

RERAD Research Programme 3: Delivering Knowledge for Scotland's Biodiversity

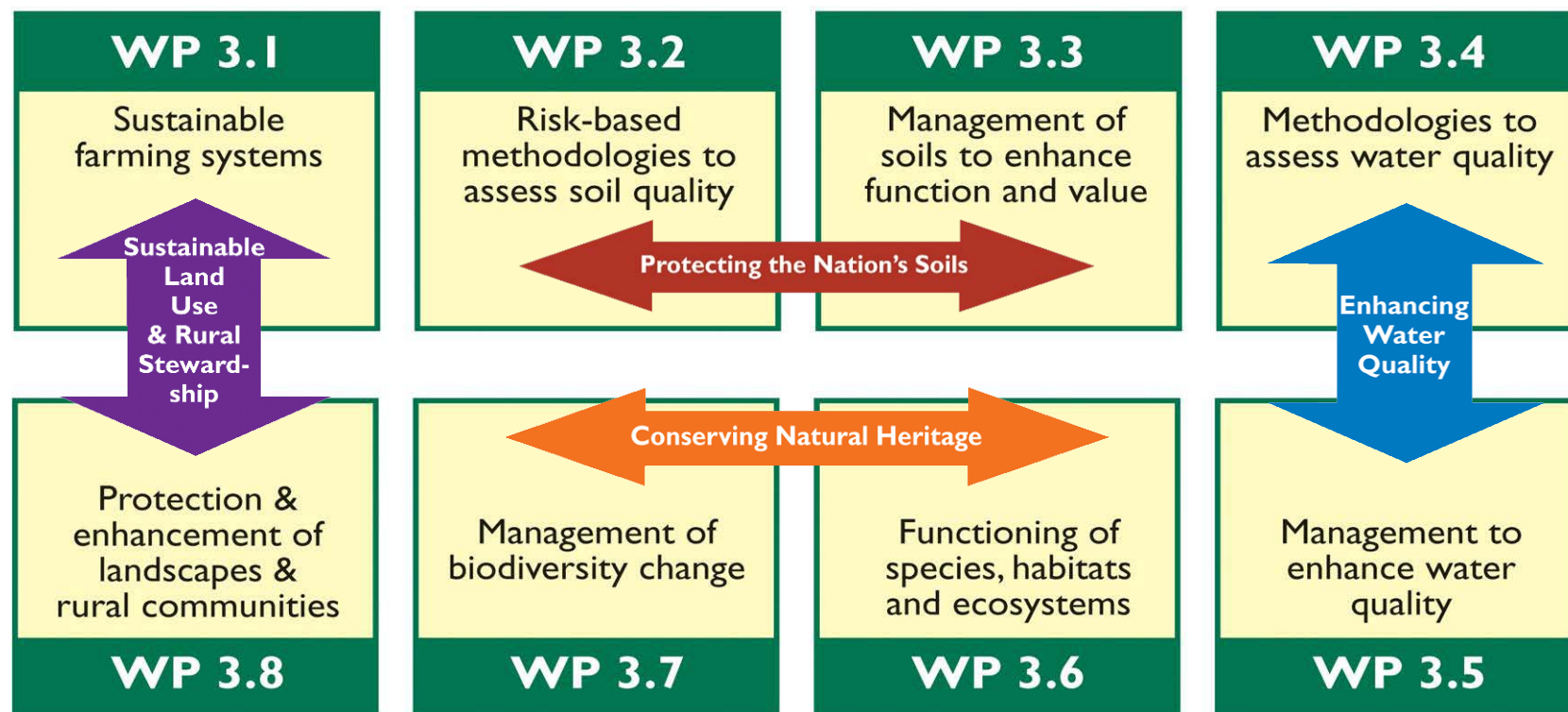
Rob Brooker

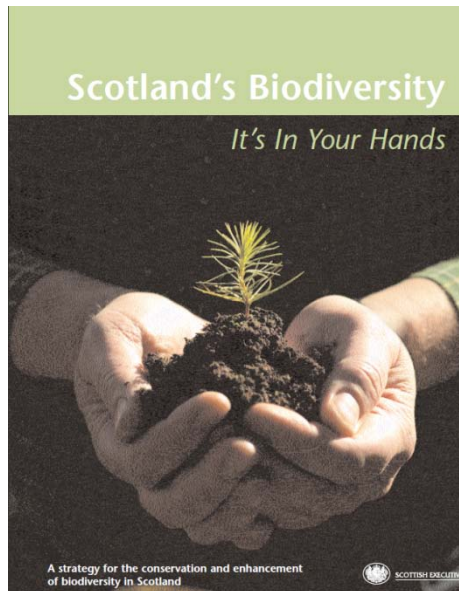
