



Wales Biodiversity Partnership/Welsh Assembly Government Conference Proceedings 2010

Natural Environment Framework – 2010 and beyond: Leading by Example

The third Wales Biodiversity Partnership Conference in partnership with the Welsh Assembly Government took place at Bangor University on the 15th & 16th September 2010. Matthew Quinn, Director, Environment and Sustainability, Welsh Assembly Government, opened the conference and welcomed delegates.

Jane Davidson AM, Minister for Environment, Sustainability and Housing gave the opening speech with over one hundred delegates from a wide-ranging group of organisations in attendance, and launched the formal consultation of ‘A living Wales – a new framework for our environment, our countryside and our seas’

Day 1

Chair: Matthew Quinn, Welsh Assembly Government

Ministerial Address – Jane Davidson AM, Minister for Environment, Sustainability and Housing



Presentations

Natural Environment – the role of local government - WLGA Environment Spokesperson, Cllr Aled Roberts, Leader Wrexham County Borough Council

Cllr Roberts thanked the organisers for the invitation to address the conference and highlighted the length of time that environmental issues have been debated. He emphasised that this is not just a UK problem, but is in fact a pattern that can be seen across Europe and the rest of the world.

He emphasised the importance of getting the message across to the public – severe economic losses as a result of biodiversity loss, estimated as €50m (TEEB). He thanked the Minister for not hiding behind the reasons for failure to meet the target and re-emphasised the need to look beyond the traditional species and habitats approach, to a new approach where sustainable development is truly integrated.

The NEF approach would provide a stronger focus on ecosystems and land management/use and emphasised the importance of the language used when communicating with the public.

He stressed the importance of NGOs mobilising membership (including youth membership), and the advocacy potential of such numbers. The failure of biodiversity to engage the general public was noted, slow process, language often makes this un-graspable. Danger of complacency by decision makers. Small scale developments held up by survey work often undermines the process. What is the role of local government? Need a clear commitment to leadership role/ planning.

The Welsh Local Government Association (WLGA)/Welsh Assembly Government (WAG) pilot – role of scrutiny in holding local authorities to account over biodiversity duties (local scrutiny committee) can deliver real benefits to the NEF.

Meeting biodiversity objectives within the context of broader land use change – Prof. Mark Tewdwr-Jones, Foresight Project

Expectations on land to deliver food/recreation/housing etc, will affect how we meet climate change and greenhouse gas emission targets, amongst others.

Need to look at long term challenges – population levels, economic growth, transport, energy generation etc. Stressed that impact in UK is dependant on global influences.

Highlighted the disparity in perception vs. statistics – for example the majority of people believe that < 50% of land in the UK is developed, when the actual figure (in 2005) was closer to 10%.

Amount of land development for local authority housing has fallen dramatically in the last 30 years, leading to a shortfall in housing, which in turn has had an effect on availability of affordable housing. There are land use implications of delivering local authority housing developments, for example:

Knock on effect of development on other environmental issues i.e. run off, flooding etc

Brown field vs. Greenfield development

Impact of new patterns of commuting that old infrastructure is no longer able to cope with.

Competing policy commitments regarding development/ agricultural land/ green spaces etc.; Climate change and sea level rise/ flood risk. There are also wider implications of competing priorities of different government departments.

Need to explore ways to encourage land owners to change awareness - Incentivizing multi functional land use.

Need political plan of action, which will enable a balance to be struck between national, regional and local powers. A national framework which sets out decision criteria, valuation methods; decisions taken at lowest suitable level and greater direction from a central body charged to deliver a national land use strategy.

National Ecosystem Assessment - Dr Shaun Russell, Wales Environment Research Hub

Dr Russell provided delegates with background information on the UK National Ecosystem Assessment (NEA). The NEA is an assessment of scientific knowledge, ecosystem goods and services. It is a 2 year programme of work which will provide a high-level picture of current status and trends in ecosystems (habitats) and ecosystem services since the second World War and look to the future (2050) to evaluate change under plausible scenarios and consider a range of response options. It is expected to be published in February 2011.

Dr Russell directed delegates to the National Ecosystem Assessment (NEA) site <http://uknea.unep-wcmc.org/> and highlighted the access to the shared document area.

The NEA also flags up gaps for future research.

A summary of progress of the NEA was presented including valuation of ecosystems services/ review of benefits. Delegates were presented with a preliminary analysis of the importance of different habitats and change over the last 20 years within those habitats.

Role of biodiversity in assessment of services - there remains differing opinions amongst scientists regarding contribution of biodiversity to ecosystem services.

