



Department
for Environment
Food & Rural Affairs

UK Government experiences on Payments for Ecosystem Services and Natural Capital Accounting

**Nature Conference, Riga, Latvia,
26-27 May 2015**

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UK Government

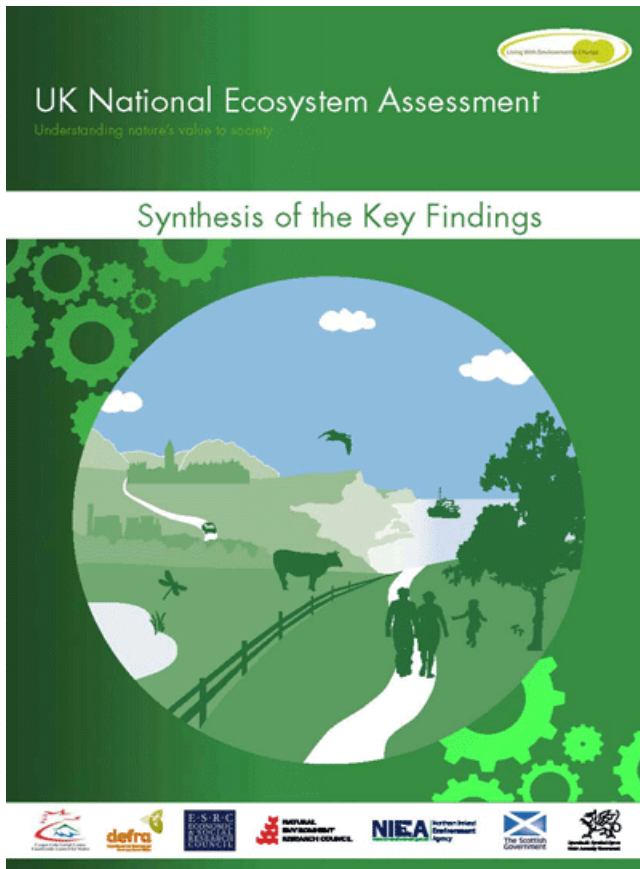
What we'll cover

- Setting the scene
- UK experiences on:
 - Natural capital accounting:
 - National NCA
 - Corporate NCA
 - Payment for Ecosystem Service (PES) schemes



Setting the scene

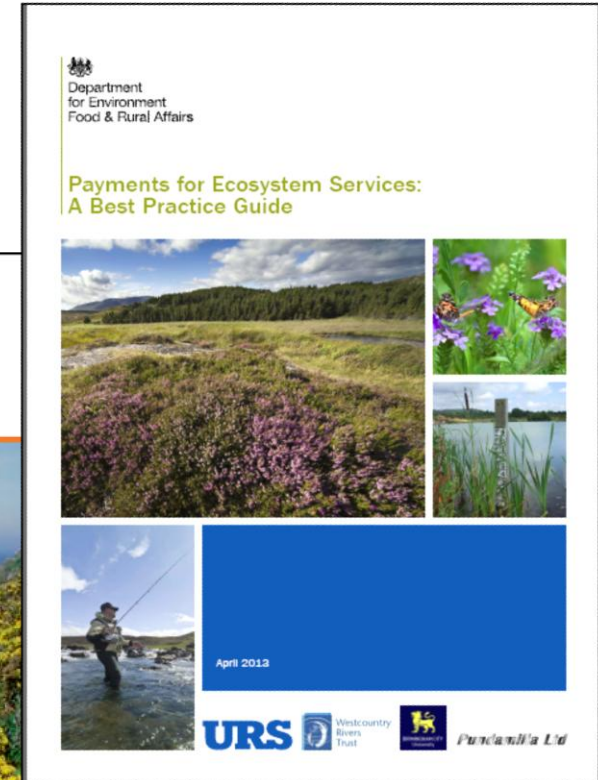
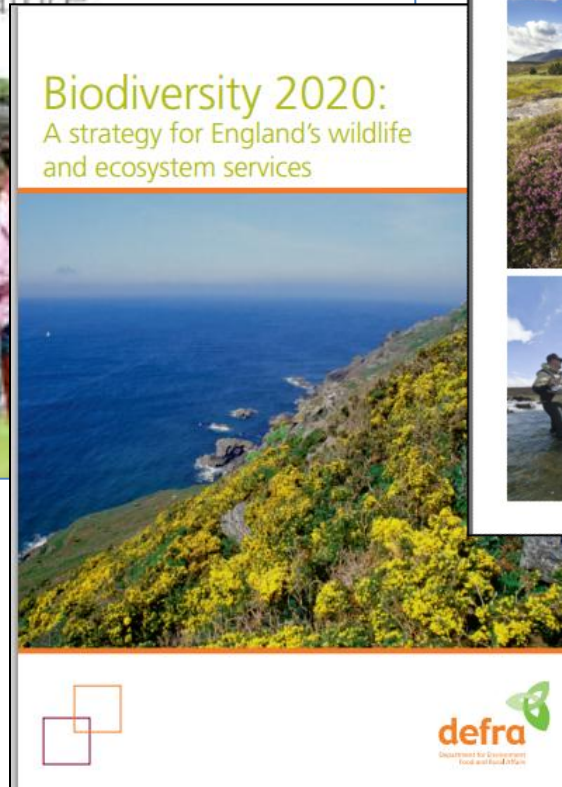
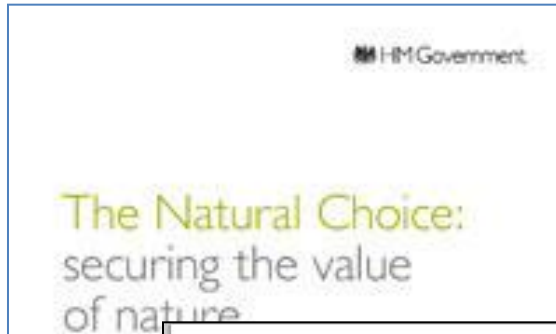
UK National Ecosystem Assessment (2011)