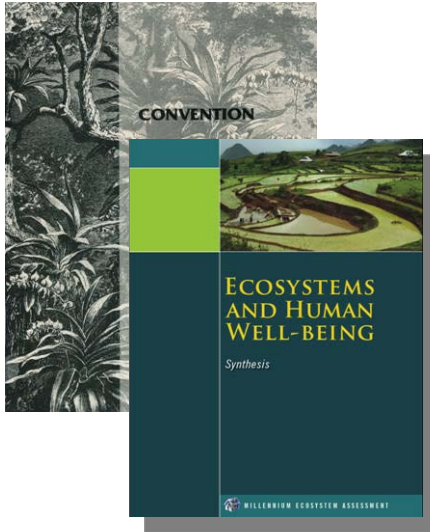
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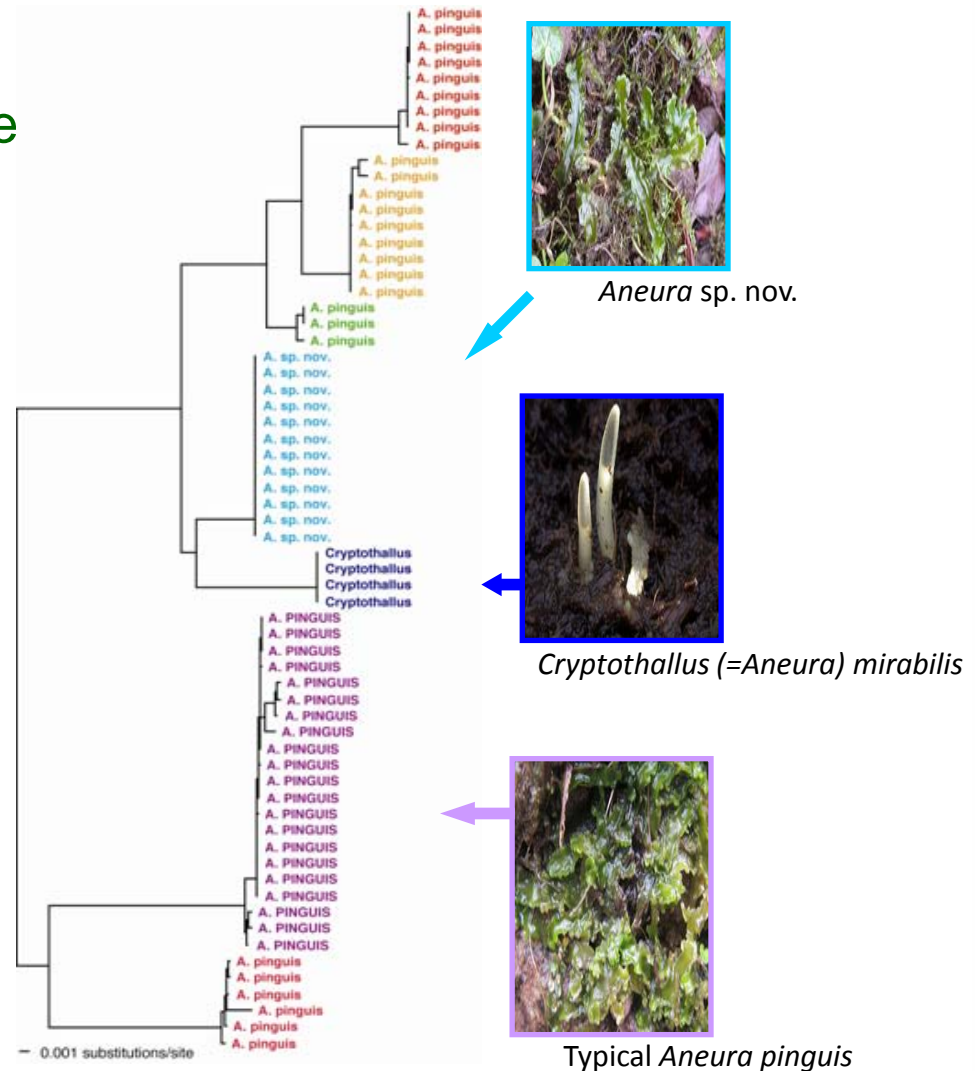
SBS Objectives

