

ENVIRONMENT AGENCY WALES

LAND MANAGEMENT CONFERENCE

1ST OCTOBER 2009

FULL REPORT

1. INTRODUCTION

This report of the conference has been written by the independent facilitators.

The summary includes

- Aim of the conference
- Evaluation: were the objectives met?
- Key points raised during the day
- Issues for future consideration

The agenda and transcripts of notes made by the facilitators and volunteers in small groups are included as appendices.

The presentations made at the event are on the conference website:
www.conferencesearch.co.uk/landmanagement

For further information contact: landmanagement@environment-agency.gov.uk

2. SUMMARY

2.1 Aims of the Conference

The way we manage our land impacts our local communities, the landscape and the wider quality of our environment: Over 90% of Welsh land surface is farmed or forested and the influence of land owners on the environment goes far beyond managed land itself. The support of the land owning community in Wales is needed for an integrated approach to land management, which can mitigate climate change and also deliver environmental and economic benefits for landowners

The goal of the conference was to educate delegates on the connections between water resources, carbon storage, water quality and flood risk management and the benefits of holistic approach to land management. It also provided an opportunity and first step in furthering our understanding of land management practices in Wales and in beginning to apply what we know, to tackle the challenges we face, such as climate change, improving water resource management and pollution control.

2.2 Evaluation: were the objectives met?

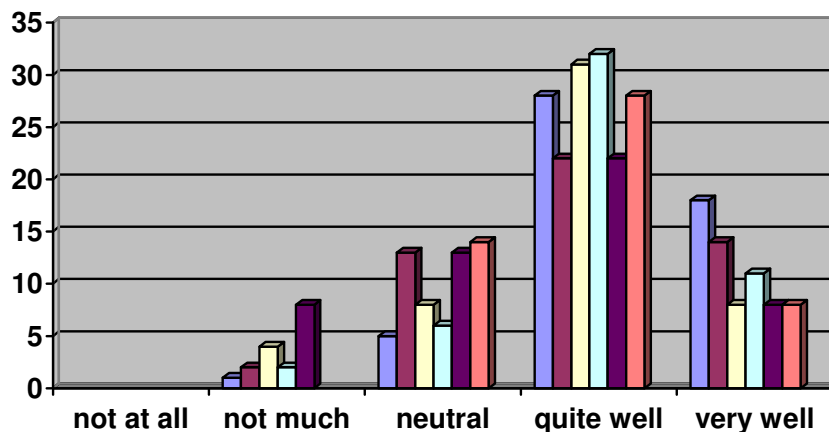
Many delegates appreciated the wide range of topics and the high standard of speakers. It was an ambitious agenda to cover in one day and many delegates would have enjoyed more time for discussion and asking questions of the presenters. However, the conference should be seen as a first step in addressing the many issues which accompany land management. The day was undoubtedly effective in raising the awareness and giving people an opportunity to meet others from different organisations and sectors. Delegates welcomed the proposal from Chris Mills, Director of Environment Agency Wales, that there should be a follow up workshop to engage on a more detailed level.

The objectives were:

1. learn more about examples of good practice in land management from Europe and from Wales (the National Trust, the Pontbren Catchment Management Approach, the Sustainable Fishing Project and farmers),
2. get an overview of the principles of Ecosystem Services,
3. understand more about the current state of land management across Wales: why and how we need to change our management to adapt to climate change,
4. consider the opportunities for and benefits of a holistic approach to land management in Wales,
5. explore opportunities for putting theory into practice and identify what support is needed to make changes in land management,
6. support the proposal from EAW for a Land Management Charter for Wales and make personal pledges for action.

The feedback from the delegates shown below demonstrates that most felt that the above objectives had been met well, although more time would have been appreciated for a deeper exploration of opportunities and challenges for land management in Wales.

Q. To what extent did we meet our stated objectives for this conference?



2.3 Key points raised during the day

2.3.1 Share and build on good practice, gather evidence, fund research

Delegates appreciated the opportunity to hear about good practice in Europe as well as from Wales. The case studies presented at the conference were comprehensive and showed the multiple benefits that could be derived from more holistic approaches such as the 'soft engineering solutions' to mitigate flood risk and sustainable drainage systems. The importance of understanding more about soil as a key resource was well received and a topic of interest for delegates. More opportunities to share evidence and to ensure funding of research and monitoring were seen as essential to successfully promoting behaviour change with 'hard' evidence to show the benefits. The importance of engaging early and appropriately with local communities was agreed as well as the need for schemes to be long-term and flexible.

2.3.2 Raising awareness

Concerns were raised about how to bring farmers on board and how to ensure that social and economic issues are considered as well as environmental protection and biodiversity. For example, farmers not always keen to plant trees because it is not seen to increase the land value. Professional and academic views will probably be very different to those of farmers and general public so achieving consensus will be very difficult. How is consensus achieved on the importance of different services?

The concepts of ecosystems services were seen as fundamental to analysing the impacts of agri-environment schemes but very difficult to communicate to general public. Some delegates said how important it is to get farmers to understand the part that a well-balanced ecology pays in the general well-being of our society and culture. We were also all reminded that farmers need to make a living from the land through food production. Delegates were anxious that the conference to a large extent, was preaching to the converted. They asked how do we change land management culture, how do we incentivise? Political buy-in is required to push the changes and an evidence base is vital to convince land owners.