- Nature is critically important to our wellbeing and economy.
- But it is consistently undervalued in decision-making
- Many of nature's services are in decline or in a degraded state

This evidence informs our natural environment and biodiversity policies

- Major policies informed by the UK NEA
- Strong focus on the “value of nature”
- Includes action on Natural Capital Accounting and Payment of Ecosystem Services (PES) schemes



Why do Natural Capital Accounting?

- Natural Capital Accounts can:
 - Shine a light on the losses and gains in our natural capital and changes in the services provided by natural assets
 - Highlight links with economic activity and pressures on natural capital
 - Inform priorities for resourcing and management decisions
 - Raise awareness of the importance of maintaining natural capital



National Accounts: what are we doing?

Roadmap to Natural Capital Accounting (Dec 2012): Sets out programme of work to 2020

Office for National Statistics 02 May 2014

UK Natural Capital – Initial and Partial Monetary Estimates

Author Name(s): Jaweed Khan, Peter Greene and Adam Johnson; Office for National Statistics

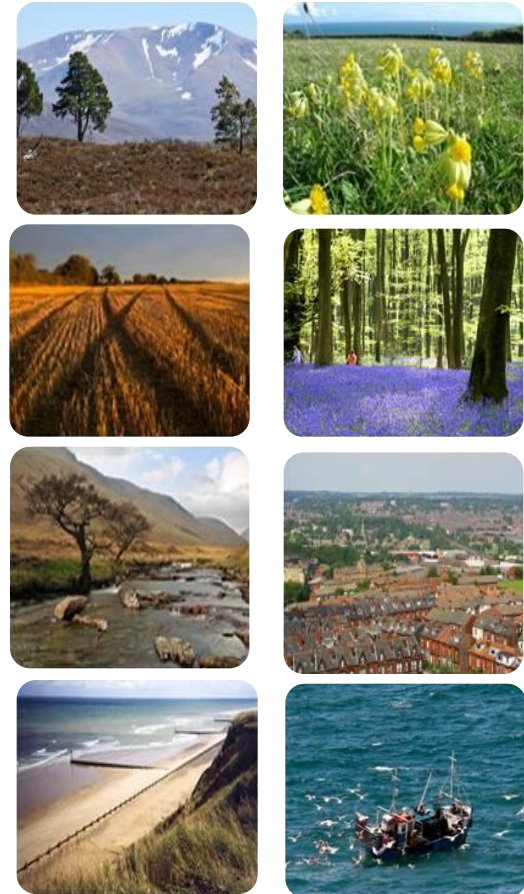
Abstract
This paper is a first attempt by the Office for National Statistics (ONS) to expand on existing approaches to estimate a monetary value for components of UK natural capital for the period of 2007 to 2011. ONS estimates that the monetary estimate of selected components of UK natural capital was £2.73 billion in 2011, a 1% increase from 2007. This is mainly due to a fall in the monetary value of UK sub-soil assets. It is important to emphasise that these numbers reflect attempts to estimate a limited segment of the UK's total natural capital. However, they provide an illustration of some of the methodologies that ONS is employing to value these components and how their value may be evolving over time. The methodology to develop these estimates remains under development and the estimates reported should be considered experimental. Further work will be undertaken to develop and improve them.

