will we approach this?

There are three pilot areas:

- South Pennines NCA, Yorkshire
- Bassenthwaite Lake catchment, Cumbria
- Dartmoor and Exmoor, South West.

Each is being run regionally with stakeholder groups



Pilot areas

- Bassenthwaite and Haweswater – Within a national park. Opportunities to negotiate a large number of new agreements. Recent floods have focussed attention on land management in the area. Tourism is a significant source of income in the area.
- South Pennines – 7 million people live within one hours drive. Source of water to many people. This pilot will in particular seek to link the beneficiaries to the services.
- Dartmoor & Exmoor – Within national parks. There are a number of projects in this area. We would like to corral these together to make a coherent integrated pilot for the whole site.

Timescales

- Aim to mainstream this work in each pilot by April 2011
- By then we should have a plan for land management changes to be implemented and monitoring in place
- We will need to continue to monitor for some time beyond April 2011 and as some outcomes may not be manifest for a long time we will need to consider modelling
- The pilots will initiate a programme of land management change which we hope will be monitored and studied for some time



Project steps

- 1) Developing partnerships across organisations responsible for securing benefits from ecosystem services
- 2) Defining the pilot area and boundaries
- 3) Identifying services currently provided by the land
- 4) Identifying and mapping the beneficiaries
- 5) Identifying the **optimal** service provision for the area
- 6) Valuing this optimal scenario compared to the status quo
- 7) Defining the land management required to achieve this vision
- 8) Working with partners to pool resources to contribute to the delivery

Mapping current service provision



We have some data on the structure and quality of upland ecosystems and on their use...

Linking these data to ecosystem service provision is not always straightforward – to what extent are we able to use surrogates?



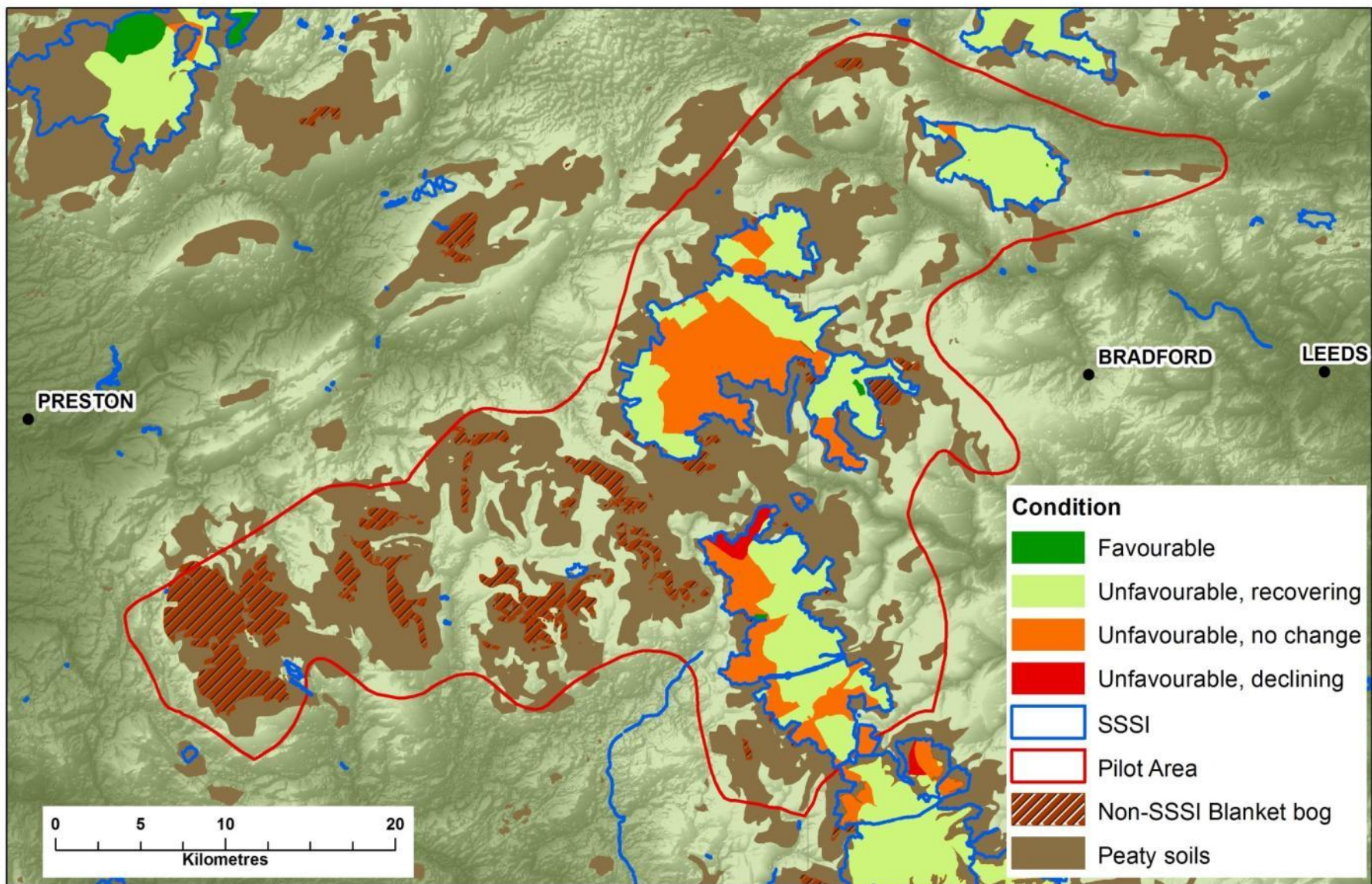
Mapping values:
the vital nature of
our uplands