2.3.3 Partnership working is essential

No one underestimated the huge challenge of creating effective regulation and incentives to achieve a balance in managing all the demands society makes of the land. Many delegates highlighted the necessity of good partnership working to meet the challenges ahead, whilst recognising that this is not always easy. All spoke of the importance of collaboration between major players to champion and enable the desired changes. Many felt that the public sector had to lead the way and that Wales is well-placed to take advantage of good working relationships between organisations. There was lots of concern about how to find the balance between food production and ecology and how to incentivise farmers.

2.3.4 Clearer coherent policies for Wales

It was pointed out that our current planning legislation has led to challenges for managing surface water run-off, biodiversity, the microclimate, our carbon footprint and how this currently impacts on urban and rural development and flooding. Delegates hoped to see changes in planning legislation and more efforts to raise the awareness of the general public, including the younger generations. Delegates wanted to see the key stakeholder agencies sharing knowledge and innovative approaches and working together to influence government policy.

Many called for coherent national policies to set a framework that could encourage implementation at local levels. The Campaign for the Protection of Rural Wales, among others, pointed out that there are specific European aims regarding the delivery of focused environmental projects and asked 'Has Wales yet defined what it actually wants? We cannot do everything, what are the priorities?' People wanted to have a more clearly defined set of aims for Wales. There was a lot of concern about how to ensure that adequate funding would be available to support the necessary changes and convince land owners.

2.3.5 A Land Management Charter for Wales

To turn the day's presentations and theories into practice, organisations in Wales pledged their support for a land management charter with individual pledges of commitment for one or more of the following actions:

- Increase awareness of the need to take action to protect and increase soil carbon stores.
- Champion and promote good practical examples of successful land management to show others in Wales what can be achieved.
- Work in partnership to ensure more rural land is covered by environmental agreements.
- Increase awareness of the need to have sustainable drainage positively considered in decision making.
- Work in partnership to ensure land is managed to maintain good water quality

Delegates' pledges and the discussion topics within this report will form the basis of a follow-up workshop in 2010 to take forward the issues raised and improve land management practices and policy in Wales.

2.4 Issues for Future Consideration

Below are suggestions from delegates on issues which they would like to see explored further in future:

1. Need for key stakeholder agencies to work together
 - To clarify purpose and priorities for introducing changes to land management
 - To encourage a more coherent set of national policies
 - To consider how to get wider community 'buy-in' and understanding
 - To move the Charter forwards together, make sure it has legs and teeth!
2. Find funding for further research, long-term monitoring of case studies and to disseminate results.
3. Cascade the messages out to politicians, farmers and other land owners.
4. Tackle the economic issues for land owners. There is a need to put a value on the ecosystem service to inform the discussion.

APPENDICES

1. AGENDA

Welcome from Chris Mills, Director EAW Mick Bates, Chair national Assembly Sustainability Committee and Rowena Harris, independent facilitator
Keynote presentation : The EU Perspective on Land Management: Michael Hamell
Round tables discussions and feedback to plenary
Introduction to the Principles of Ecosystems Services: Kathryn Monk EAW
Presentation plus exercise & discussion at tables
Break
Flood Risk Management: Jeremy Jones, Consultant, Water Industry
Case Study: Flood Risk & Land Management: The National Trust, Mark Walsingham, Deputy Head of Rural Surveying and Catchment Advisor.
Soil: Bridget Emmett CEH
Round tables discussions and feedback to plenary
Lunch
Case Study in Water Management: Pontbren: Dr Miles Marshall and Dr Nataliya Bulygina, Imperial College, London
Case Study: Sustainable Fishing Project: Ben Wilson EAW
Who Pays?: Joe Morris, Cranfield University
The Farmer's perspective: Bernard Llewellyn, NFU Cymru County Chairman, Carmarthenshire
Round tables discussions and feedback to plenary
Theory into Practice - your ideas, your pledges: short introduction to the Charter idea from Chris Mills followed by a facilitated session
Feedback forms & thanks from Facilitator

2. PLENARY SESSIONS

*Note from facilitators:
 This part of the report is intended an 'aide-memoire' for all who attended the conference. It may require explanation to readers who were not present at the event. What follows is the flip chart record made during each plenary discussion.*

The day began with welcomes from Chris Mills, Director EAW; Mick Bates, Chair of the National Assembly Sustainability Committee and Rowena Harris, Facilitator.

The Keynote Presentation: The EU Perspective on Land Management, was given by Michael Hammell, Head of E.U. Agriculture, Forestry and Soil Unit

Question. RSPB... Regarding biodiversity: I feel that biodiversity is seen almost as a by-product of environmental work by some. What is the role and value of biodiversity here?

Answer from Mike Hamell... There is of course, a very broad spectrum of habitats and species. Just 18 % of territory is protected at present. There are twenty-five thousand sites requiring protection, and this is very expensive. It requires co-operation from the landowners. Today, we can discuss how to deal with those areas that currently fall outside the services.

Comment. A Soil Scientist... The design of food and agri-systems needs to be reviewed. Thirty years ago, more funds were available than today. These funds have now dwindled. Investment is surely essential.

Question. Campaign for the Protection of Rural Wales... There are specific European aims regarding the delivery of focused environmental projects. Has Wales yet defined what it actually wants? We cannot do everything. What are the priorities?

