



Department
for Environment
Food & Rural Affairs

Payments for Ecosystem Services in practice: opportunities and challenges

Making Space for Water Conference
Manchester

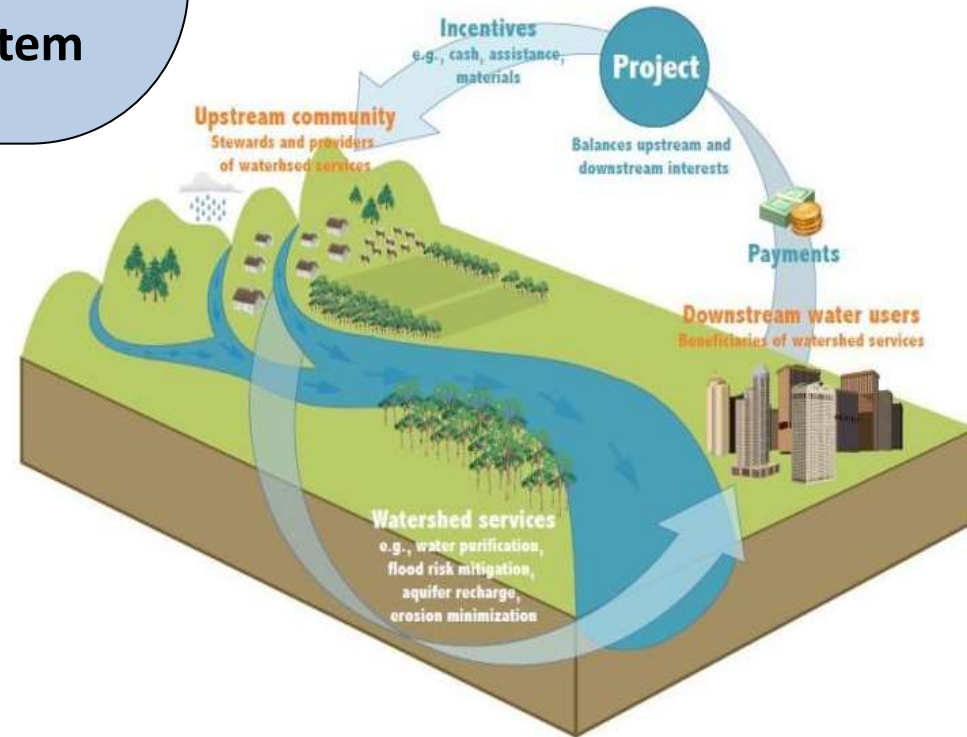
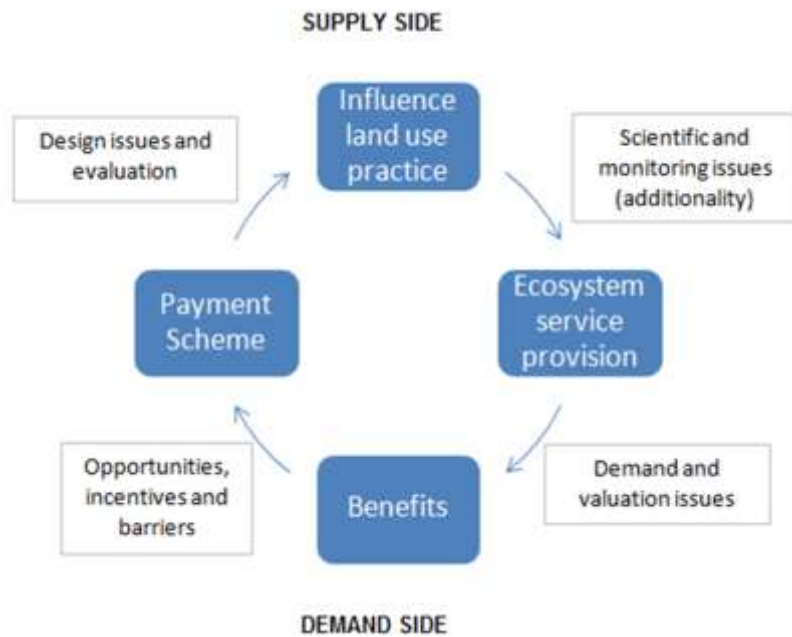
Colin Smith, Ecosystems Evidence Team, Defra
April 23rd 2015

Overview of presentation

- Introduction to payments for ecosystem services (PES) concept and Defra's work
- Lessons from our PES research pilot programme since 2012
- Case studies on peatland code and flood risk PES

A simple concept ...?

