

Opportunities and challenges for use of PES in England

Policy Mechanisms for Ecosystem Services
Delivery - International Workshop

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Outline for presentation

- Policy background to work
- Key principles of PES
- Case study examples of PES
- Key emerging opportunities and challenges
- Next steps in work

Policy Background: A greater role for PES?

- **UK National Ecosystem Assessment (NEA)** is due to report shortly in 2011
- **Lawton Review** recommended that the Government should stimulate the creation of new markets and payments for ecosystem services
- The **Natural Environment White Paper** will set out the Government's vision for the natural environment, including practical action to deliver it
- Interest in the potential for private PES schemes, i.e. those financed voluntarily by businesses and individuals

PES - Why are we interested?

- Builds on valuing ecosystem services work in Defra – want to ensure values are realised
- Provide opportunities for linking more directly those who benefit to those who deliver and in potentially cost effective ways
- Understanding opportunities for new financing streams
- Opportunities for engaging a broader spectrum of stakeholders in delivery of improved outcomes for the natural environment

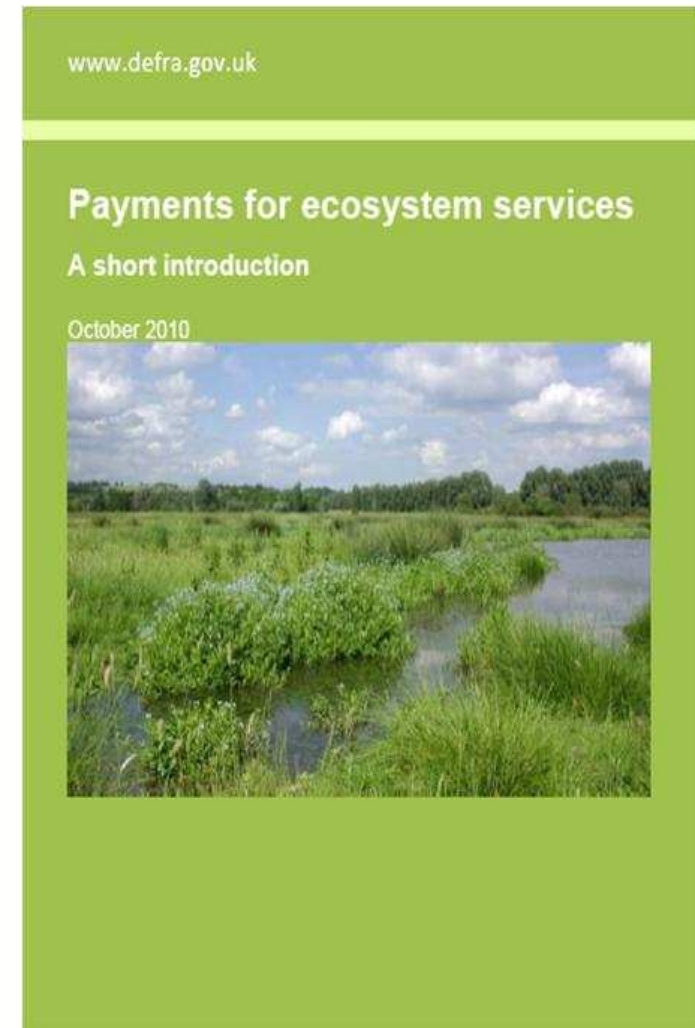
PES – growing number of innovative pilots and schemes in England



- SCaMP (Sustainable Catchment Management Programme (partnership RSPB and United Utilities))
- WATER (a partnership to take forward a market based catchment restoration scheme based on a PES model in the South West)
- Natural England upland pilots
- Defra 'multi objective demonstrator projects (applying ecosystem service approach to flood risk management schemes)
- Nurture Lakeland

Programme of work on PES

- Developed 1st year programme of work on PES
- Published short introduction and forthcoming analytical paper
- PES R&D study on barriers and opportunities for use of PES
- Ensure evidence base on PES feeds into NEWP and look forward to developing work programme further.



What is PES?

Definition of PES: payments to land managers and others to undertake actions that increase the quantity and quality of desired ecosystem services.