Acknowledgements

- This paper has benefited from the valuable comments from Kirk Hamilton (Grantham Research Institute on Climate Change and Environment, London School of Economics), colleagues from the Ecosystems Evidence team (Department of Environment, Food and Rural Affairs), Natural Capital Committee Secretariat and members of the Natural Capital Committee, and members of the Natural Capital Steering Group.
- We would also like to thank Catherine Healey (ONS) and John Chamer (ONS) for their valuable contributions.

1) Introduction
In December 2012, the Office for National Statistics (ONS) published a roadmap, *Accounting for the value of nature in the UK*, which set out a strategy to incorporate natural capital into the UK Environmental Accounts by 2020. As part of the roadmap, ONS outlined a plan to develop natural capital estimates within the framework of comprehensive wealth accounts to provide an overview of the value of natural capital within the UK. In June 2013, ONS published a paper, *Sources, Values Accounting – Natural Capital within Comprehensive Wealth*, to share its plans for developing UK natural capital estimates.

Office for National Statistics | 1



Suite of accounts for particular habitats (2013 to 2017)

Office for National Statistics

Accounting for the value of nature in the UK

A roadmap for the development of natural capital accounts within the UK Environmental Accounts

December 2012

Ecosystem accounting principles to ensure consistent methods and concepts (July 2014)

Office for National Statistics Department for Environment, Food & Rural Affairs

Principles of ecosystems accounting

Paper by the Department for Environment, Food and Rural Affairs (Defra) and the Office for National Statistics (ONS)

July 2014

Next update
to be published Spring 2017

First partial estimates of the value of UK Natural Capital (May 2014)