Payments to land managers / others to undertake actions that increase the quantity / quality of desired ecosystem services.



Graphic © Forest Trends

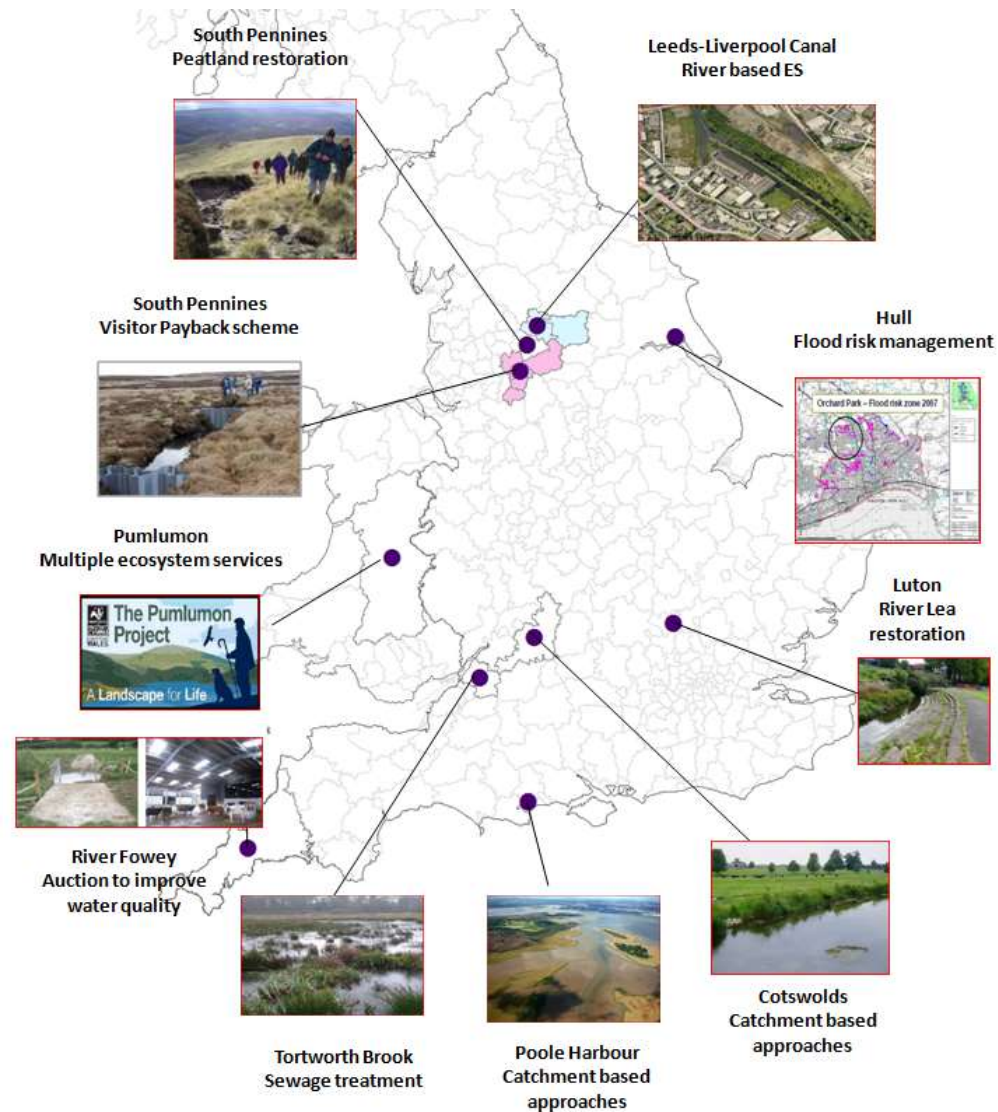
Recent work in Defra on PES



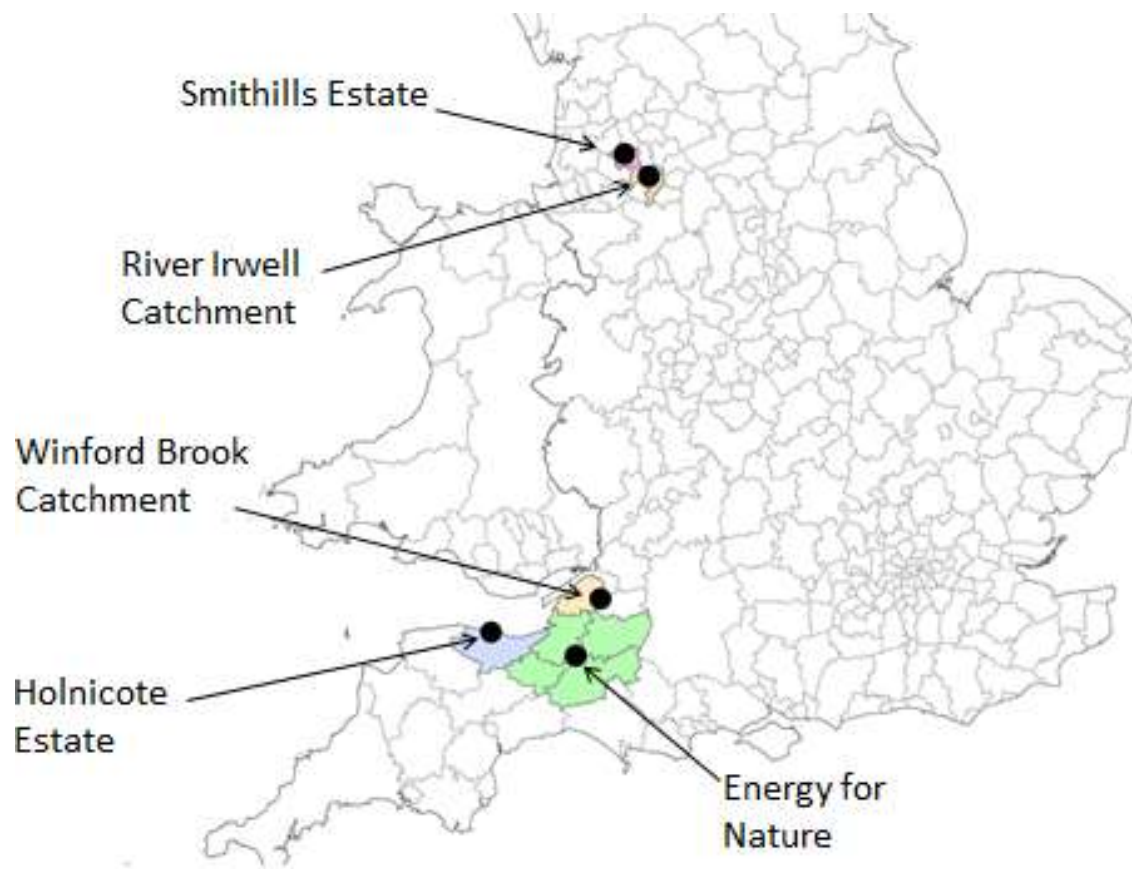
Defra PES pilot studies (2012-14)

Aims:

- *develop proof of concept,*
- *platform for real PES*
- *help build capacity*
- *identify challenges*
- *spread good practice*



Round 3 PES Pilots (2014-15)



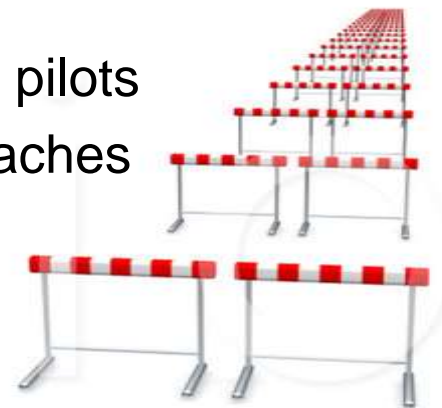
Holnicote Estate, Exmoor
Identifying PES options to fund natural flood management methods and support biodiversity, recreation and water quality.

Winford Brook Catchment, North Somerset,
A multiple-beneficiary PES scheme primarily aimed at water quality and flood mitigation services.