- **Species and Habitats**
 - halting and reversing biodiversity loss
- **People**
 - increasing awareness, understanding and enjoyment
- **Landscapes & Ecosystems**
 - enhancing biodiversity
- **Integration and Co-ordination**
 - framework for inclusion of biodiversity in all decision making
- **Knowledge**
 - best new and existing information for stakeholders & practitioners

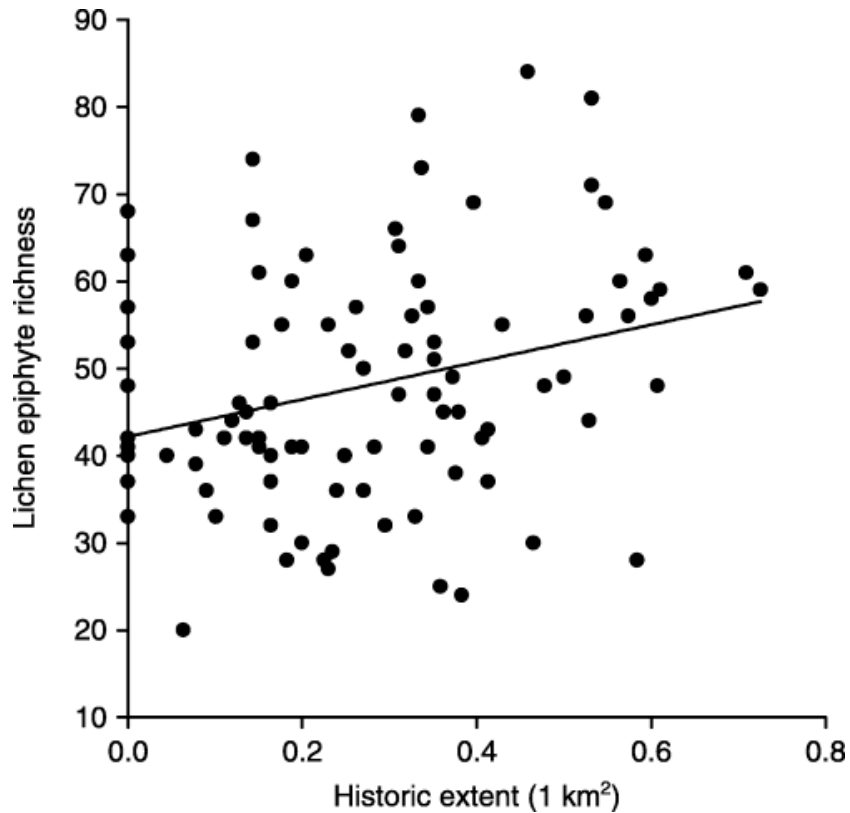
Describing our biodiversity resource

Scotland has globally important liverwort flora

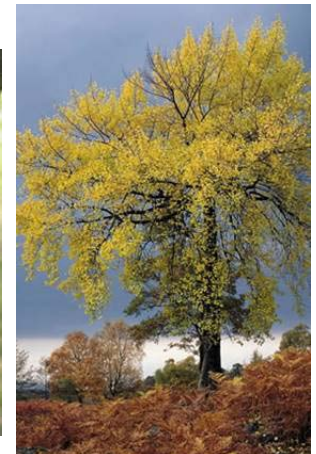
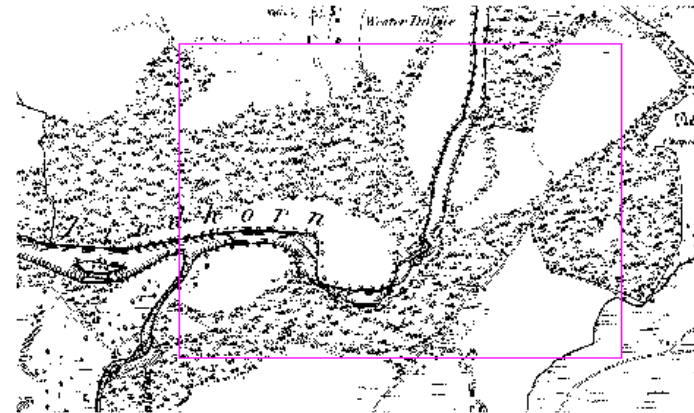
Develop system for rapid low-cost identification and species discovery