An atlas linking environment and people

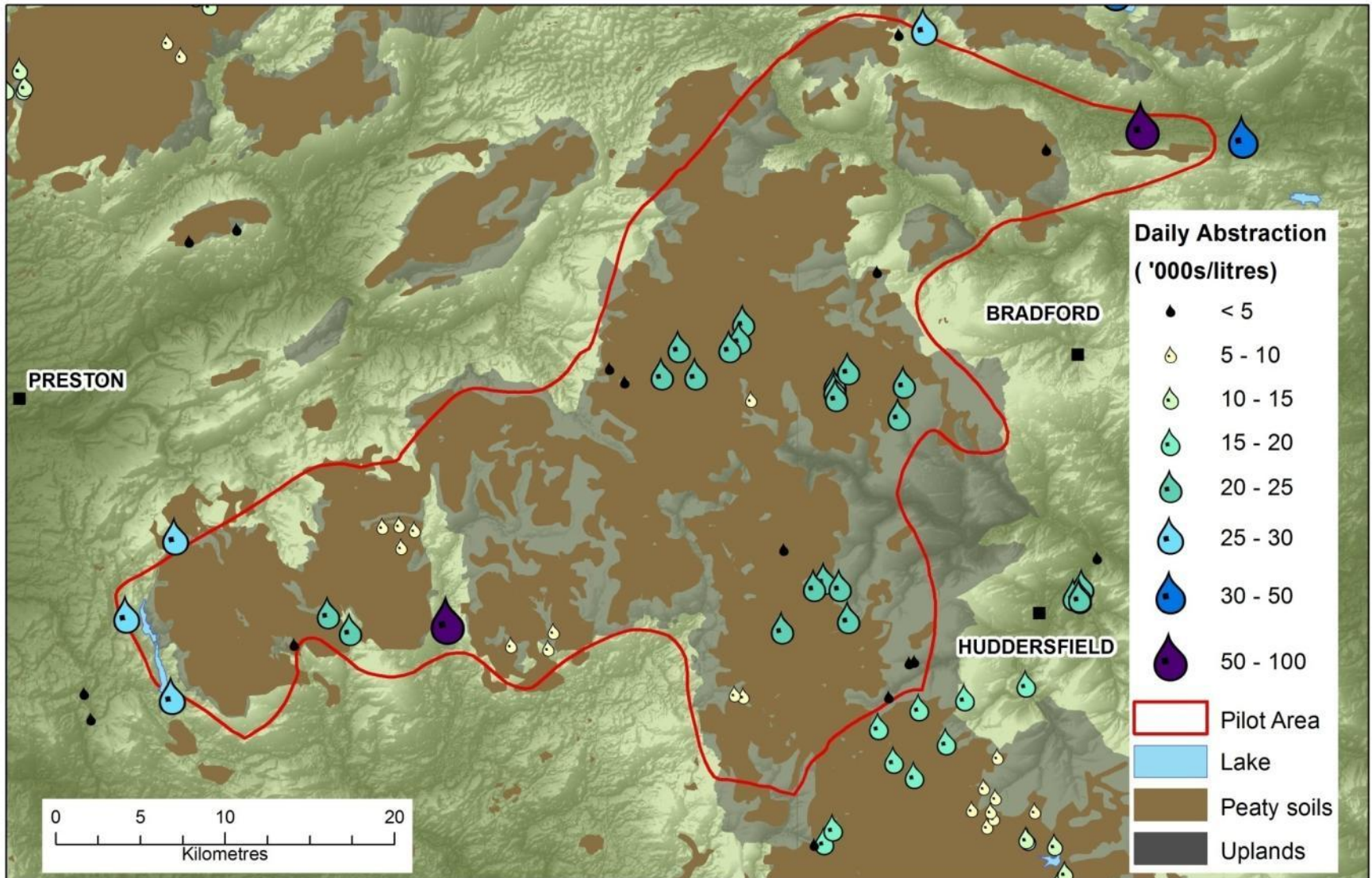
www.naturalengland.org.uk