- Classically defined as a voluntary, conditional transaction between at least one seller or provider, and at least one buyer over a well-defined ecosystem service (Wunder, 2007)
- PES is often used as an umbrella term for a wide variety of schemes in which the beneficiaries, or **users**, of ecosystem services provide **payment** to the stewards, or **providers**, of ecosystem services

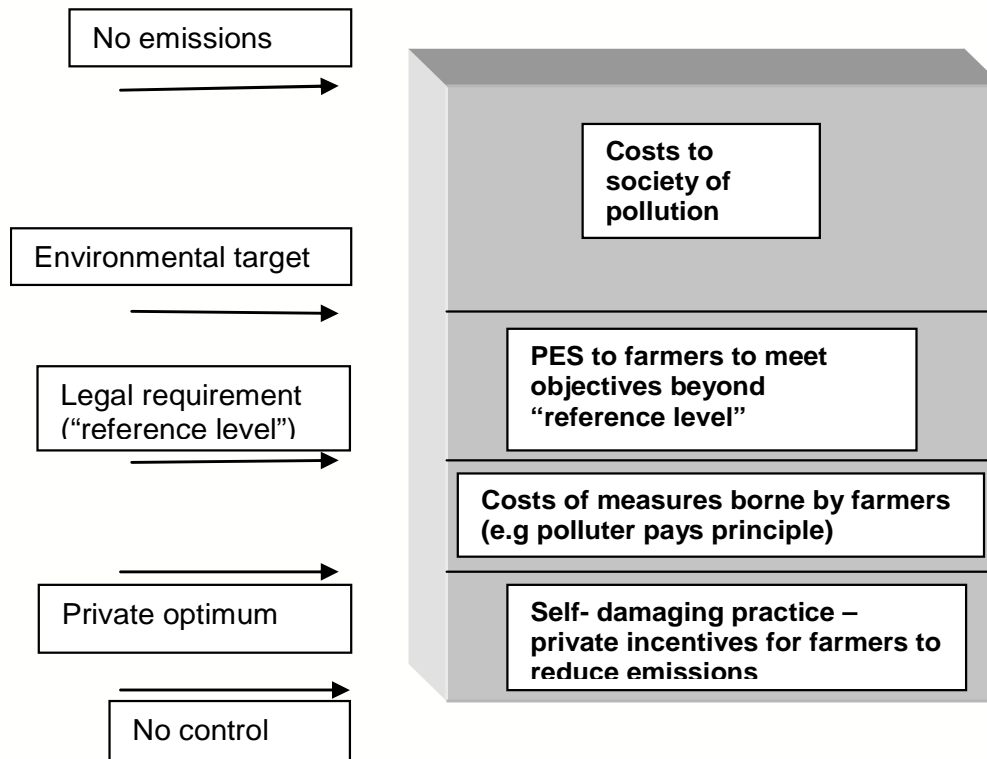
Key principles of PES

- ✓ There is a close link between the payment and the delivery of ecosystem services: the “directness” of payment.
- ✓ There is a voluntary nature to the transaction, i.e. not because they are forced to trade by regulation or in order to meet a mandatory cap.
- ✓ PES should recognise only the “additional” benefits from ecosystem service delivery that arise, above and beyond land users meeting their statutory requirements.

Many “PES-like” schemes, i.e. those that fulfil most but not all criteria .