Understanding drivers of biodiversity change



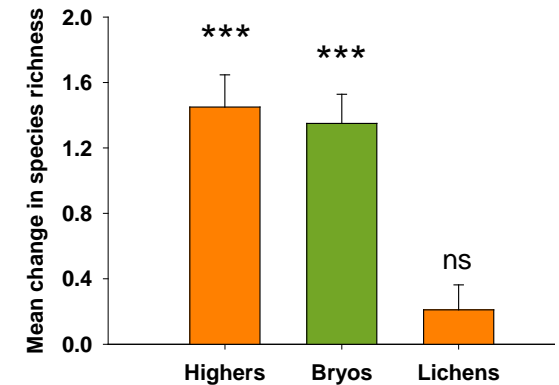
Aspen woodland declining



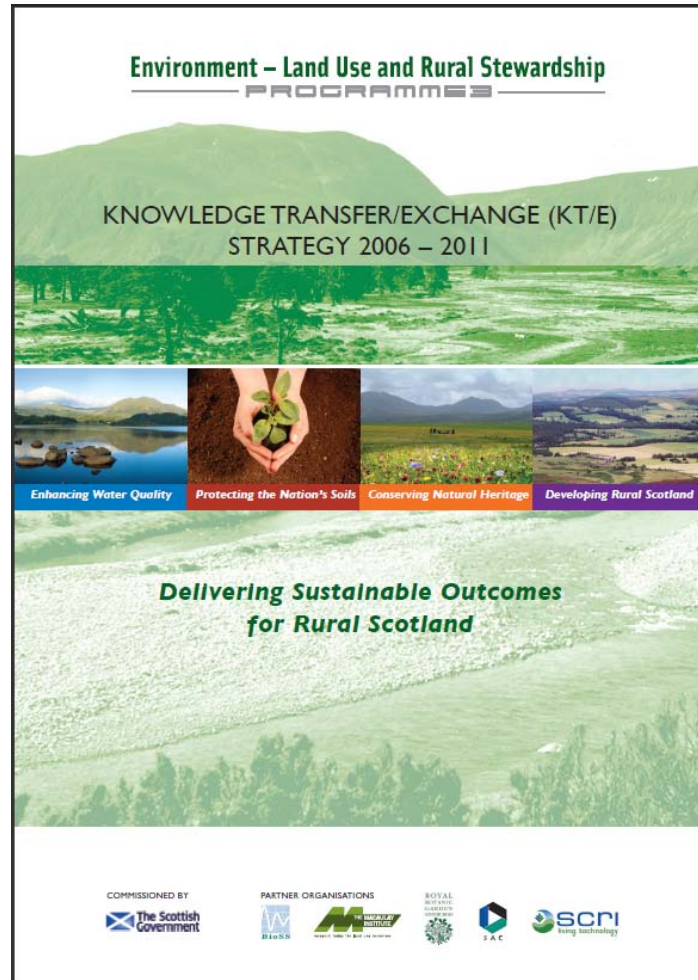
Links between lichen species richness and woodland extent

Understanding drivers of biodiversity change

Evidence of long-term vegetation change

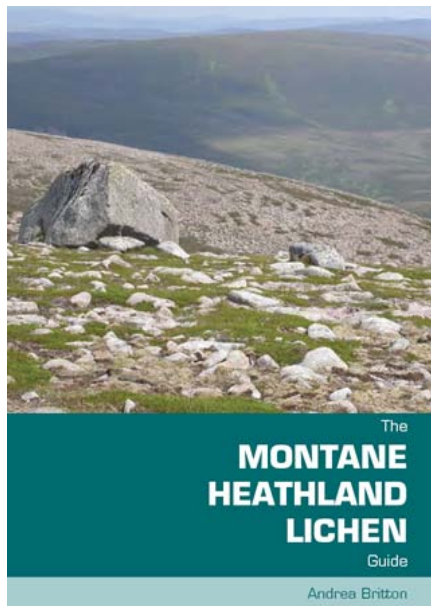


Increase awareness & enjoyment of biodiversity, and engage more people in conservation and enhancement