Answer from Michael Hamell. Regarding soil & food research, across the EU 89 % of migration comes from the soil. We need to give attention to wetland, peat-land and to all low-carbon areas. In the UK, scientists need to remind the Government of the importance and need for good soil legislation. A rural group of scientists has formed and is working on the delivery of goods, foods, services. WEF currently needs to become more integrated. The ideas of how to make progress are here in this room, they are not necessarily coming from Europe.

Presentation. Kathryn Monk. EAW
An Introduction to the Principles of Ecosystems Services.

Question. The Countryside Commission Wales... Affluence has an effect on agri-systems. Using the form in Kathryn's exercise, is very different to doing the actual calculations – for meat imports for example. I am concerned about the over simplification and impact of affluence over the delivery of services and goods.

Answer. Kathryn Monk... Agreed. This exercise simply starts the examination process. We need to identify the costs by other means. We're looking to combine all the various influences ultimately.

Question. Environment Agency... We are facing a challenge regarding our economic systems – how to sell our work across Wales?

Answer. Kathryn Monk... Well, yes, that's for us to discuss today.

Comment. Welsh Assembly Government... we've seen examples of the market-based approach. We are starting to deal with different means of valuation. The task therefore is to get farmers to change, to see their contribution also as of value to society.

Presentations.
Flood Risk Management, Jeremy Jones.
Flood Risk & Land Management, Mark Walsingham.
Soil, Bridgett Emmett.

Question. Welsh Assembly Government... Regarding 'evidence'. This is currently incomplete. How do we provide better evidence in the current economic climate?

Answer. Bridgett Emmett... We cannot actually wait until the evidence is more complete. We need to start now. We need an adaptive management approach, to continue to check our work and adapt to what we find.

Answer. Mark Walsingham... I agree with that. At the National Trust, our work is both evidence based and it's just common sense for the land. Our ancestors knew what to do – we're following our ancestors. And yes, we need research for the future.

Comment. **Environment Agency...**I was pleased to hear Jeremy Jones reference to the importance of education. The Environment Agency Wales is very aware of the need for education regarding flood control. Our grandchildren will suffer unless we take action. We need to raise the profile of education.

Question. **Welsh Assembly Government...**Actual land management is the responsibility of the individual. What then are the key issues and methods to gaining a consensus of agreement with farmers?

Answer. **Mark Walsingham...**we are beginning to get some good examples of this. The National Trust is the same as other landowners. Some of the partnerships are very complicated, we are working to improve the quality of our work. Good examples are increasing in number. To begin, we look at the carbon budgets on our own estates.

Question. **West Wales...**Two points from the presentation – one, soil erosion. Was anything caused by the farmer? Two, Lime – was it there on the uplands or was it there as a normal part of the farming activity?

Answer. **Mark Walsingham...**the fields were being used for potatoes. We're now working with the farmer to control the erosion and this may require changes to the farming methods.

Answer. **Bridgett Emmett...**We recommend not to use liming.

Comment. **Resource for Change...**The focus seems to be on getting the evidence, not on rewarding pro-active behaviour. Perhaps we need to reward behaviour – don't wait on the evidence. There is an urgent need to get land managers and farmers engaged in these debates.

Presentations:

Water Management Pontbren, Dr. Miles Marshall & Dr. Nataliya Bulygina.

Sustainable Fishing, Ben Wilson.

Who Pays? Joe Morris.

The Farmer's Perspective. Bernard Llewellyn:

Having listened to the various presentations today, I have enjoyed them and I have various concerns. First of all, I was concerned about the delegate list. I see there are only four farmers on it – although I appreciate that this kind of a day is not necessarily for farmers just yet. I feel that you shouldn't expect farmers to have Climate Control at the top of their agenda. For example, I'm sure that not many people here will be aware that today we're getting the results of our TB Tests. Climate Control cannot be on top of the farmer's list on such a day. Farmers do care, they do, and they are already aware of Climate Change because they are already affected by Climate Change – because of Blue-Tongue.

An earlier speaker talked of 'value', he talked of the value of these new schemes. But it's me that must implement them. As to the use of data as support for the schemes, well, for me it's too variable. It's just too risky for me to decide to commit my land to something, a project or a plan on the basis of data which may, in twenty years time, prove to be wrong. In the past I have disagreed often with Mike Hammell's various arguments when I've listened to them in Brussels. I disagreed less today, but I think perhaps that he may have been underplaying them. When it comes to Pontbren – I do approve of the ethics of the place. Pontbren was actually developed by farmers with a commercial intent and perspective. It was developed without any Government support, in fact, they even opposed it – until now. Now, Pontbren is viewed differently. Farmers rely on market forces for their income, they are reliant on the market. Pontbren has shown what can be done by following a sound commercial route. Sometimes I think we should all follow what Prince Charles has said. We all

know, our ancestors all knew, that trees will slow water, we don't need anything else to tell us that – but this is still not accepted by politicians. Pontbren is a combination of good agricultural practice and commerce. Is the National Trust really the biggest land-owner in the UK? They're doing good and positive work but I have a problem with this phrase, 'a sustainable future'.

To me, sustainable means 'profit'. You need profit in order to be sustainable. Profit for me, is first, even before the environment.

Comment. **A private Forrester...**All the procedures and schemes are ready and in place, we now need the funds to do the work.

Question. Anonymous...Could Joe Morris elaborate on his term 'the value that is locked into the landscape'?