Illustrative example of PES and farming

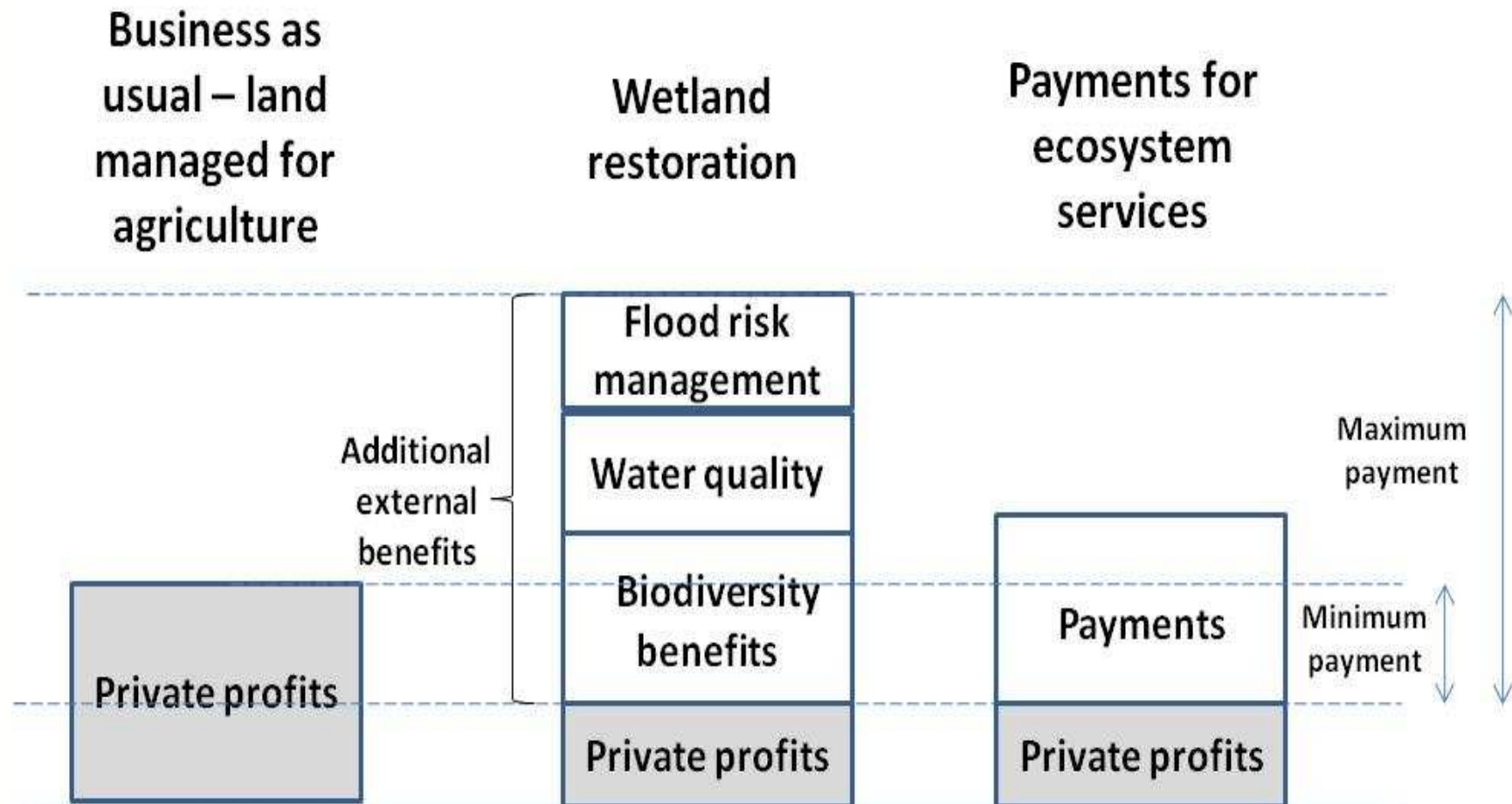


Source: adapted from TEEB

Where PES could work best and potential advantages

- ✓ Work best where financial incentives can make provision of ecosystem services a more attractive option for a land manager;
- ✓ Could draw in private financing alongside public sector funding;
- ✓ PES instruments offer less prescriptive and coercive approach and therefore may be a more feasible instrument in some situations;
- ✓ Ability to target payments to land managers or owners who can affect the ecosystem services directly;
- ✓ Seek out opportunities that provide for higher ecosystem service value, whereas regulation often needs to be applied to all land managers irrespective of benefit; and
- ✓ The greater the heterogeneity in the land managers' costs, the greater the potential for a PES scheme to be cost-effective compared to regulation

PES for wetland restoration – a simple example



.....Potential beneficiaries in PES example

- ✓ water companies – interested in improving water quality
- ✓ local residents - interested in reduced flooding
- ✓ insurance groups – interested in reduced flooding
- ✓ recreational users - interested in enhanced recreational opportunities
- ✓ conservation groups - interested in enhanced wetland habitat