Targeted knowledge transfer and exchange

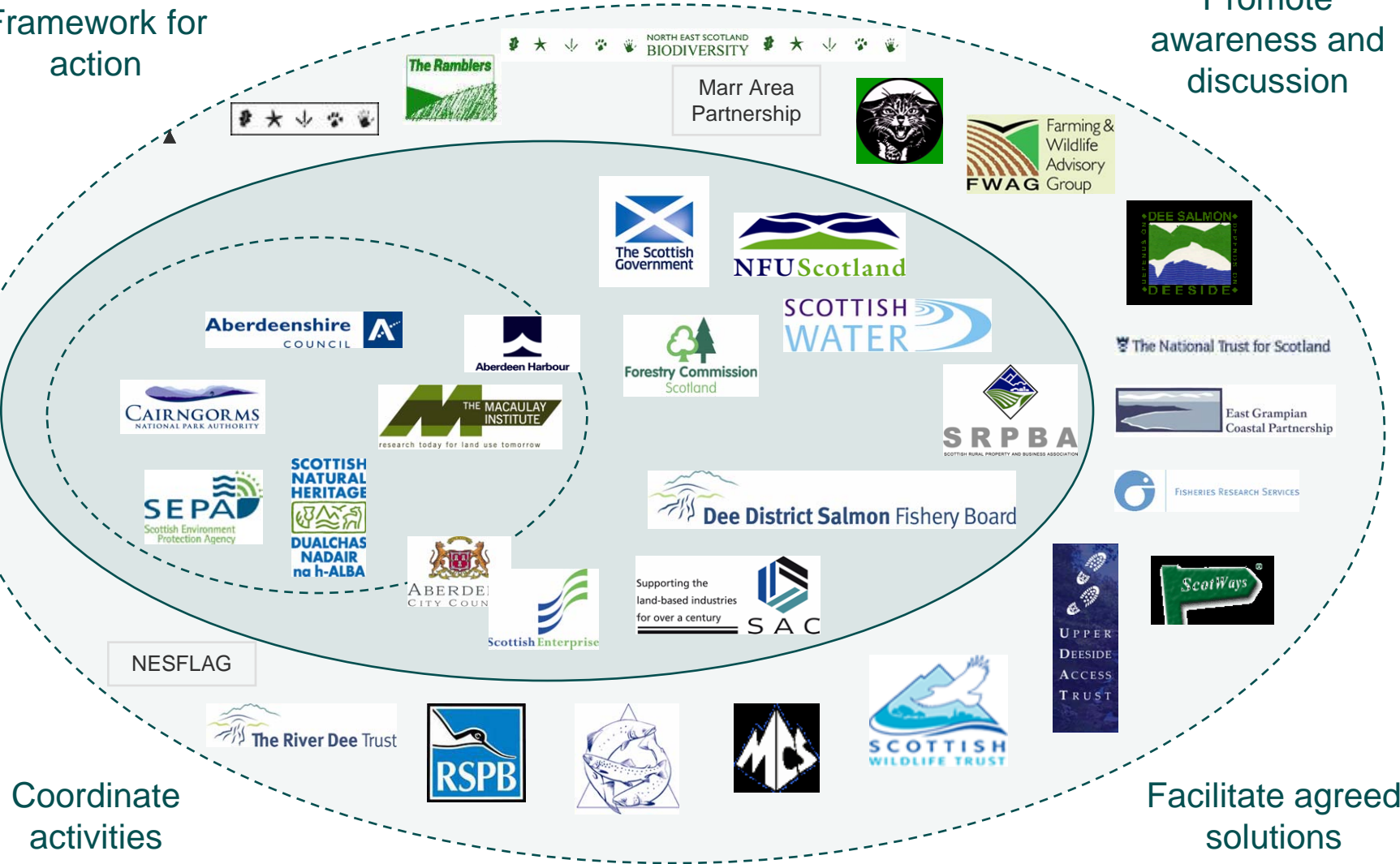
Audience	Principal purpose of communication	Main communication route
Policy	Increased use of research evidence in policy development and evaluation cycle	Commissioned research programme outputs including direct briefings
Public	Improved awareness of research and use for education	Media, themed events, and partnerships
Commercial	Consolidation of existing client base & increased business (numbers & areas)	MRP commercial consultancies
Scientific	Increased impact of scientific publications	Peer-reviewed publications, presentations
Programme specific	Increased awareness of, engagement with and use of research results	Stakeholder consultative groups, and relevant trade in/house publications