Answer. **Joe Morris...**The management value at present of land is high, it's too high – it's almost a tax. If that value was released there would be funds for urban development. A way to do this would be to scrap green-belts and introduce green-wedges, use that land.

Comment. **Welsh Assembly Government...** Today, here, we're aware that we are preaching to the converted. Outside this room, there is minimal awareness of these issues. We need to make sure we deliver, communicate with those outside this room.

Question. **The Countryside Commission Wales...**What is the purpose of the Land Management Charter?

Answer. **Chris Mills...**After last year's Conference there was little in the way of action. This year, the Charter can be used to help follow up today's discussions. We will contact you. There will be a further workshop in six months time to create an action-plan.

Comment. **Crown Estates...**I support the National Farmers Union view. If there is no money or financial benefit for the farmers, nothing will happen. We manage a high volume of landmass, but we are not at all aware of any 'carbon store'. I would welcome an audit to show us - how we are doing?

Question. **The Campaign to Protect Rural Wales...**We are currently being asked to support the Charter. Do the three big players here believe in the need for the Charter?

Comment. Anonymous...The purpose needs to be clearer. We must then all support it.

Closing comments from Chris Mills, EAW...We've been doing a lot of learning today. We need to identify what we can do, how we can support new schemes. Please note the email address for correspondence. I'd like to thank our speakers and the universally high standard of presentations. The report of the meeting will be made available online. There will be a workshop in six months time. Meanwhile, we will be evaluating the next steps to take. We have all the expertise we need right here in this room.

3. TABLE TOP DISCUSSIONS

What follows are all the comments and questions noted at tables by volunteers in response to the presentations and during discussions. There is no attempt to interpret or summarise – we have just typed up the notes as they were written. We have done our best to read all the handwriting and thank the volunteers who made the notes!

1. The EU Perspective: Michael Hamell

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Table	Notes
1	<p>Need to tap into best practice</p> <p>How much under threat will our resources be in future? These are fundamental changes, how to you align with market forces?</p> <p>How much will people accept a rural Wales that looks different?</p> <p>No current solutions</p> <p>Regulation should facilitate not prescribe (set up the frame)</p> <p>Do we understand how biodiversity will make it more difficult to sustain ourselves?</p> <p>Small 'c' conservation is an obstacle</p> <p>What is best practice public engagement in these issues in Europe?</p> <p>Are we putting enough resources into regulation? E.g. phosphates</p>
2	<p>How do we get the best value from others experience & learn from the EU?</p> <p>Are we moving in the right direction with Glastir? Do we really understand what the issues are and what we are trying to solve?</p> <p>Integrate the problem analysis, the desired outcomes and delivery mechanisms to get best value</p>
3	<p>Resonance – need desire to have more partners in agri-enviro schemes</p> <p>The importance of carbon conservation is often missed – not seen in EU context</p> <p>Find ways to manage fair farm income balanced with environmental concerns</p> <p>Is there clarity of purpose on what we are trying to achieve?</p> <p>Need to move clock backwards. Population growth is driving the figures</p>
4	<p>Agri -enviro schemes: is there competition between water, soils, biodiversity?</p> <p>Are the trade offs right? Need to focus on multi benefits. Contract issues.</p> <p>Need to be able to quantify to allow payment. Up to now no agri/environment schemes. Focus on limited biodiversity schemes. FLEXIBILITY? Schemes must be long term & flexible, is there detail in EU to allow Wales to run schemes?</p>
5	<p>Are agri-environment schemes successful? How do we know?</p> <p>Importance of connectivity – ability to prioritise farms & encourage voluntary co-operation</p>
6	<p>Experience from other countries useful</p> <p>Country/area specific objectives needed, at grass roots level</p> <p>Impact of NVZ's – little funding for compliance measures</p> <p>Neighbourhood co-operation – examples of good works</p>
7	<p>We have no choice, we must get on with it but how? Limited resources to achieve it? How to convert sustainable policy into actions?</p> <p>There's a demand, how do you incentivise?</p> <p>Do we fall back on regulation, can the industry afford it?</p> <p>Increased integration of schemes will help</p>
8	<p>Farmers not aware or concerned about the bigger picture? How do we get this across?</p> <p>So much diversity in Wales – should be more local or catchment based delivery</p> <p>No monitoring at farm level, even in Tir Gofal</p> <p>Better more holistic targeted area schemes rather than focus on one issue</p> <p>Catchment – incentives bring together groups of farmers – farmer led</p> <p>Schemes should be appropriate to local area</p>
9	<p>Key link between EU & work on the ground i.e. funding legislation</p> <p>Needs to work both ways i.e. evidence & research needs to feed back to EU.</p> <p>More funding is required</p> <p>Partnership is the only way to find solutions</p>

	We need one policy for food, energy & environment security with clear outcomes for Wales (environment alone isn't a sufficient priority for politicians)
10	Challenges dealing with agriculture, wildlife and biodiversity in same area Role of biodiversity? Farming must develop to adapt to the issues (Tir Gofal scheme) Encourage uptake of schemes (compensation?) Concerns of payments for new schemes Lack of advisors & influencers to reach farmers, need to convey real benefits if farmers to make changes
11	Any progress in targeting water quality areas? Carbon. How much resource is available for baseline monitoring? How can comparisons be made? Soil – less work done on this In Wales the new agri-scheme seen as saviour but eh reality is that more schemes and more money will be required How do we reconcile food production versus agri-environment?
12	Pulumon project has learned from experience that making aims & outcomes clear to all stakeholders was key Need to think long term Farmers are running businesses, therefore they need to know what economic benefits come from integrated land management Food production v/s other environmental services – need to look for complementary solutions and be aware of the positive impacts of integrated management on food production
13	How do we ensure that social & economic issues are considered as well as environment? Sustainable development framework for decision making Environmental costs must be included when costing services and products