A significant cultural divide exists in our knowledge of biodiversity and associated ecosystem services. The challenge now is to address this divide. To do this we need a shift in emphasis towards a more functional understanding of biodiversity.

Delegates were provided with an overview of valuing biodiversity, using the example of urban green space. Urban greenspaces provide key services such as recreation, aesthetics, physical and mental health, neighbourhood development, noise regulation and air pollution reduction. Changes in the provision of urban greenspace can create or destroy billions of pounds worth of benefits to local residents.

Panel Discussion with Jane Davidson - Minister for Environment, Sustainability and Housing, Welsh Assembly Government & invited speakers

The panel invited questions from delegates relating to the mornings discussions.

Using Our Green and Blue Infrastructure – Russell Elliott, Countryside Council for Wales

An analysis of current pressures on the environment and impacts on status/trends/biodiversity loss was highlighted and. The importance of mapping out interactions was emphasised.

A wider holistic approach is required which future proofs work programs and explores synergies between ecosystem services – example of mapping tools (NEF) / analysis of functions of habitats i.e. woodland supplies to assist with local regeneration - feed into development of renewables (locations etc)

Role of habitats in ecosystem services i.e. saltmarsh in regulating flooding etc. further information is available from the following web link:

<http://www.ccw.gov.uk/landscape--wildlife/managing-land-and-sea/sustaining-ecosystem-services.aspx>

Biodiversity and human health – bridging the gaps in policy and practice - Conor Kretsch, COHAB Initiative

The talk was aimed at bridging gaps in awareness/ research / policy regarding health and biodiversity

Addressing health and biodiversity in the context of the Natural Environment Framework (NEF). Opening dialogue between sectors

Context – what do we mean by health? Physical, mental and social health, livelihood security and overall quality of life.

Provided an overview of the biodiversity and health policy drivers, identifying cross cutting policy drivers such as;

- International Convention on the Rights of the Child
- International Convention on Persistent Organic Pollutants
- Universal Declaration of Human Rights
- UN Declaration on the Rights of Indigenous Peoples
- Guiding Principles on Internal Displacement
- Non-Legally Binding Agreement on All Types of Forests

Millennium ecosystem assessment showed a marked decline in biodiversity as a result of human activity.

Health is a core element of sustainable development – human populations can only exist where they are supported by a healthy environment. Industrialised countries bear burden of responsibility for degradation and consumption, whereas developing countries increasingly bearing responsibility for meeting demand expectations

Relationship of biodiversity, not just to food production but also to nutritional values and associated health impacts was highlighted.

Link between human health and natural disasters/ ecosystem services which mitigate these. Climate change mitigation and adaptation

Biodiversity must be seen as a fundamental part of the health system.

Ecosystems - an economic fundamental – Laurence Rose, Director (Acting), RSPB Cymru

Attributing economic values to species and habitats, whether it be individuals that make a contribution to the local economy, such as the Glaslyn ospreys or colonies, or species as a whole (example of honey bees and pollination)

Placing value on resources at an ecosystem level. The Millennium Ecosystem Assessment (MEA) identifies potential conflict between ecosystem and species approach – which demonstrates the need for both. Multi-functional ecosystems therefore, have multiple values attached.

Estimating economic loss of ecosystem services:

There are limits to measuring economic impact due to a number of factors;

- Difficulties in measuring the baseline
- Difficulty in characterising with competing impacts (counterfactual)
- Difficulty in predicting future trends (natural, political, market)
- Local variation
- System complexity

TEEB estimates the ratio of costs to benefits of conserving ecosystems ranges from 1:10 to 1:100

Important to incentivise/reward those providing the benefits, reform perverse subsidies, invest in ecological infrastructure etc.

Example of Lake Vyrnwy and the ecosystem services it provides such as, water catchment (quality, quantity), carbon stewardship, flood regulation, biodiversity, recreation, tourism etc.

3 part ecosystem led framework;

- best practice ecosystem services management / multiple socio-economic benefits
- quality standards in wider environment
- addressing species/features which fall between cracks

Day 2

Chair: Morgan Parry, Chair, Countryside Council for Wales. Morgan welcomed the political commitment to a new way of thinking. He urged delegates to ‘Think Big about what Wales is about to do’. Day 2 would focus on the International experience, the European Framework and consider the Individuality of Wales.

Presentations

Marine Conservation Zones in Wales – Gill Bell, Marine Conservation Society Officer /Wales Environment Link

The presentation outlined the need for Marine Reserves around Wales. The Marine Conservation Society (MCS)’s vision is for ‘Seas fit for life’ – diverse, clean and productive seas for wildlife and future generations. This vision is supported by Wales Environment Link. The route is through the creation of a series of Marine Reserves free from disturbance.