The Dee Catchment Partnership

Framework for
action

Promote
awareness and
discussion



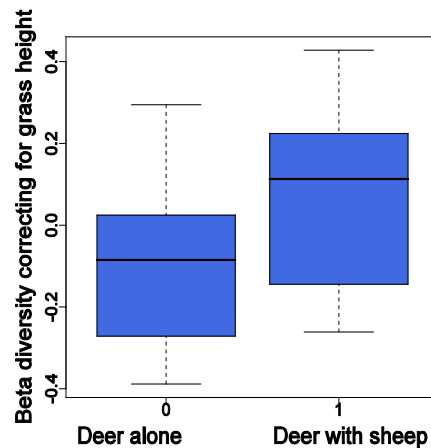
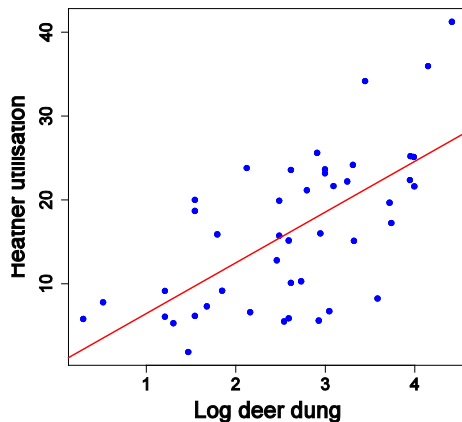
Restore & enhance biodiversity in all environments through better planning, design and practice

Understanding management practice

Deer, sheep and biodiversity

Sheep stocks are declining – whilst deer numbers have increased

Will deer replace sheep and what are the biodiversity consequences?



Assessing restoration of ecosystem function

How does “apparent” restoration relate to restoration of function?

Development of fungal community structure regulates soil C turnover

Estimate level of biological recovery (e.g. fungal community) and compare to target state

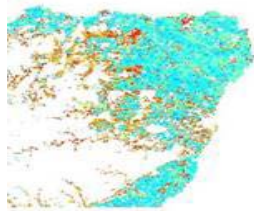
Link biological and functional state (C sequestration potential)

Use biological measures as an indicator of function

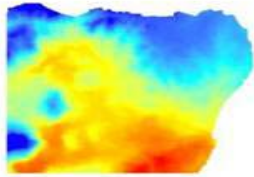


Integrated use: multifunctional farm woodlands

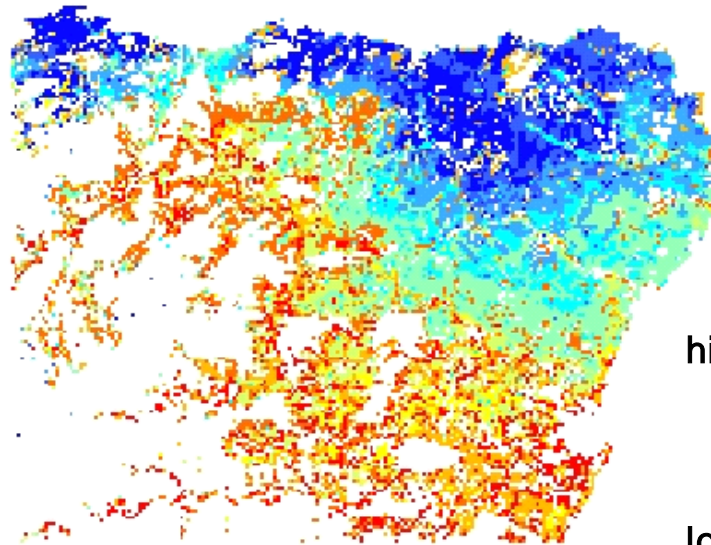
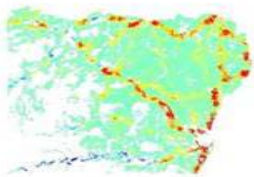
BAP bird & mammal species