2. Principles of Ecosystems Services: Kathryn Monk EAW

Table	Notes
1	An academic approach, not readily understandable, communication is key & need to show practical benefits People only value public goods when they disappear This is fundamental to agri-environment schemes Explain how National Parks contribute widely i.e. Brecon Beacons provides water for Cardiff
2	Principles are understandable but the challenge is to weight the different/relative benefits of each service & the elements within them How do you get consensus about the importance of the different services? Professional views will be different from general public
3	No comments written
4	Debate: do we need to quantify ecosystem services to allow us to compete with those who can quantify their services? Cost change: some ecosystems are unquantifiable. Identify a Welsh priority
5	Impacts of climate change on eco-systems services in Wales? 'willingness to pay' stems from the wrong questions – perceptions of the public – getting the wrong answer: false economy. Need clarity of message to get across to wider public & get greater take up
6	Willingness to pay hypothetical
7	Communicating the approach is very difficult. Job to do to sell this approach. Should this be simplified? How do you get actual implementation rather than 'living in a bubble' Regulation and bottom line (£)

8	<p>A difficult concept to get across at the farm gate Need to develop dialogue – a good concept needs better communication Process one thing but community/partnership working very important Could help people think outside their own boxes – helps to bring the whole package together Need to start with the farmer – bottom up approach – DEMONSTRATION SITES, think of how to package the message, farmers will be delivering public goods & links with town and country Handout a very EA interpretation of eco systems services Necessary at policy level</p>
9	<p>Very difficult concept to understand in a short timescale – too complicated to begin trying to engage a wider audience</p>
10	<p>Unsure what the messages in the presentation mean Why do eco-systems matter? Prominence due to climate change? Benefits of looking at things as a whole system? Need quantifiable evidence – how do you put monetary value on the environment? Can you value each area differently? What is the cost of conservation? Where are the real models? Ethics v economics Uplands very important in Wales Need to understand this more clearly and communicate it better Major renewable energy vs conservation of wildlife debate – a trade off – how do 'we' decide?</p>
11	<p>Some of the terms alienate those we need most to engage (farmers, provisioning services) Community projects are key: individuals can cause problems elsewhere in catchment The 'table' ignores ownership & control issues</p>
12	<p>Gaps in the matrix: marine off shore, above ground, non aquatic Need effective communication methods Changes in ecosystems services provision and the costs over time need to be considered</p>
13	<p>Eco system services have different meaning to different people Putting a value on is key – this depends on individual circumstances/aspects on life</p>

3. Flood Risk Management: Jeremy Jones, JRJ Consulting

Table	Notes
1	<p>What's stopping us? Is it just cost? Bio-diversity benefits of soft engineering are clear Impacts on coast & estuaries from run off How much is agriculture contributing to Welsh water problems?</p>
2	<p>Can water co's provide incentives to households to develop their own SUDs? How can we highlight the issue to general public?</p>
3	<p>Taking personal responsibility is key to change – cultural issues Cuts in public spending should act to motivate SUDS Partnership between WAG agr & DCWW to work together on this issue? Welsh circumstance gives us an opportunity which may not exist in England</p>
4	<p>No real difference between rural & urban Foul/clean water separation – more information needed Why don't we tax people/businesses who use drainage systems?</p>
5	<p>Maintenance costs? Require a programme of education for existing dwellings</p>

	Water plan needed for all new developments & rigorous enforcement of legislation Provide incentives for households to have water friendly systems
6	Permitted development issue Need to raise awareness – public to take ownership Cost & maintenance issues
7	EA/CCW doing some education – should we increase education for young people on these matters?
8	Joined up thinking in planning legislation & incentives for mitigation Stick or carrot? Cp affordable housing - developers can't afford it even if they want to Council tax could be based on this – reduced for delivery of benefits
9	Planning needs to build this in & everyone needs to 'go for it' – be proactive Incorporate incentives into Council Tax? Good practice is also creating a better aesthetically pleasing environment to live in
10	Individuals can make a difference Similar to the big push to conserve energy, will it be too much for householders? WAG building reg's inc water – builders max build, min cost Small proportion is new build – what about existing housing stock? Too many cars (& car parks) Supermarkets responsibility?
11	How is Planning guidance linked in? Remember rain water harvesting from farm buildings
12	What education is going on for kids around climate change? Are there greater immediate economic costs to a greener approach to traffic calming etc?
13	Education is key – simple things can make a difference Architects & developers are important Planning laws need to enforce mitigation measures: change WAG building reg's Issue of what to do with present land use e.g. paving stones Who pays?