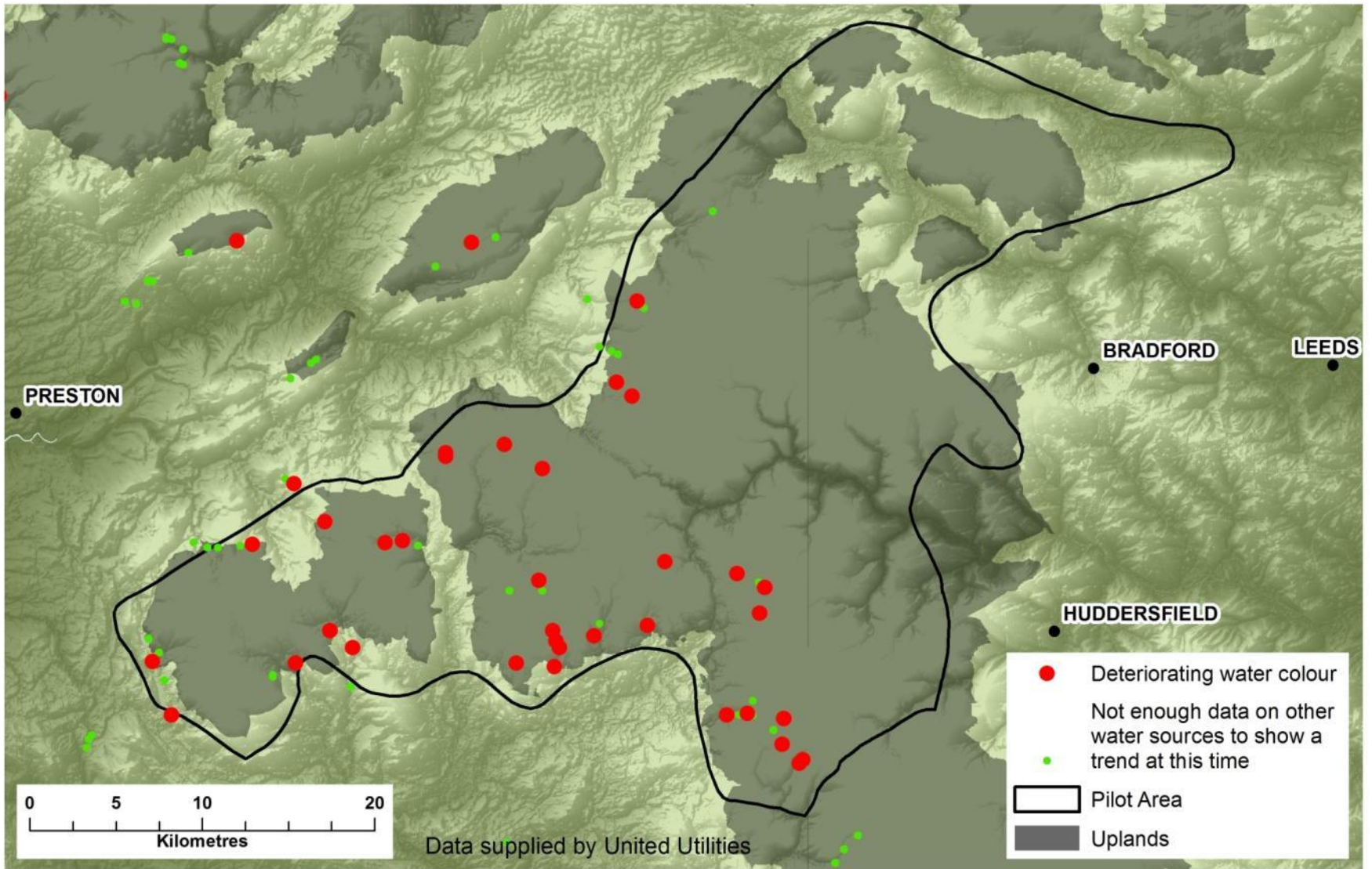
South Pennines Ecosystems Services Pilot - Condition of Blanket Bog on SSSIs



