

Systemic solutions at the landscape-water interface

Monday 10th February 2014

Venue: Bristol Aquarium.

Background

The recently published [UK Agri-tech strategy](#) is likely to support a significant shift in farming and land management practices, with an emphasis on increasing knowledge exchange. At the same time, concerns over water quality and supply driven by the EU Water Framework Directive in addition to UK-wide commitments to take an Ecosystem Approach mean that there is growing interest in developing multi-functional 'systemic solutions' in farmland as a novel means to both manage issues at the landscape/water interface. This coincides with a greater focus by the statutory sector on a partnership-driven [Catchment-based approach](#), aligning with greater water industry interest in protecting the quantity and quality of water at source in preference to greater investment of money, energy and chemicals in cleaning it up at the point of abstraction (as exemplified by South West Water's '[Upstream Thinking](#)' programme).

To address these challenges, this one-day workshop will bring together key players with interests in farming, the water environment and interactions between them.

The objectives of this workshop are to:

1. elaborate the 'state of the art' of the potential of wetland-based solutions to address multiple benefits in cost-effective ways;
2. explore barriers to further development and uptake of wetland solutions;
3. consider ways to overcome those barriers;
4. identify (and share) tools already available and others that may need to be developed in order to overcome specific barriers; and
5. develop stronger relationships between possible co-beneficiaries and greater understanding of the constraints and opportunities that exist in working together.

Draft Programme

09:00 for 09:30	Registration, coffee/tea
Welcome and introductions	
09:30-09:40	Welcome from the University of the West of England, Royal Agricultural University and ESKTN, administrative details and introduction to the day
Session 1: 'Systemic solutions' and the potential of wetlands	
09:40-10:15	What do we mean by 'systemic solutions'? (Rob McInnes and Mike Acreman, CEH) <ul style="list-style-type: none"> • From productivity alone multiple benefits, at catchment scale • The potential of multifunctional wetlands as 'systemic solutions' in practice • Other systemic solutions (green infrastructure, SuDS, washlands, fenced river margins and natural wetlands, etc.)
Session 2: 'Who benefits and who pays' in realising these opportunities?	
10:15-10:30	Water company perspectives (Ruth Barden, Wessex Water)
10:30-10:45	A regulatory perspective (WFD, cross-compliance, CaBA, CSF, etc.) (Dave Baxter, Environment Agency)
10:45-11:00	Landowner perspectives (tbc)

11:00-11:15	Retail supply chain perspective (tbc)
11:15-11:45	Tea/Coffee collection and straight back into panel discussion
Session 3: Economic solutions	
11:45-12:00 12:00-12:15 12:15-12:30	<ul style="list-style-type: none"> • Payments for ecosystem services (principles and pilots) (Mark Everard, University of West of England) • PES Pilot #01 BART (tbc) • PES Pilot #02 Cotswolds catchment, including stakeholder and participatory approaches (Chris Short, CCRI)
12:30-12:45	Panel discussion and capture of key learning points
12:45-13:30	Networking Lunch
Session 4: Workshops	
13:30-14:15	<p>Principal opportunities (breakout groups)</p> <ul style="list-style-type: none"> • Multifunctionality, exploring potential win-win solutions • Who are the 'usual suspects' (principal beneficiaries)? • Who are the 'unusual suspects' (potential beneficiaries such as health) who might benefit from this? • How do we get everyone around the table?
14:15-14:30	Plenary discussion of key outcomes
14:30-15:15	<p>Principal barriers to be overcome (breakout groups)</p> <ul style="list-style-type: none"> • What and How? • Who should do what?
15:15-15:30	Coffee/tea
Session 4: Learning review	
15:30-16:00	<p>Plenary discussion/learning review (lessons, particularly who should do what?)</p> <ul style="list-style-type: none"> • For businesses • For regulators • For land users • For NGOs • For researchers • For communities • For advisors • For other 'unusual suspects' (health, transport, green space, civil engineers) • For prospective funders (including PES, s106, CIL, LEPs, private?) <p>What do these bodies need to make progress with these steps forward and to work more efficiently?</p> <ul style="list-style-type: none"> • Priorities for action
16:00-16:15	<ul style="list-style-type: none"> • Thanks from the chair, host and sponsor • Next steps: <ul style="list-style-type: none"> ○ Write-up of this workshop ○ May/June workshop at RAU • Close and depart

A follow-up, field-based workshop will be held on-farm at the Royal Agricultural University, (scheduled for May/June) focused in more detail on understanding and developing catchment-specific applications of beneficial wetland technologies.

Our hope is that many of the same delegates will commit to both of these workshops, so that the immersion and solutions identification in the first workshop can promote greater insights and innovations in the second workshop.

Further detail

To achieve improved water quality and supply while delivering 'more with less' from agriculture, there is increasing recognition of the value provided by functional ecosystems at the land-water interface. In particular, there is a particular focus on wetlands and wetland functions, including both natural wetland features (protected springs, buffer zones, etc.) but also constructed wetland systems (particularly integrated constructed wetlands, or ICWs) as well as buffer zones and other solutions exploiting or emulating wetland functions.

Simple measures such as fencing banksides and wetlands are commonly promoted by the UK's Rivers Trusts, and via the government's [Catchment Sensitive Farming](#) programme, for multiple and simultaneously beneficial purposes. Urban examples of systemic solutions include progressive implementation of 'green infrastructure' and SuDS (sustainable drainage systems) which can, when applied strategically, tackle simultaneously issues as diverse as urban flooding, air quality enhancement, noise and visual screening, amenity and enhancement of real estate value. The challenge is no longer envisaging such systems, but of overcoming barriers to their implementation, and their adaptation to local circumstance as a means to optimise benefits not only to farmers and landowners but to local communities and society at large.

Beyond entrenched habits, assumptions and economic interests, other key barriers include narrowly framed legislation, ring-fenced budgets, narrow interpretation of them in an operational context, and an aversion to risk-taking by both land managers and regulators to achieve potentially enhanced outcomes.

This workshop will provide an opportunity for a diverse group of stakeholders to explore and discuss how to overcome these barriers and support adoption of these low-input technologies, based on natural processes, to deliver multiple benefits in real landscape contexts.