Recreation potential

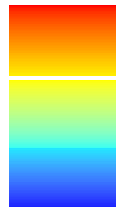


Visual amenity

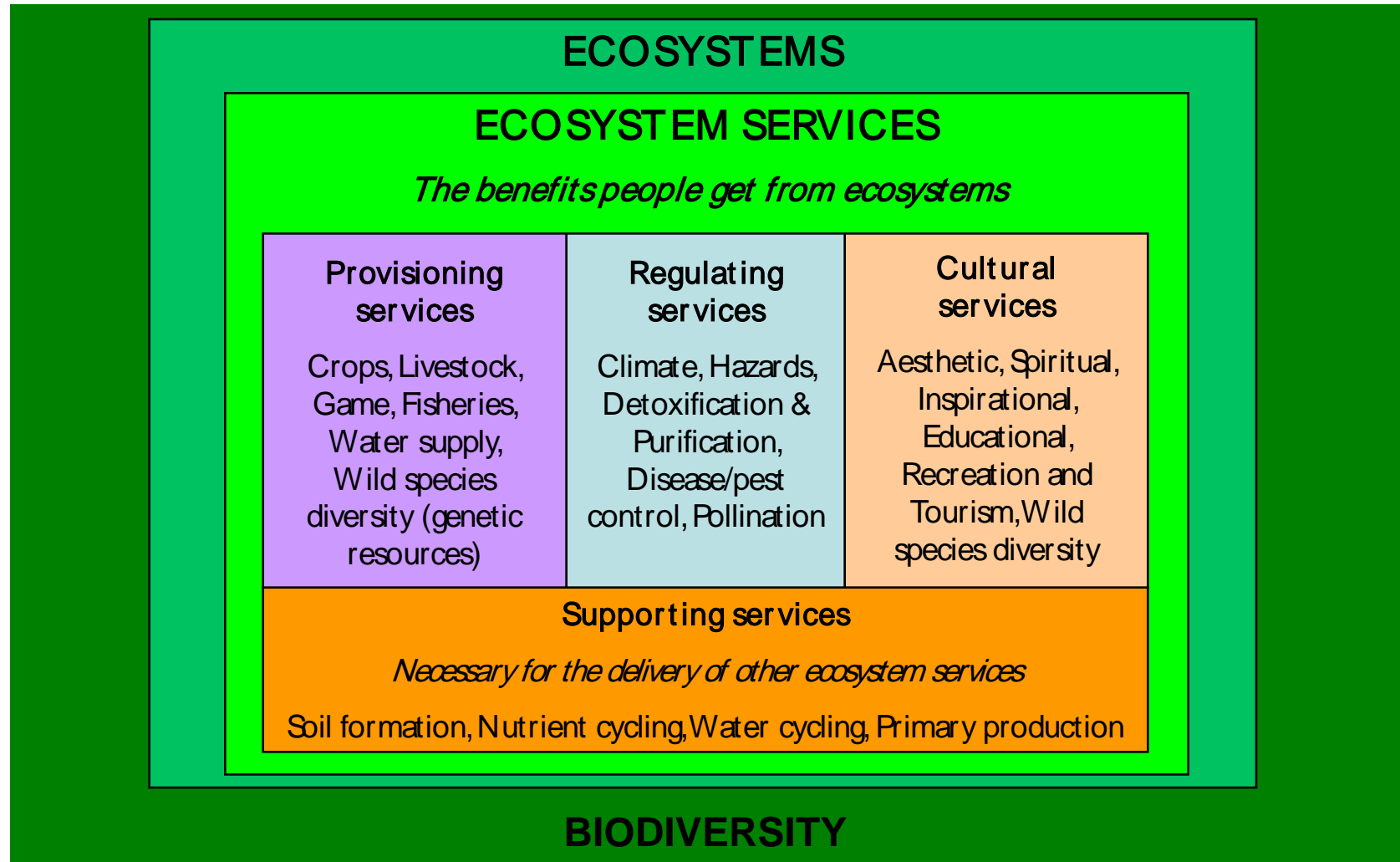


high

low



Develop an effective management framework ensuring biodiversity is taken into account in all decision making