4. Case Study: Flood Risk & Land Management: Mark Walsingham of The National Trust

Table	Notes
1	Changes in agricultural practices in upland areas Pontbren showed that relatively few trees make a difference, Glastir now using this Only 5% increase in tree planting provided 60 years buffer against climate change Need to maximise agricultural output DG environmental attempted to get 5% of farm given over to environment (resisted) Need to look again at planning and building reg's & permitted development rights
2	Can we have a water footprint cp carbon footprint? Several references to inhibition of innovation by Planners: what about incentives again? How can we raise awareness? What is the scale of the issue in rural & urban environments?
3	Small catchments well represented – larger catchments scale seems missing?

	Identify where the 5% of land is that makes the difference How do you roll out the NT experience outside of NT estates? Cross boarder impacts may not be an issue
4	Education required Insurance & transfer of risk How can we focus efforts away from hard engineering solutions?
5	Planners are fundamental to achieving BEST case Education – stress opportunities available with take up of water friendly systems Need greater understanding of cost benefits – show case savings in hard defences by implementing alternatives
6	Land use solutions less tangible than hard engineering – tackle public perceptions
7	Inflexibility in regulation – we must challenge the planners Excellent case study of where practical mitigation options have given quantifiable solutions
8	Money needed to make this happen in Wales Big schemes near towns can afford managing water but no funding for small Welsh schemes NT is giving support to their tenant farmers Incentives/support required to deliver this across the board in farming communities Education for the future
9	Policy framework needs to facilitate or even force partnership working because it's the only way to sort out the problems Decision making at a local level Must build resilience into the landscape Find funding incentives
10	Good prompt to Ministers What can be done with mountains/forestry to aid run off? Land management schemes at catchment – how do you get them all to agree? Need to work together EAW looking to integrate diffuse pollution with water management, improving both profitability and the environment, landowners are happy to work together, good communication, relationships and incentives for further improvements.
11	Common solutions to common problems Need planning policy to help do this – what are the barriers & costs? Importance of the images in explaining the benefits Are people within departments aware & giving the right advice? E.g. flood engineers give 'hard' solutions
12	Interesting comment that the Planning System & Highways Authorities prevent certain measures to be taken Sustainability demands a greater willingness to take the innovative solutions Learn from more progressive EU countries e.g. around ground water pumps Planning advice notes: WAG needs to be more proactive in pushing farmers in this direction
13	Good to see practical e.g. Would be interesting to see effect on food production & carbon balance etc Water co: to install water harvesting system same time as meters Better for water co: to use and finance efficiently in SUDS rather than reporting pipes and sewers

5. Soil: Bridget Emmett Centre for Ecology and Hydrology

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1	Great potential for practical application, needs to be built in to agri-environmental schemes More likely to be a source than a sink – need to protect wetlands having a base line hugely important minimum till but having to modify machinery, currently we reward historical bad practice do you put money into quick wins or longer term measures i.e. forestry?
2	Very important but public will expect to formulate strategy and advice Do we use shock methods to raise awareness? Can we have a major single corporate statement on this approach from EAW, CCW, major water co's, FCW
3	How do we change land management culture – farmers not keen to plant trees How do we incentivise? Agri-enviro doesn't allow it We need political buy-in to push the changes Evidence base vital to convince land owners Who will fund the R & D required when budgets are under so much pressure? Market driven payments for delivery of some services e.g. paying farmers to reduce H run off reduced N in water courses by 98%
4	Soils are <u>the</u> agricultural resource Monitoring is required ('Glastir' adaptive monitoring) Different options for different soil types Better support required for farmers
5	Cycle of carbon capture – what is end point of timber? Need more information on biochar – do you need to add more fertiliser? Other benefits? Trade off with carbon in uplands
6	Potential for both problems and benefits Below ground bio-diversity should be recognised Need to educate farmers re nitrogen applications
7	Incentivise or regulate to take up? Golden rules: a lot already being suggested via existing good practice in agri-enviro schemes
8	Can we get a package with this soil science relevant for farmers? More storage capacity for slurry on farms Use water for biomass? Consider changes in farming practice i.e. outwintering Research to deliver practical solutions and unpick some of the past practice Past peak oil solutions – soil for the future when fertiliser no longer viable Adaptive management – cannot wait!
9	Knowledge needs to be converted to information to help others
10	Will it get to a stage where it would come to carbon trading? Will it affect food production? Increase in arable, reduction in livestock – carbon retention - is this an issue? Encouraging ploughing pastures/growing maize – economics (animal feeds if inside for longer). Concerns over soil loss. Gov't legislation? Grazing and fires will not help – more of a concern with drier summers
11	Reinforced the importance of funding for soil research & monitoring & improving the evidence base for future important to understand diverse soil scape for land management options need to increase awareness of land managers
12	Need to convert science into practice – involves dissemination via education &

	<p>professional organisations Lack of science often leads to inaction which must be overcome Land management needs to be supported by ongoing review and monitoring – needs funding (adaptive management) At present no rewards for proactive management & holistic practices</p>
13	<p>Minimum tillage benefits after 5 to 10 years, there are ways of doing this in Wales in arable sector Encourages wood in construction to sequester carbon Agriculture – look at use of fertilisers & ways of reducing dependence on commercial fertilisers Green roofs a good idea Bio-char present research looking at long term benefits & potential r-wetting of soil is more complicated, initial release of methane</p>