The protection afforded currently to Wales’ only Marine Nature Reserve ‘Skomer’, does not include a ban on fishing or other disturbance. As a result, the island’s lobster population has been increasingly depleted by fishing. This has led to a large increase in urchins, usually preyed on by lobster. Subsequently the urchins graze the kelp beds relatively unchecked, adversely affecting the beds and their associated species. Such unsustainable fishing practices need addressing in any future Marine Plans. There remain large gaps in our knowledge and understanding of marine ecosystems and associated biodiversity and it is essential therefore that we apply the Precautionary Principle in our decision-making process. For example, we have inadequate data on the true losses incurred through fishing practices since fish landing data does not represent the total catch as bycatch is not factored in. It is stipulated that 30% of UK Waters should be ‘no take reserves’; there are none in Wales. The expansion of these reserves will allow fish stocks to recover from over fishing. The practice of ‘fishing the line’ of ‘no take’ is common; where fish populations in Marine Protected Areas recover and result in overspill over the line of ‘no take’.

The creation of Marine Conservation Zones will provide natural undisturbed areas for marine life to recover and thrive. All extractive and depositional activity will be excluded, as will other activities considered to be damaging or disturbing. This move, introduced in the Marine & Coastal Access Act 2009, after 10 years of campaigning, is hugely welcomed and ties in with the message of the NEF. There is now recognition that ecosystems must be in a healthy state before we can use the services they provide. WAG approach is top-down; stakeholders will be asked to comment on a proposed list of Highly

Protected Marine Conservation Zones (HPMCZ). The entire Biodiversity community is requested to engage in the process of stakeholder consultation, and to share their specialized knowledge. The “Your Seas Your Voice” campaign led by MCS also welcomes all to comment on the future of our seas which is likely to feed into the WAG consultation.

Coastal East Africa - Fisheries for the Future

Glyn Davies, WWF Director of Conservation/Chair of East Africa Marine Project

The presentation focused on the threats-based conservation approach adopted by the Eastern African Marine Ecoregion, the largest fringing reef in the world; running down the East flank of Africa, from Somalia to South Africa.

The people living within, and living off, the Ecoregion are fundamental to its success, both controlling and addressing the main drivers affecting the biodiversity of the Ecoregion. Issues facing the region include pollution, large finds of gas in Uganda and oil prospecting, with governments ill-prepared; mangrove harvesting for charcoal export and destruction for infrastructure development; tuna fishing; the unsustainable capture, harvesting, and trade of threatened and endangered species and climate change. All required substantial reform of industry if biodiversity is to survive. In addition to home drivers for change, both China and USA are massive investors in the region and have an interest in sea management to protect their interests e.g. fisheries. An Ecoregion approach was required to bring about necessary changes in practice, behaviour and attitudes to protect biodiversity and ecosystem goods and services into the future. The Nairobi Convention in 1996 provided a legally binding protocol.

Marine Protected Areas need local support if they are to succeed. WWF can offer loans and microfinance. Training and pilot projects were introduced inspiring change in behaviour and practice. In Tanzania Mafia Island introduced a landing point to maintain catch quotas. There was recognition that the Tuna Commission was not working to protect tuna stocks; this resulted in the introduction of sustainability plans and associated practices. Using market instruments to drive sustainable outcomes, exporters used their buying power to insist on suppliers following sustainability plans. The Navy worked with local community involvement to stop dynamite fishing. A small-scale local project encouraged participation in the release of young turtles to the sea, inspiring interest in the species conservation and raising valuable financial support. Communities were taught how to farm milkfish and fatten crab. Work continues, including assessing the vulnerability of mangrove & coral reef habitats to climate change and devising appropriate management adaptations.

Lessons learnt:

- different scale approaches are needed in the ecosystem approach
- a range of tools and levers are required to affect change
- a range of partners including the corporate sector need to be engaged and inspired.

Chair's welcome and introduction to Commissioner Potočnik, European Commissioner for the Environment followed by Keynote speech by Commissioner Potočnik

Keynote speech by Commissioner Potočnik



We are continuing to experience an enormous acceleration of development begun in the 20th century. We are more interdependent on each other than ever before. All seek a quest for a better life. A shortage and decline in Biodiversity have resulted. The restructuring necessary in these times of financial constraints provides opportunities for us to stop, re-consider our position and change. We must acknowledge that sustainable use of our resources is absolutely necessary. Our responsibility is global.