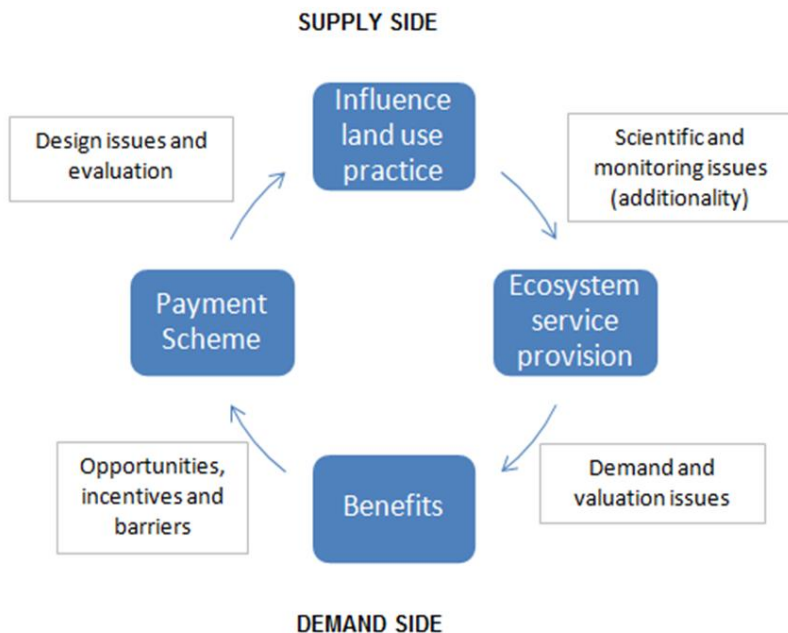
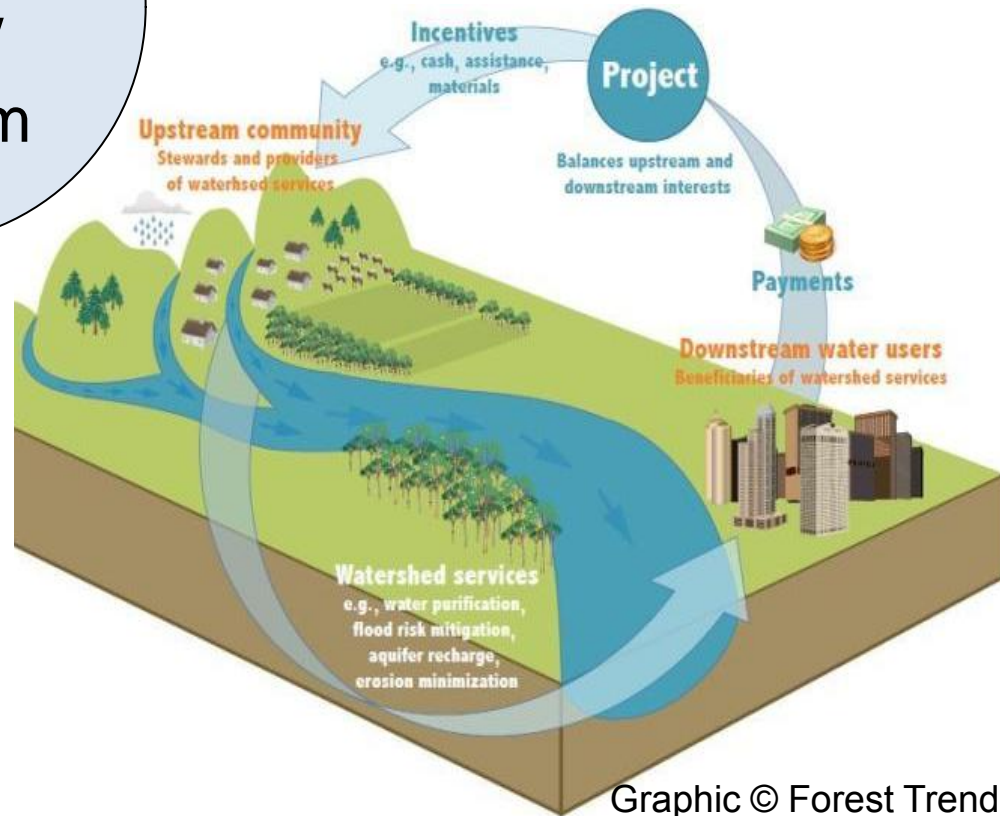
Corporate natural capital accounting

Natural Capital Committee initiative

- Developed a framework for corporate natural capital accounting (CNCA).
- Piloted with several landowning organisations, e.g.:
 - LaFarge Tarmac
 - Crown Estates
 - National Trust
- Produced CNCA guidelines which contain practical steps for organisations seeking to undertake their own accounts
- Interesting potential!


What are “payment for ecosystem services” schemes (“PES schemes”)?