6. Case Study in Water Management: Pontbren: Dr Miles Marshall and Dr Nataliya Bulygina, Imperial College, London

Table	Notes
1	<p>Bottom up approaches fall between funding schemes Important to know clearly what we are trying to achieve. Trying to justify the ecosystem services? Information on peat tremendously helpful in providing economic justification Drivers all agricultural Issue of permanent or short term grass land needs to be sorted out</p>
2	<p>How do we get farmers working together? What are the incentives? Sensible cost saving management approaches? Lowland catchment v abandoned upland catchments</p>
3	<p>Evidence based policy – will it make a difference in extreme events? Is 50% reduction in extreme event flood peaks worth having?</p>
4	<p>Problems of different storms. Hard core engineers feel ‘safer’ covering all types with concrete. We accepted they did demonstrate an effect of land management. What should drive a change in land management? Is flood risk enough? (Does have money attached!) Small compromises can have big benefits for another ecosystem service. Information makes a difference (farmers putting trees across slopes & planting native species) Potential of keeping animals on land all winter – do we really want to encourage that? Advice from this table was it wouldn’t cause a problem, farmers won’t do it anyway if poaching a problem</p>
5	<p>Importance of mixed farming Flexible approach of Pontbren farmers not restrained by a Gov’t scheme</p>
6	No comments
7	<p>What happens to base flow – it should go up Combined sub-catchments – assess the impact</p>
8	<p>Biomass willow – has been explored as an option Sometimes optimum placement of trees could be good for shelter and for flow</p>
9	<p>Commercial community husbandry Catchment of water</p>
10	<p>Plant trees in the right place further down the slope – what size strip belt? Possibly 10 m wide, fenced off, gives deeper penetration of root & increases soil retention, with heavily compacted soils there is no penetration</p>
11	Forestry Commission carrying out suitability study for planting to address

	flooding & run off – also taking into account future markets for wood Farm woodlands give no return for 20 years what incentives? Other products from hedgerows/woodlands?
12	Flood risk – different criteria depending on your perception or interest What policy? Different policies will have different evidence base/thresholds Long & short term solutions needed
13	Success of Pontbren is the result of farmers co-operating – how can we replicate this across Wales?

7. Case Study: Sustainable Fishing Project: Ben Wilson EAW

Table	Notes
1	Good communication – easy to understand and gives a strong economic case Whole life cycle costs? Conflict between users? Should this be a priority? What about the wider needs? One clear outcome can be built on. Wye & Usk – just given a sum of money & got on with it
2	How do farmers upstream benefit from spawning ground improvements that allow down stream fishing? Consumer pays?
3	Management agreements in Glas Tir to bring new money into the scheme for riverside corridors (down side – need to control invasive species)
4	Will Glastir deliver this? Easy wins done – rest need major economic incentives There are other management benefits for farmers – access to stock & flood management but we have a long way to go before fishing money pays for needs of management Groups of landowners can make a difference if they work together (e.g. in Wye) Important to get management right, advice & support needed e.g. too narrow a strip makes banks more vulnerable
5	Issues of maintenance costs (fencing) Invasive species Where's the next tranche of money coming from?
6	Need to look at long term management issues Cost of implementing these schemes?
7	No comments
8	Partnership working required. Angling clubs cutting banks/farmers planting Good demonstration e.g. of ecosystems service
9	Better water management leads to bigger fish Farmers need to improve stock management 10 m barriers? Too much – consider impact on food production Fragility of ecosystems
10	Habitat necessary for fish numbers – shade on tributaries not main river – major river valley erosion – no bank activity trees etc will stop
11	Fishing passport – putting revenue into the hands of the land managers, leading to realising the asset – could this be extended to include walks & other activities? Good way to engage people who might otherwise have no interest in land management
12	This is a good e.g. of integrated management, joined up working which demonstrates need to make links Powerful e.g. of economic return for good land management

	May be other non-economic benefits apart from fisheries (wider environmental benefits Carbon 'passport scheme? Revenue from better land management
13	Putting the economic value on an end product brings the message home As with other presentations today it's good that data is available to prove positive effects & monitor good land management practice Baseline monitoring is a useful tool

8. Who Pays?: Joe Morris, Cranfield University

Table	Notes
1	Be clear on purpose & know what outcomes you want Beckingham models – particular values The ecosystem values need to be brought into the centre of the debate Economic thinking squeezing down on environment therefore need to maximise value Concentrate on cost of charges at the margin. Slight variation in land use might deliver significant extra benefits (Mike Hammells 5%) Will there be public resistance?
2	Can we persuade the business community to invest more for prevention than for cure or clean up? How to get around need for upfront investment for long term sustainable development?
3	Preaching to the converted here – need to take it to treasury Need some quick wins Funding sources not from public purse e.g. funding of ranger on Flintshire Coastal Path
4	How do you release the money/value of ecosystems? E.g. get insurers to pay for flood mitigation upstream? Scamp project: water co's released cash to revert peat lands. Gathering evidence is the way to learn from experience – must be open with results
5	Where does the responsibility start? See funding to help farmers see benefits?
6	Duplication of work Need for more centralised working – more co-ordination
7	No comments
8	Should everyone take more responsibility for what is valued – town & country? Concerned that biodiversity just a commodity – it is a support function of countryside Understand constraints Optional viable uses – balance all benefits Who owns the land & who owns the purse?
9	Not much landowner consultation Need to start somewhere: price/value of carbon? How do you value water quality – difficult to pin ownership
10	No solutions yet – struggle with economic estimations Capital sums for asset less problematic How do you estimate & calculate annual management problems? Phosphorus sediment – reduce P content
11	Very complex subject – did we understand it!? Ultimate end goal has to be human well being Polarisation of production – high intensity, can we make it economically attractive to include environmental protection ?
12	Sums up what the day has been about

	Shrinking economy could ne a driver – efficiency release capital BUT where to start? Systems e.g. planning are not yet aligned with ecosystem services approach Will take time for ideas to work through the system, how can we ensure innovation is more widely adopted?
13	No comments

A Land Management Charter for Wales: theory into practice.