Wales's failure to meet the 2010 Biodiversity target is replicated throughout Europe. The unique and natural is being lost; this in turn may have provided goods and services to mankind. Our ecosystems are fundamentally unstable. Our response has to be to learn, and respond appropriately. We are creating a new vision for 2020 and 2050. We need to build on and consolidate the positive processes and projects we have in place.

The Natura 2K network provides a huge investment for the future, in terms of land cover and use. Our knowledge base is better than ever before, and should result in better responses by government. We need to include the economic value of our ecosystem goods and services within a Global Strategic Plan and target. We have a unique opportunity to integrate Biodiversity into Environmental Policy. Our resource strategy needs to consider how we can reduce our impact, while producing more, so as to ensure fair distribution of our resources. There are new opportunities to learn, prioritise and use new innovative tools to develop a greener economy. 'Think Global Act Local' – if we look after the local we will look after the global.

An internet consultation is in progress on the EU consultation page 'Your Voice in Europe' - "[Protecting our natural capital: an EU strategy to conserve biodiversity and ensure the provision of ecosystem services by 2020](#)" Your contribution is valuable – please respond.

The Welsh flag proudly displays the Welsh dragon, a mythical creature worthy of protection into the future; let us ensure we provide the same proud protection to our live creatures and systems.

Panel Discussion with Commissioner Potočnik, European Commissioner for the Environment and Jane Davidson – Minister for Environment, Sustainability and Housing, Welsh Assembly Government

Roger Thomas, CE, Countryside Council for Wales to Commissioner Potočnik:

Q: What hopes and aspirations do you have with regard to the detail of the NaGoya agreement?

A: **Comm Potočnik:** To move forward in the context of protecting Biodiversity and inter-governmentalism on a global scale. There are many open questions on the table. We need to determine our goals and strategies, our financial means and also access and benefit sharing of genetic resources. It is true that more financing for biodiversity is required and the Commissioner agreed he needed to be involved in these discussions especially regarding developing countries. We are in difficult times and developing countries will continue to require support from developed countries. The issue of illegal logging is extremely important as logging creates revenue for developing countries. We need to address this together. Access and benefits sharing- how do we share our genetic and global resources? We need to forge links with other initiatives like climate change? Europe is a lead partner and is globally one of the most active.

Ann Meikle, WWF Wales

Q: Resource efficiency – incentives for way forward?

A: **Comm Potočnik:** Biodiversity and the business of resource efficiency is overshadowed by the Climate Change Agenda. In the 70's we invested 40 times as much as we are investing now in energy research. We have a raw material shortage in Europe. We need to move with energy efficiency in Europe-we have no choice. In 6 months we will be publishing our 'Resource Efficiency Roadmap'.

A: Jane Davidson: There is a big agenda around sustainability and this accords with the way we move forward in Wales in public and in every organisation where we have levers to force change. The Wales Waste Strategy is based around resource efficiency. Changing language leads to a resource efficiency agenda. The current suite of sustainable development indicators are useful tools but if you visit a school what grabs the pupils is the fact we are using resources as if we had 3 planets.

Blaise Bullimore, Carmarthen Bay & Estuaries EMS Officer, Marine Ecosystem Group Chair

Q: We welcome Natura 2K sites as a cornerstone – long term and proactive. Investment is dropping. Planning is increasingly short term & re-active. Who should be making the investment at moment and promoting long-term action?

A: Comm Potočnik: Financial crisis will not last forever. Recovery is coming. Figures for carbon reduction are actually a driver for innovation.

A: Jane Davidson: It is difficult to find money for new investment. Need to use public money as leverage to bring in the private sector. Business is starting to look more long term. Don't waste a good crisis. Re-look at where you are. E.g. If the Wales Waste Strategy was rolled out across the UK it would create 1000s of jobs.

John Taylor, NEF

Q: Optimism – providing opportunities for change. With the reform of CAP & cohesion funds in mind – how can we argue for continuation of this?

A: Comm Potočnik: We have to manage land and so need to do this through farmers. Part of what they do is for public good and so there needs to be better compensation for this. Shift actions from 2nd pillar into 1st pillar to make compulsory and then shift to biodiversity benefits i.e. use the 1st pillar logic and don't give the optional approach. Stronger 2nd pillar required. Integrating environment better within structural funds is part of the discussions. Use these messages in Wales – we need to be discussing this with other Ministers.

Tracey Lovering, Support Officer for Wales Biodiversity Partnership and Monitoring Ecologist for Countryside Council for Wales

Q: We're encouraged to look long-term, to be responsible, to be pro-active, to lead by example. Why isn't Europe/Wales requiring (or providing incentives) to industry and commerce to adopt 'a cradle to grave approach' in all areas of business? Dealing with the consequences of damaging waste and pollution is expensive both to industry and governments.