Some successes to date

- **Fowey Improvement Auction** - potential for PES to deliver cost effective water quality investments through innovative reverse auction showing vfm
- **Tortworth Brook** - robust proof of concept for applying PES in context of sewage treatment works using integrated constructed wetlands
- PES apps for **Visitor Giving** (S Pennines; Lake District) and Visit England guide
- **Pilot Peatland Code** + market research and metrics, building on two Defra pilot studies
- Strong stakeholder engagement across all pilots
- Increased awareness of ecosystem approaches

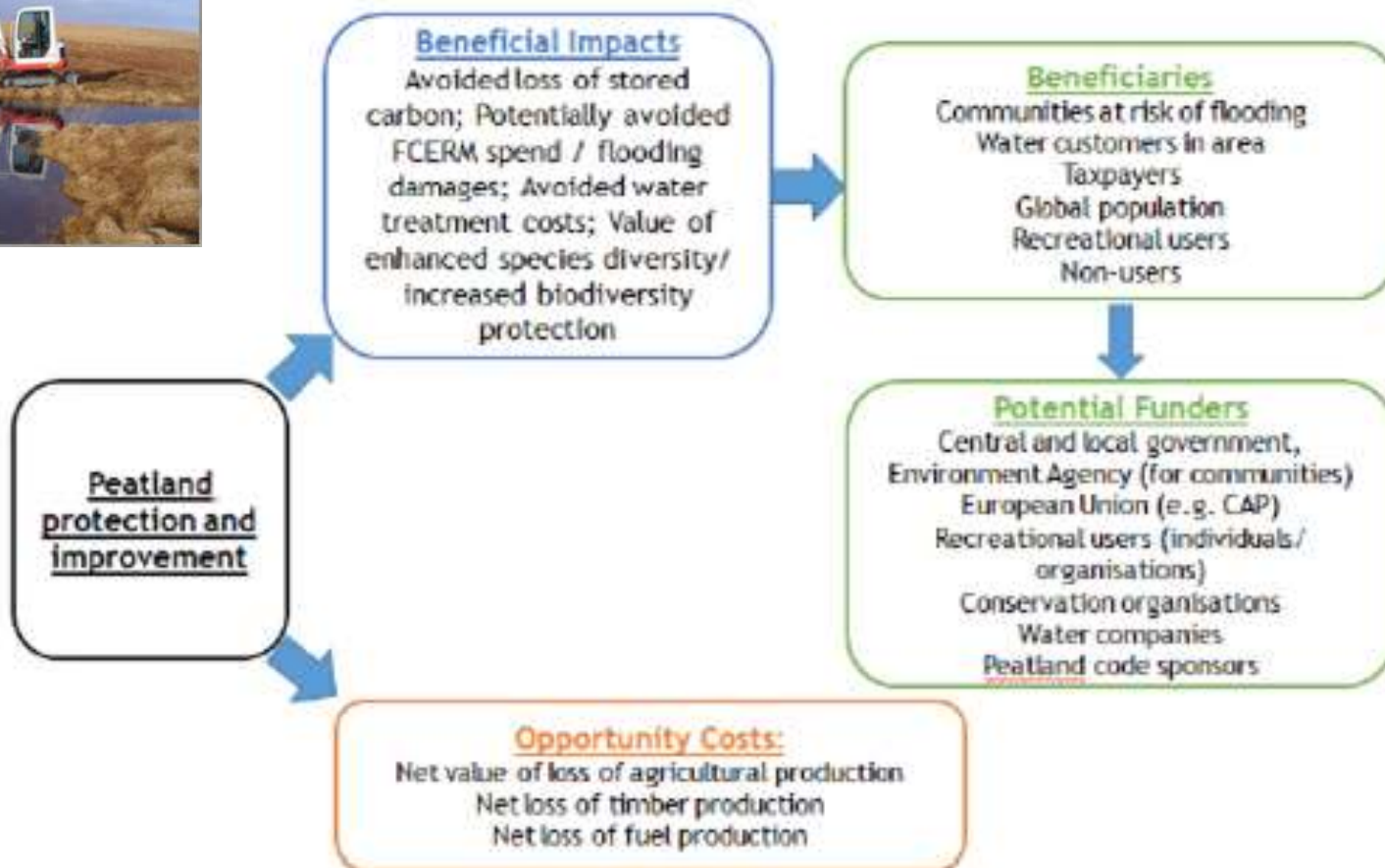
But all faced technical, institutional and / or informational challenges



Some lessons learned ...