Characteristics of PES

Types of PES can vary according to:

provision of ecosystem service

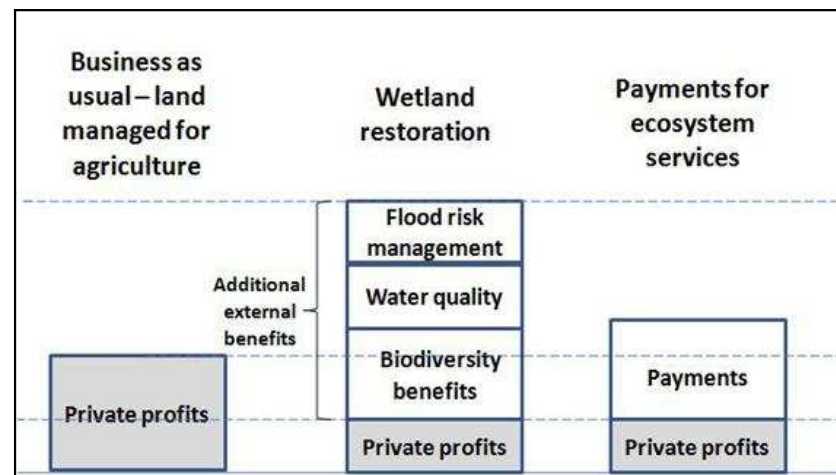
- ✓ one specific service
- ✓ bundles of ecosystem services

financing

- ✓ Government purchasing on behalf of a large number of beneficiaries
- ✓ private companies and individuals, for example, downstream water users paying for watershed management on upstream land

payment approaches

- ✓ output-based payments (also referred to as payments for results)
- ✓ input-based payments for adoption of particular land uses or management practices



PES on a catchment scale - South West WATER project



SW Water (Buyer) ⇒ Westcountry Rivers Trust (Intermediary) ⇒ Farmer (Provider/seller)