A: Comm Potočnik: We have been looking into this. It's slow progress and we're battling with all the other agendas brought to the table. Thank you for contributing your ideas. We welcome all to contribute to our internet consultation– 'My Voice in Europe'.

A: Jane Davidson: We're actually looking more into 'Cradle to Cradle' approach within the context of sustainability. We haven't persuaded other parts of the Assembly to do this yet, however they are engaged with the Natural Environment Framework and discussions around economic / health value of this approach are helpful.

Geraint Davies, Environment Agency Wales Mapping Invasive Species in the Valleys Regional Park

Japanese knotweed, Himalayan balsam & Giant Hogweed cause serious damage to natural ecosystems. Economic scale: - control costs estimated at £1.5 billion at a UK £150 million in the UK alone. Remote sensing coupled with ground-truthing extremely useful in mapping out areas of invasive weeds in the project area.

Technique limitations: Remote sensing techniques are unable to pick up all areas of Japanese Knotweed, particularly in the shadow of trees. Young willows and bramble occasionally picked up as target Japanese Knotweed.

Conclusion: Overall useful tool. CASI provides more accuracy since it draws from a wider spectrum. The data has provided a base-line against which eradication success can be judged.

Prof. Gareth Wyn Jones (LUCC Project) Biodiversity in a Changing Land Use Climate

WAG holds copies of report of LUCC project. Remit: Advise on new actions to deliver 3% target cut in GHGs and help Welsh agriculture be 'carbon neutral' by 2020. Emissions from Agriculture and the food chains in Wales collated in 2007 show N₂O at 2.83 Mt CO₂ e (from microbial action in soils and manures, inorganic N application, manure and leaching); CH₄ at 2.72 Mt CO₂ e (from enteric ruminant activity & manure); CO₂ at 0.48 Mt CO₂ e (from farm emissions & 2.5-3 Mt CO₂ e from food chain, fertilizer production and other inputs).

5 Scenarios proposed. Sc 2 relies on changes to be driven by market forces; considered possible but likely to be slow progress. Sc 4 based on organic farming systems requires good data on the 4 gases emitted. Project on Lleyn Peninsula is mimicking New Zealand clover-based system of dairying. This is a low intensity system but requires gas data again.

Welsh diet and Welsh food production are not the same. Question thrown up re. whether we micro-manage our habitats and eco-systems as they change in response to climate change - which could be costly.

Summary: The preferred scenario by 2040, if fully implemented is to:

- Reduce net emissions of agriculture and land use from 5,200 kt CO₂e to around 2,000 kt CO₂e and,
- Produce about >3 TWh of renewable heat and >3 TWh of renewable electricity. This would save further 1,500-2,000 kt CO₂e emissions annually.

Questions re. mitigation/adaptation:

1. Which processes will drive Welsh biodiversity?
 - a) changes due to mitigation of Land Use GHG emissions
 - b) changes arising from climate change
2. Should priority be given to GHG emission reductions?

3. What price conservation of defined 'interests'?
 - a) allowing evolution to occur
4. What price local production?
added N; extra N20; extra CO2

Marcus Yeo, Managing Director, Joint Nature Conservation, Committee Conserving biodiversity beyond 2010: the UK and international context for the Natural Environment Framework (presentation prepared with Helen Baker JNCC)

The developing international framework: CBD, Nagoya 2010. Post 2010 targets. Global challenge to meet 5 goals:

1. mainstreaming biodiversity across society
2. reduce direct pressures
3. improve the status of biodiversity
4. enhance benefits to all from biodiversity and ecosystem services
5. implementation through participation

An EU Vision and Strategy: Ecosystems, species, and genes; the World's natural capital; integral to sustainable development by providing vital goods and services; economic prosperity, social well-being and quality of life

Integrated solutions. Evidence + interpretation = good policy and action. Need to look at how we can share data effectively, be more efficient. Integrate more with economists and other disciplines to meet joint needs across sectors. Data collected at UK level needs to be suitable for sub-dividing. Can we scale our work up or down? Need to consider our language.

Re-wiring networks. Considering how we can, and where we need to re-configure our networks, reaching beyond the biodiversity community. Where can we gain influence in and value from supra-national networks.

UK BAP. *A Living Wales* the new framework. Valuing our ecosystems. Let go of the things that are no longer necessary in a devolved UK and continue and build on what does work well.

Chair's closing remarks

Thanks to all who have contributed to and supported a very successful 2010 WBP/WAG conference.