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



Graphic © Forest Trends

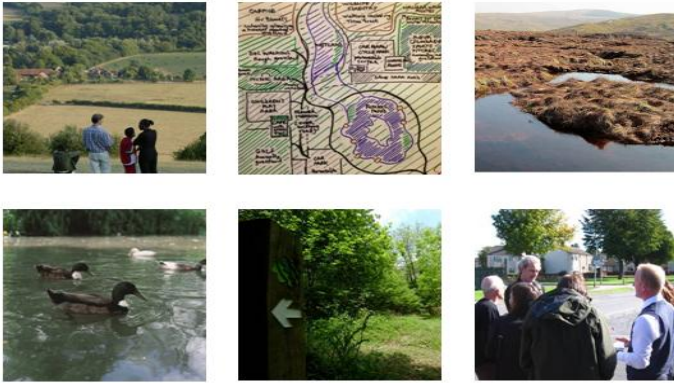
Background work in Defra on PES


 www.gov.uk/defra

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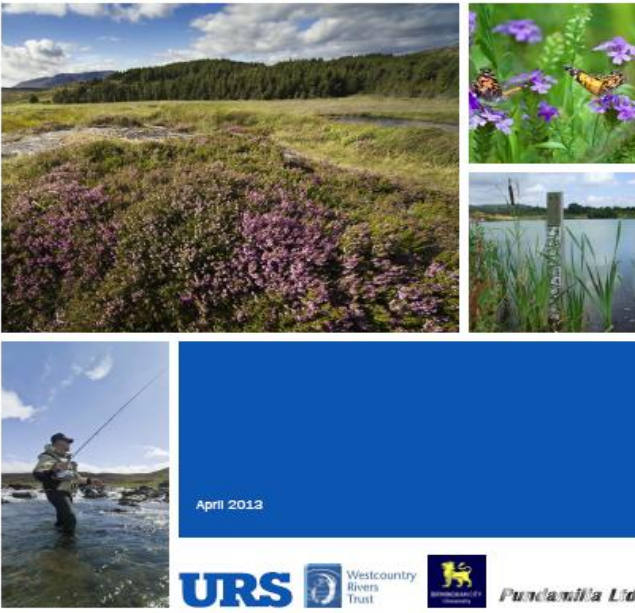
Developing the potential for Payments for Ecosystem Services: an Action Plan

May 2013







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**Payments for Ecosystem Services:
A Best Practice Guide**

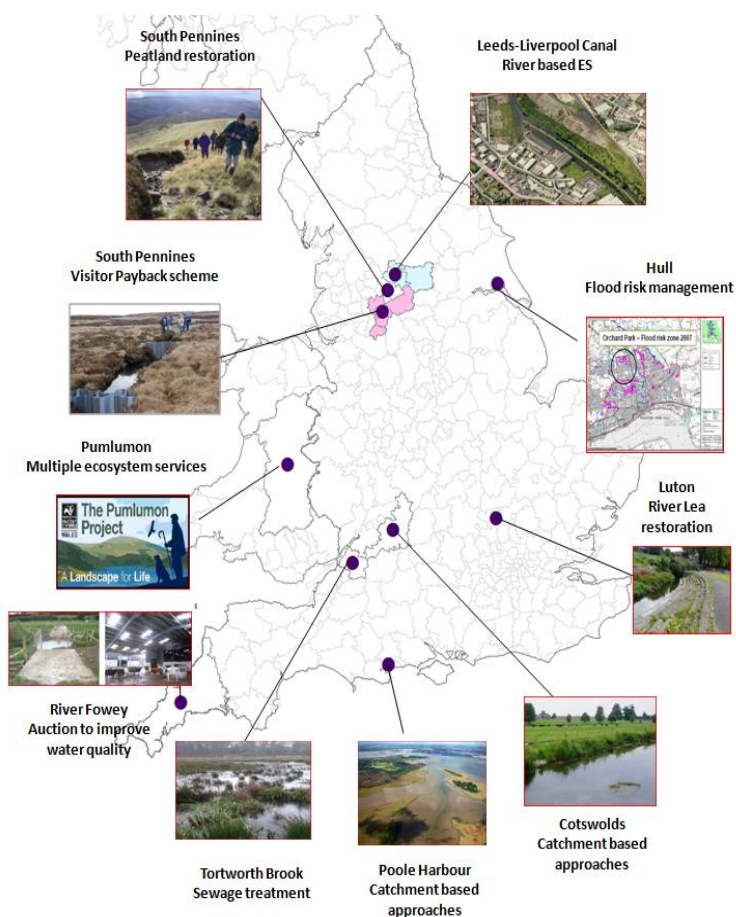


April 2013

PES pilot projects (2012/2014)

- completed



Fowey River Improvement Auction

Reverse auction to drive water quality improvements

Hull Flood risk

Two PES schemes to reduce urban flooding

Poole Harbour

PES nutrient offsetting scheme to reduce nitrogen levels linked to new development