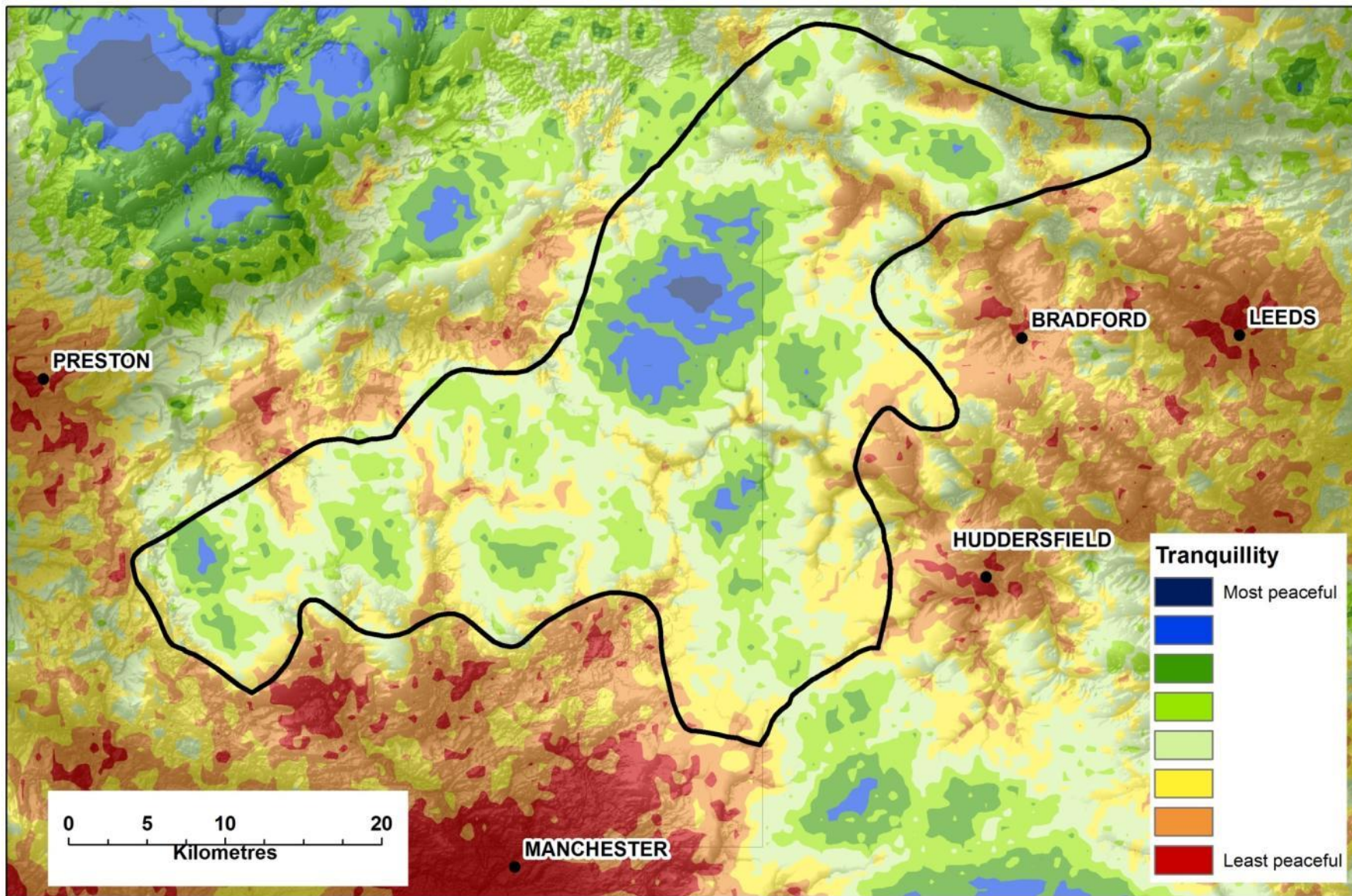
South Pennines Ecosystems Services Pilot - Water Abstractions