- **Pilots helpful in testing feasibility of PES** in new contexts in which market approaches have not been used - development of 'proof of concept' and trialling new delivery models
- **PES opportunities need to fit within wider strategy**, recognise importance of trust building (not simply incentives).
- **Informational challenges** - need to raise profile of efficacy of natural solutions, build awareness among beneficiaries
- **Challenges to collective action for multiple services** – spatial scales may differ according to buyer need and service; new models needed to co-ordinate & incentivise participation
- Innovation can be hampered by regulatory constraints or lack of adequate **metrics**
- **No 'perfect' PES scheme** but that doesn't matter ...

The peatland value chain



Peatland Code – a key tool for PES

- Designed to provide open, credible and verifiable basis for business sponsorship of specific peatland restoration projects.
- Key metric is carbon benefits, but co-benefits are critical too. Research in pilot phase to strengthen these.
- Range of business motivations to invest:
 - ✓ Reduce costs (e.g. water retention in Exmoor)
 - ✓ Demonstrate responsibility towards environment, e.g. where staff or customers located close to peatland
 - ✓ Promote brands & product lines linked to peat (SME / regional companies)
- “Peatland Alliance” national prospectus - range of shovel-ready projects for sponsoring.
- Code can help ensure peatland restoration isn’t just another “good cause” among many.
- But still early days ...



PEATLANDCODE



Natural flood management and PES

- NFM as focal point for other ESS – better soil management, recreation, biodiversity, climate regulation
- Need clear understanding of:
 - ecosystem services provided – headline messages key
 - relevant interventions and their costs
 - who benefits – do beneficiaries understand what has been / could be achieved?
- But having done this - what are the prospects for actual trade? It's about numbers, incentives, institutional arrangements, and building relationships.

Lessons on PES from Holnicote FMD project

- Strong basis for exploring PES opportunities – tangible impacts on flood peaks, carbon, sediment, biodiversity
- But difficulties on the demand-side :
 - Limited beneficiaries from flood risk; limited ability to pay
 - Limited incentive for tenants to invest in NFM – seen as others' responsibility
 - (Incorrect) perception that there is now risk of flooding
 - Water quality and biodiversity not seen as issues
 - Few corporate businesses in region to tap in to; not easy to engage
 - But Woodland and Carbon Codes offer potential
 - Need visitor focus to test visitor-giving approaches
- PES thinking remains key due to limits on public funds and growing interest in natural solutions; and integral to legacy of the Holnicote project



Winford Brook PES pilot

- Focuses on land management change to:
 - improve water quality
 - reduce soil erosionwith potential cost savings to water treatment.
- Flood risk reduction is an anticipated benefit, but no modelling to quantify.
- This can still strengthen the business case based on quantified benefits e.g. wastewater nutrient removal
- Transferring evidence from elsewhere on reductions in flood risk and soil erosion could mislead → walkover survey
- As case studies increase, proxies may be sufficient

Conclusions – promoting PES

- Growing interest in PES, but still early days – need to make space for innovation, and learn by doing;
- Spatial and local diversity of ecosystems and services- precludes a “one size fits all” approach. Need localised opportunity mapping.

Developing PES needs:

- clear guidance, metrics and governance, to give confidence to potential investors and providers;
- sufficiently robust evidence base to show cost and environmental effectiveness of ecosystem management practices;
- partnership and trust-building among potential players esp. for place-based PES
- clear incentives for beneficiaries to invest
- time!

Further information

- Defra review of PES pilots (rounds 1 & 2)

<https://www.gov.uk/government/publications/payments-for-ecosystem-services-review-of-pilot-projects-2011-to-2013>

- Ecosystem Knowledge Network

<http://ecosystemsknowledge.net/resources/tools-guidelines/pes>

- IUCN Peatland Code

<http://www.iucn-uk-peatlandprogramme.org/peatland-gateway/uk/peatland-code>