Tortworth Brook

PES approach to sewage treatment using Integrated Constructed Wetlands

Leeds-Liverpool Canal

Study of potential PES mechanisms to support Canal River Trust activities

Pumlumon Project

Valuation of multiple ecosystem service benefits from landscape -based project

Peatland code

Development of code to facilitate private investment in peat restoration

Visitor Giving PES

Research on visitor giving schemes to support cultural and recreational ES

River Lea in Luton

Assessment of PES approaches to restoration of River Lea

Cotswolds Catchment

PES-based water quality improvement scheme

Developing place-based PES

Carbon metrics to support Peatland code. Developing place-based PES in the South Pennines



Some successes to date

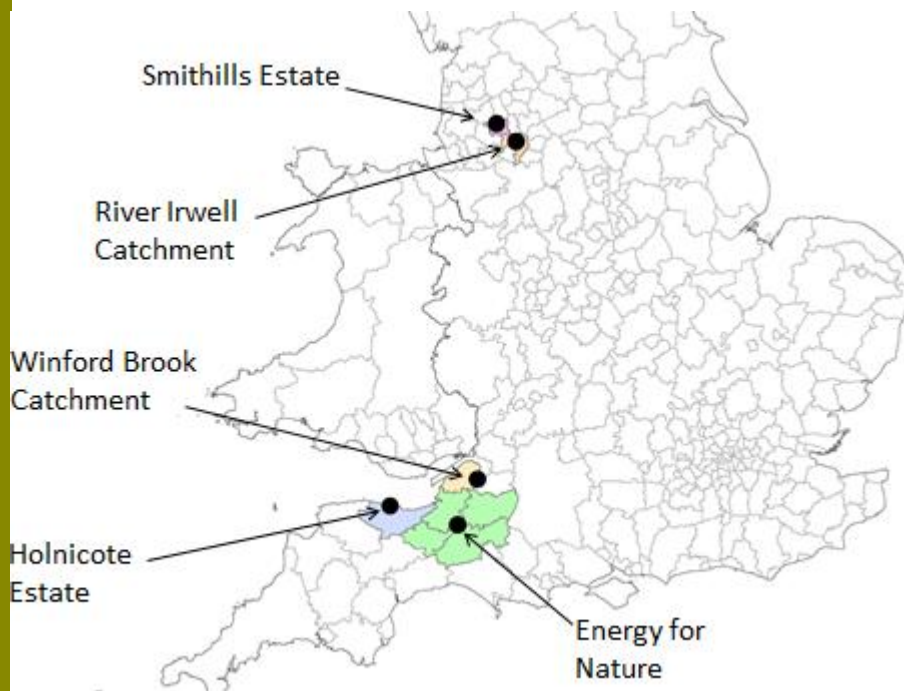
- **Fowey Improvement Auction** - potential for PES to deliver cost effective water quality investments through innovative reverse auction showing vfm
- **Tortworth Brook** - robust proof of concept for applying PES in context of sewage treatment works using integrated constructed wetlands
- PES apps 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***

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Defra Payments for Ecosystem Services (PES) Pilot Projects: Review of key findings of Rounds 1 and 2, 2011-2013

October 2014

Overview of PES Pilots (2014/2015) - to complete in summer 2015)



Energy for Nature:

Using biomass from land (wetland) conservation to create saleable bioenergy products.

Holnicote Estate :

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

River Irwell Catchment:

Linking private businesses in the city centre with land owners in Greater Manchester.

Winford Brook Catchment:

Bristol Water and Wessex Water working with stakeholders to develop a multiple-beneficiary PES scheme primarily aimed at water quality and flood mitigation services.

Smithills Estate:

To find practical, enterprise-based ways to link the site's natural assets to local people and businesses to bring nature and city closer together.

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 ...

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 especially for place-based PES
- clear incentives for beneficiaries to invest
- time!



Thank you

UK National Ecosystem Assessment:

<http://uknea.unep-wcmc.org/>

Defra Payment for Ecosystem Services initiatives:

<https://www.gov.uk/government/publications/payments-for-ecosystem-services-pes-best-practice-guide>

National Natural Capital accounting pages on the ONS website:

<http://www.ons.gov.uk/ons/guide-method/user-guidance/natural-capital/index.html>

Natural Capital Committee Corporate Natural Capital Accounting:

<http://www.naturalcapitalcommittee.org/corporate-natural-capital-accounting.html>

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 (PES information)

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

IUCN Peatland Code

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