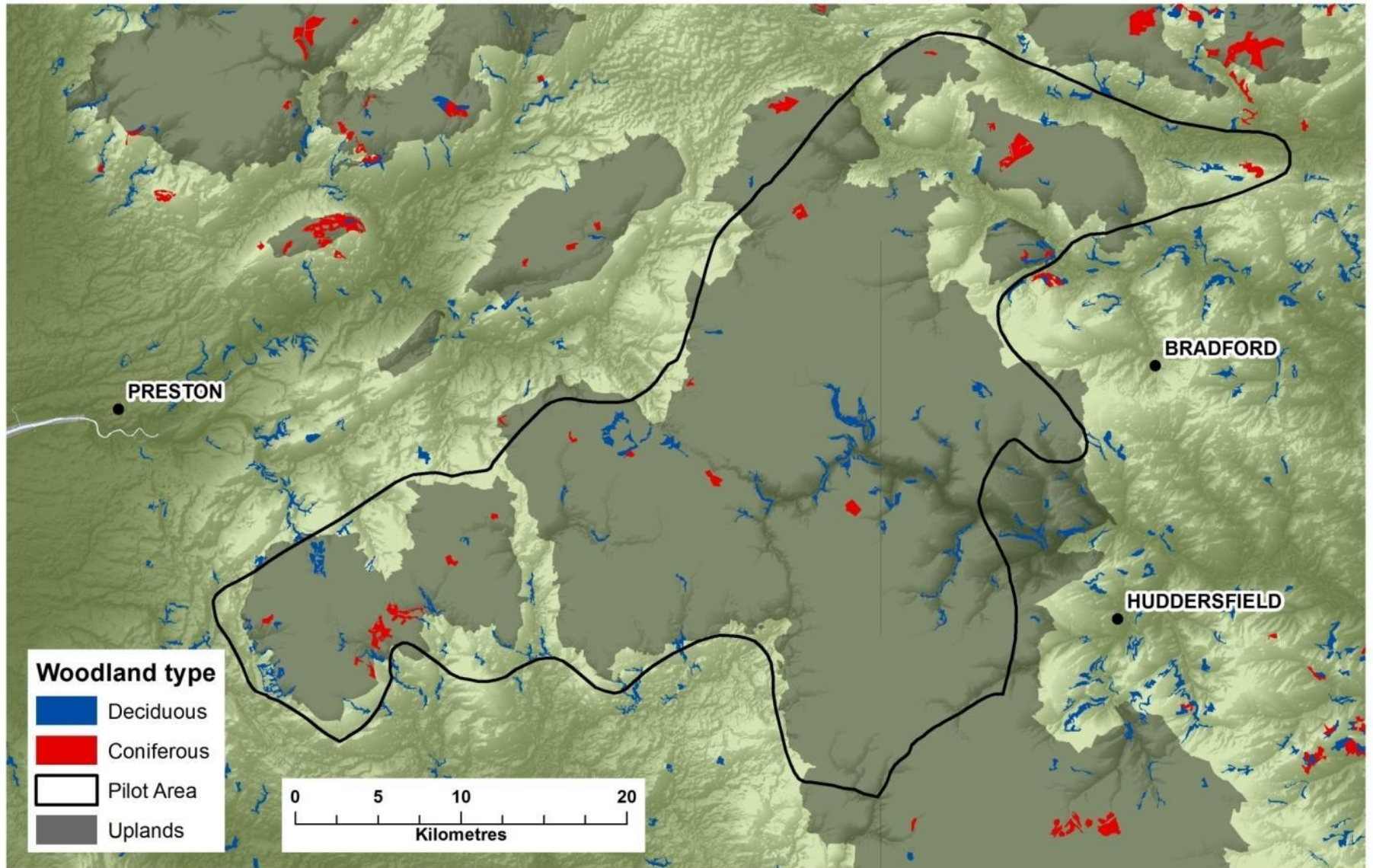
Raw Water Colour



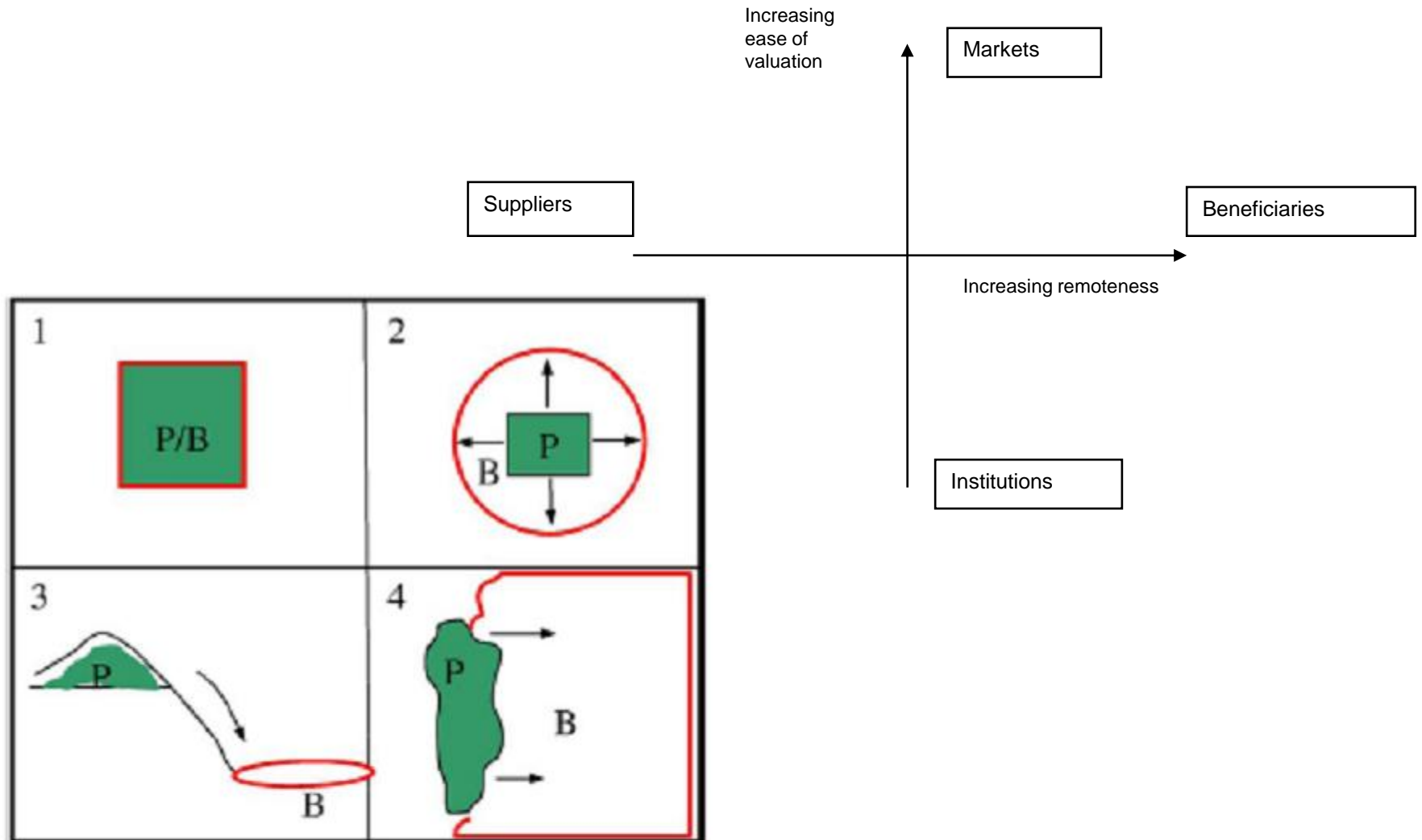
South Pennines Ecosystems Services Pilot - Perceived Tranquillity