Understanding issues

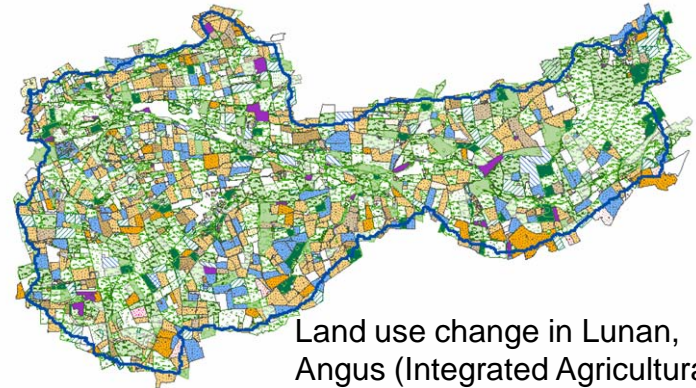
Co-construction with stakeholders to explore context, desired outcomes, and relevant institutions

Understanding how people interact with, and perceive, landscapes



Characterising systems

Establish baselines, trends, dynamics, feedbacks, trade-offs in Ecosystem Services



Land use change in Lunan, Angus (Integrated Agricultural Census data)

Policy

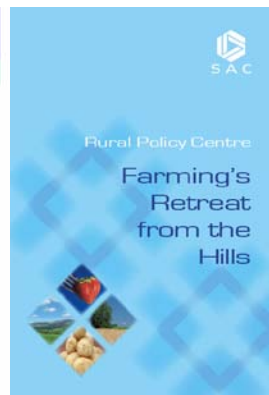
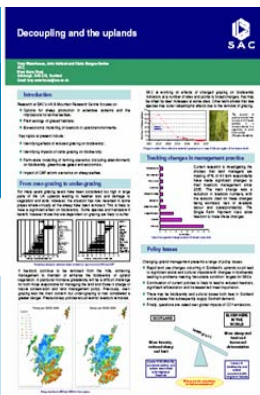
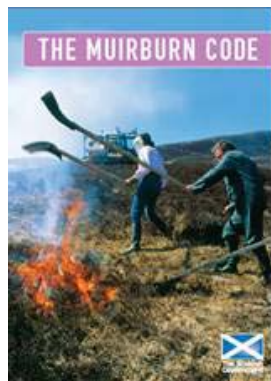
- Agri-environment payments
- Less Favoured Area Support Scheme
- Scottish Forestry Strategy

Practice

- Aberdeen City & Aberdeenshire
- Greenspace Scotland
- National Parks – strategic plans

Ensure that the best knowledge on biodiversity is available to all policy makers & practitioners

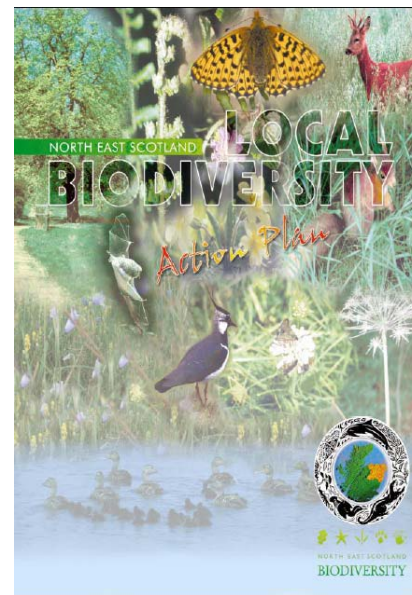
Policy – National



knowledgescotland
Science Policy Connections Online



Policy – Regional



Practitioners



SBS Objective

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Programme 3 Activities

Detecting and understanding biodiversity change

Public outreach & partnerships

Understanding and developing management tools and approaches

Integration with an Ecosystem Approach

Targeted knowledge exchange & research development



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