Workshop Notes:

1. What are the key challenges to keeping your pledges & how they can be met?

Table	Notes
1	EAW, CCW, FC, National Parks (& Glastir) need to work out their real objectives: what are we uniquely placed to deliver individually and collectively and how do we maximise associated benefits. Glastir needs our support
2	Leadership and knowing who is doing what – get on with it!!
3	Day job gets in the way for some, for others lack of funding streams Difficult for private individuals to contribute
4	Conflict in regulatory organisations e.g. EA should use carrots not just sticks How to switch to outcome approach so more flexibility? Communication can be a problem between organisations 'Myths', not based on evidence. Small can be good for Wales but can also put brakes on as 'clientism' is very active
5	Education: awareness of the need to take action Continued funding for research & awareness raising Clarity of policy from WAG & EU – need clear direction
6	Lack of clear co-ordinated lead from WAG & WLGA Funding Raising profile to increase the priority , make it practical Make information available & easy to understand
7	Who 'owns' the charter? Who puts it together? What is the process for it's creation? What are the ideas in it?
8	Partnership: lovely idea, difficult in practice, breaking the mould and risking innovation Deliver of services at farm level depends on financial support to a large degree Engage – demonstrations to show the way forward Planning Legislation changes in some instances Being clear on what we want from the countryside
9	No comments
10	Defining the management objectives. What use is required? Need to list possible objectives Defining by enquiry what is feasible and suitable Provision of easily accessible and up to date information Access to finding & continuation The future schedule for the Glastir scheme
11	Our position in our organisation Long term funding vs short term political situation

12	Cascading through other organisations and our own Financial sustainability More evidence
13	What incentives should be offered & who should pay for these? Insurers to conduct research to see if they can 'invest' or reduce premiums to those who take steps to avoid floods etc in the future How do you quantify impacts/activities upstream on locations down stream a few miles away? Size issues as well

2. What support is needed to take forward the ideas proposed in the Land Management Charter for Wales?

Table	Notes
1	Speak to WAG about the funding system – clear advice from farmers that without economic incentives it won't be done Look at EU funding & frameworks to ensure sufficient flex to enable progress
2	Need better information on incentives e.g. % reduction in water bills for having soak aways rather than runoff into sewers – this was not known by everyone Sell the message. Deal with the points we've made on previous pages
3	Leadership is needed. Who will/ should that be? Clear lines of responsibility supported by clear targets Need to take risks where there's limited evidence. Need to influence policy makers
4	We need to be open and honest with each other in Wales Do a cost/benefit analysis & DO the things that emerge – we cannot wait – flood and drought bring trouble for farming and forestry
5	0% loans to farmers. Farmer extension schemes Incentives to keep younger generation farming
6	Lead from WAG & WLGA Good information & communications
7	No comments
8	Support those who take the initiative & take risks with innovative ideas Consistency in policy, not 5 year cycles Flexibility in targeting funding
9	No comments
10	Clear govt' policy Sufficient funding Good e.g.'s of best practice Information to stakeholders & between stakeholders
11	Funding delivery mechanisms that will work on the ground to achieve action Long term planning and investment for the future Durability of policy i.e. if individuals invest in infrastructure will it still be fit for purpose if policy changes?
12	Support on technical issues Get more information out there, hold briefings, more evidence
13	Lack of awareness/education on critical issues – knowledge transfer Securing political clout to make a difference Realistic appraisal (on the ground) of impact of proposals

3. Any bright ideas?

Table	Notes
1	Public sector leads the way

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FULL REPORT**

2	Get on with it! Be a leader!
3	Need to put a value on the ecosystem services in question to inform the discussion Identify 'low hanging fruit' and go for it!
4	No comments
5	Free farm consulting Free soil testing Encourage agri-tourism/diversification
6	Education: include land management in national curriculum – offer more course to increase awareness Make events accessible to all – offer free training
7	No comments
8	All agencies together Exemplar projects like Pontbren
9	Coherent national policy with buy-in at local level Systems all in one place
10	No comments
11	Community pot of money for local innovative projects, not so prescriptive – more outcome focused but audited
12	Do an audit across land managers More cross sector collaboration & sharing of learning
13	Better joined up policies Targeted enhanced short term support for longer term gain

4. Any concerns?

Table	Notes
1	Must get private sector involvement, few farmers here today How do we reach the public & those not represented here today
2	What legs and teeth does the Charter have?
3	No comments
4	No comments
5	Funding support
6	No comments
7	No comments
8	Biodiversity being purely a luxury commodity Short disappearance of Tir Gofal/ Tir Cynal – loss of momentum, transition arrangements
9	Urgency – stop navel gazing Get farmers engaged
10	No comments
11	Most environmentalists do recognise that farmers need to make a profit, however, farmers are people too and will benefit from the aim for human well – being.
12	Funding, especially for soil science research
13	No comments