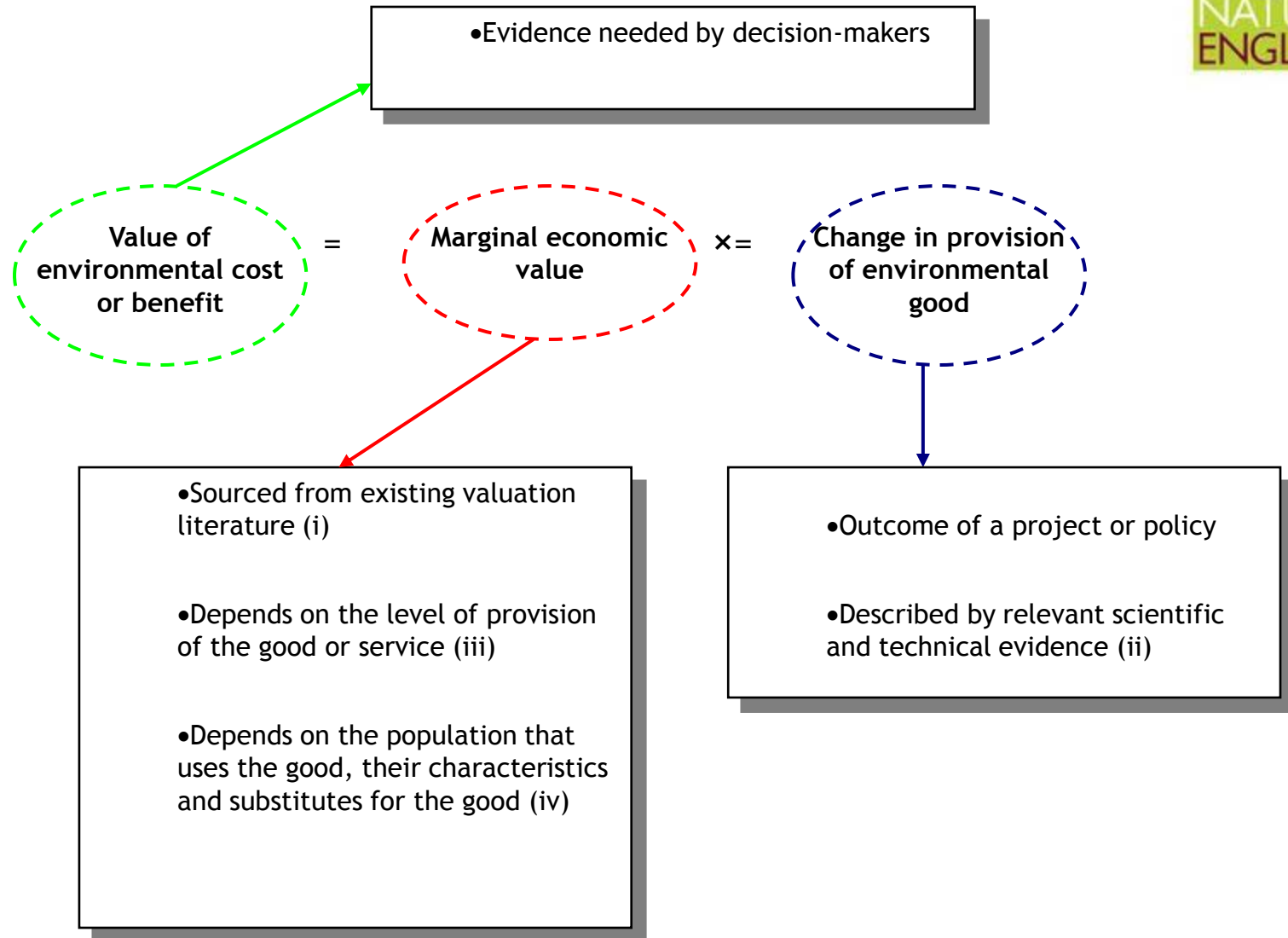
Woodland over 10 hectares in area



Linking services to beneficiaries



The fundamentals of valuation



Baseline

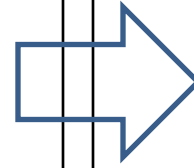
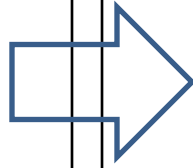
What does the world currently look like?

Process

What steps and procedures are we taking as part of the pilot exercise?

Outcomes

How has the world changed as a result of our intervention (environmental, social and economic)?



Monitoring

Quantitative: existing data, new data,
Qualitative

Models

physically based process models, behavioural models, economic models

Some issues and challenges

- Mapping current and future ecosystem services
- Valuing services – intangibles, benefits transfers?
- Trade offs. Are services mutually exclusive? How do we reach decisions?
- Monitoring needs to be economically, socially and environmentally literate. How do we measure success?
- Integrated land management - How do we achieve this? What land use model gives us what we want?
- Communication - can we get people to understand the concepts?
- Payments – stacking (a-e constraints), innovative funding sources and institutions

Thank you



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