Estimated benefit-cost of 65:1

Avoided costs of expensive end of pipe treatment

Ensures works and advice creates multiple ecosystem service benefits

Minimises admin costs
Monitors concept

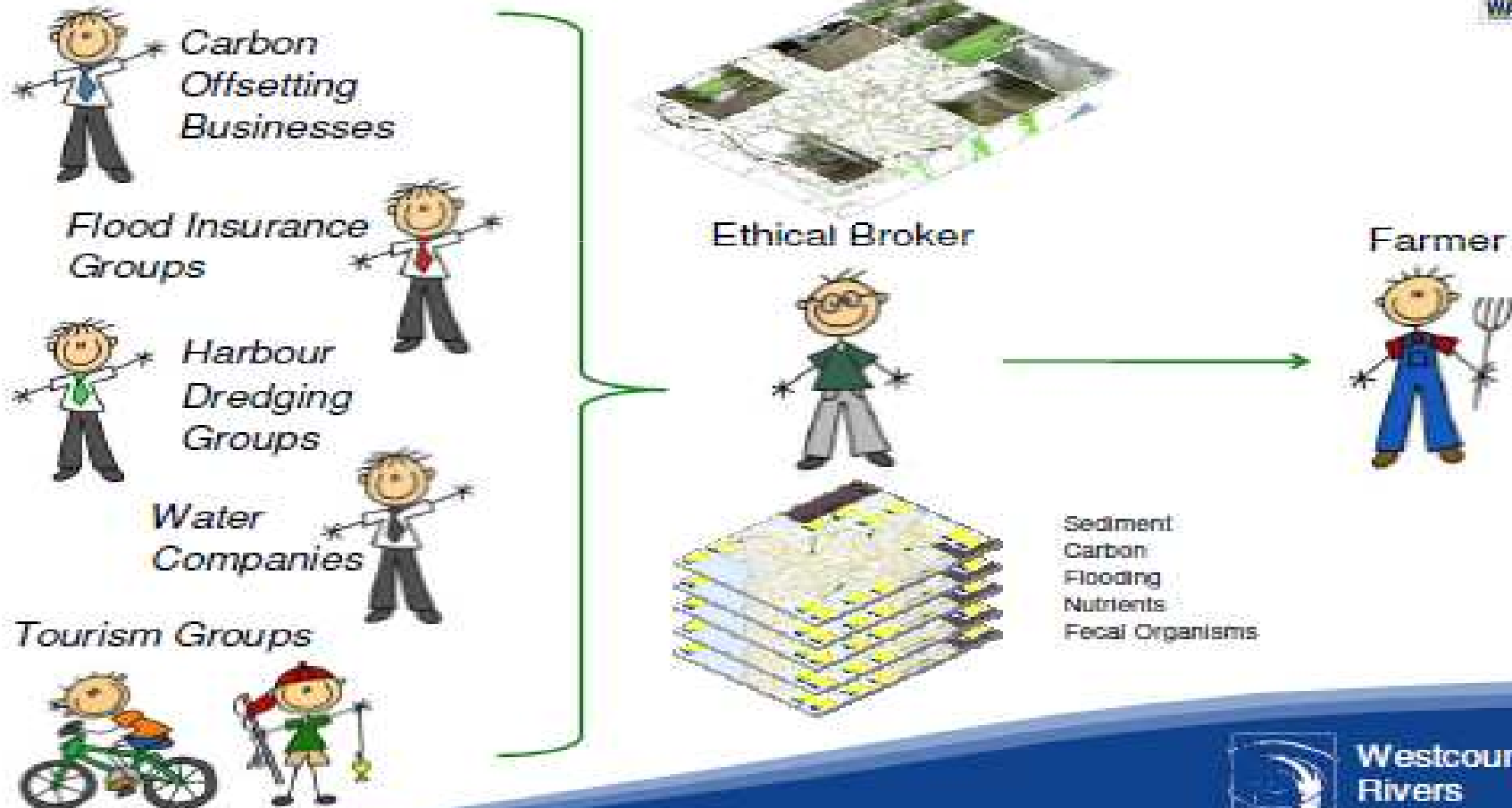
Develop farm resource management plan

Change land management practices

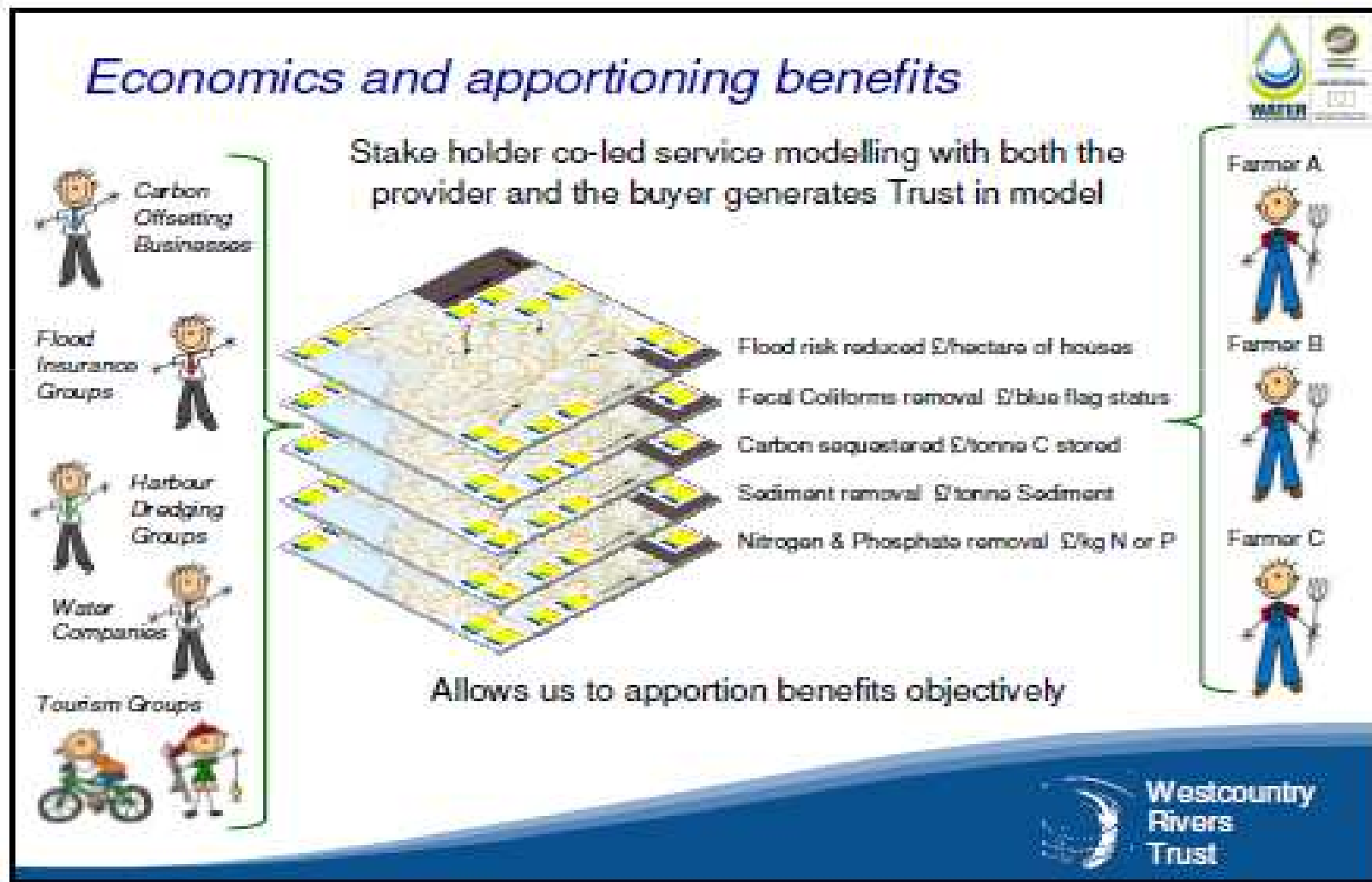


PES on a catchment scale - South West WATER project

Future delivery of multiple PES



PES on a catchment scale - South West WATER project



Lessons learnt from other PES case studies and pilots....

SCaMP (sustainable catchment management programme) :

- Multiple benefits and good partnership approach including 3rd sector role in delivery
- Long time frame in delivering water quality improvements
- Dealing with various institutional issues (e.g PR09 allowed water companies to invest in assets they did not own)

NE pilot upland projects:

- emerging lessons, e.g, role of peers important in people's decisions to participate in schemes and programmes, constraints on stacking payments .

Emerging opportunities for PES in England?

Based on URS/Scott Wilson forthcoming study:

- Water quality
- Local flood management
- Carbon offsetting (e.g peat uplands)
- Urban green infrastructure
- Tourism and recreation
- Making existing agri-environment schemes more effective

Key challenges – scientific uncertainty

- Scientific understanding of the complex relationships between ecological and biophysical processes and service provision is limited
- An effective and ideal payment system requires that the linkages from inputs (actions by the provider) to outputs (ecosystem services required by the beneficiary) are reasonably understood by all parties.
- The provision of ecosystem services in response to a change in management regime may take some time to materialise and compromise the uptake of ‘results-based’ schemes

Key challenges – accounting for spatial variability

- A site's capacity to generate ecosystem services is affected by a number of factors including:
 - biophysical characteristics (e.g. soils, topography)
 - history (e.g. previous management)
 - characteristics of neighbouring sites (e.g. seed banks, habitats)
 - local managerial capacity (e.g. skills, access to capital)
- These factors are highly variable, meaning that the marginal costs of delivering services also vary spatially
- The value of services is often contingent on location

Key challenges – scheme design challenges

Time horizons

- Often long time horizons required when considering ecosystem services delivery but funding agreements can be very short.

High start up and transaction costs

- Establishing a PES scheme can be costly (e.g identifying, recruiting and organising buyers and sellers. holding negotiations and establishing protocols, monitoring, evaluation and review)

Valuation

- Many services are generated jointly (e.g. multifunctional agriculture) and are delivered and utilised as bundles of services; pricing individual components can be therefore be difficult
- Potential buyers of ecosystem services (consumers, businesses, utilities, government agencies) are often unaware of their dependence on ecosystem services

Key challenges – Regulatory and institutional



- Complex and evolving regulatory environment
- e.g. numerous EU directives to take into account (Water Framework, Nitrates, Habitats) plus CAP reform, Localism and 'Big Society' agenda, new Community Infrastructure Levy, new marine planning
- Examples of institutional barriers - often surmountable but do take time to sort out.
- Move towards use of ecosystems approach and ecosystem service framework directs attention to multifunctional use of land – challenges for institutions to work together

Initial findings...

- Need for capacity building (e.g. PES demonstrator projects, guidance and case studies)
- Availability of practical tools and improved access to scientific and socio-economic information is also likely to be important in scaling up such approaches
- Creating metrics to measure services, such as carbon sequestration resulting from land management changes.

Next steps



- Publication of Defra analytical paper and R&D study due shortly
- Case study examples and pilots provide important 'ground truthing' for assessing application of PES
- Defra committed to taking forward expert workshop end of 2011 on PES
- NEWP – potential further commitments/actions on PES

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