

Agenda – Climate Change, Environment, and Infrastructure Committee

Meeting Venue:

Hybrid: Committee room 4 Tŷ Hywel
and video Conference via Zoom

Meeting date: 8 June 2023

Meeting time: 09.30

For further information contact:

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Private pre-meeting (09.15–09.30)

Public meeting (09.30–12.15)

1 Introductions, apologies, substitutions, and declarations of interest

(09.30)

2 Biodiversity and the nature emergency – evidence session 1

(09.30–10.45)

(Pages 1 – 50)

Dr Jonathan Davies, Senior Ecologist, Nature Recovery, Bannau Brycheiniog – representing the Three National Park Authorities in Wales

Annie Smith, Head of Nature Policy and Casework, RSPB Cymru – representing Wales Environment Link

Chloe Wenman, Policy and Advocacy Manager (Wales), Marine Conservation Society – representing Wales Environment Link

Attached Documents:

Research brief – Biodiversity

Paper – Dr Jonathan Davies, the Three National Park Authorities in Wales

Paper – Pathways to 2030, Wales Environment Link

Paper – Nature Positive Bill, Wales Environment Link



Break (10.45–11.00)

3 Biodiversity and the nature emergency – evidence session 2

(11.00–12.15)

(Pages 51 – 61)

Dr Katie Medcalf, Environment Director – Environment Systems

Dr Tim Pagella, Lecturer in Forestry – Bangor University

Dr Richard Unsworth, Associate Professor, Biosciences – Swansea University

Attached Documents:

Paper – Dr Katie Medcalf, Environment Systems

Paper – Dr Tim Pagella, Bangor University

4 Papers to note

(12.15)

4.1 The Environmental Protection (Single-use Plastic Products) (Wales) Bill

(Pages 62 – 63)

Attached Documents:

Letter from the Chair to the Minister for Climate Change in relation to the Environmental Protection (Single-use Plastic Products) (Wales) Bill

4.2 Plenary debate on the Committee’s annual report on the National Infrastructure Commission for Wales—2022–23

(Page 64)

Attached Documents:

Letter from the Association of British Insurers to the Chair regarding the Plenary debate on the Committee’s annual report on the National Infrastructure Commission for Wales—2022–23

4.3 Climate Cymru priorities

(Pages 65 – 70)

Attached Documents:

Letter from Climate Cymru to the Chair in relation to priority work areas for the Committee's consideration

4.4 Ffos-y-Fran opencast coal mine

(Pages 71 – 72)

Attached Documents:

Letter from the Coal Action Network to the Chair regarding Ffos-y-Fran opencast coal mine

4.5 Net Zero, Energy and Climate Change Inter-Ministerial Group

(Page 73)

Attached Documents:

Letter from the Minister for Climate Change to the Chair in relation to the Net Zero, Energy and Climate Change Inter-Ministerial Group meeting

5 Motion under Standing Order 17.42 (vi) and (ix) to resolve to exclude the public from the remainder of today's meeting (12.15)

Private meeting (12.15–13.00)

6 Biodiversity and the nature emergency – consideration of evidence received under items 2 and 3

7 Consideration of the Committee's draft report on the Supplementary Legislative Consent Memorandum for the Levelling-up and Regeneration Bill

(Pages 74 – 77)

Attached Documents:

Draft report

**8 The Environment (Air Quality and Soundscapes) (Wales) Bill –
technical briefing from Welsh Government officials**

Document is Restricted

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Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith | Climate Change, Environment, and Infrastructure Committee

Biodiversity and the nature emergency | Bioamrywiaeth a'r argyfwng natur

Ymateb gan Dr Jonathan Davies, Bannau Brycheiniog– ar ran y Tri Awdurdod Parc Cenedlaethol yng Nghymru | Evidence from Dr Jonathan Davies, Bannau Brycheiniog- on behalf of the Three National Park Authorities in Wales'

Enhancing the role of designated Landscapes in implementing the COP15 biodiversity agreement in Wales

Prepared by Jonathan Davies, Bannau Brycheiniog, based on consultation between the 3 NPs.

26/05/2023

The Kunming-Montreal Global Biodiversity Framework (GBF), adopted in December 2022 at the Convention on Biological Diversity's COP15, includes 23 targets designed to address the global biodiversity crisis. The decision includes targets for effective conservation and management of at least 30% of the world's lands, inland waters, coastal areas and oceans, with emphasis on areas of particular importance for biodiversity and ecosystem functioning and services. The GBF prioritizes ecologically-representative, well-connected and equitably-governed systems of protected areas and other effective area-based conservation, recognizing indigenous and traditional territories and practices. The GBF targets restoration (completed or underway) on at least 30% of degraded terrestrial, inland waters, and coastal and marine ecosystems, reducing to near zero the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, cutting global food waste and reducing by half both excess nutrients and the overall risk posed by pesticides and highly hazardous chemicals.

Designated Landscapes (DLs) can play a significant role in delivery of these targets in Wales. The DLs can demonstrate an existing contribution to some of the Targets, but with appropriate support that contribution can be significantly increased. The recommendations in this paper align with the recommendations from the Welsh Government Biodiversity Deep Dive group of experts, which identified key themes and recommendations for specific actions. Those recommendations included: transforming our protected sites series so that it is better, bigger, and more effectively connected; creating a framework to recognise Nature Recovery Exemplar Areas and Other Effective Area-based Conservation Measures (OECMs) that deliver biodiversity outcomes; unlocking the potential of DLs to deliver more for nature; continuing to reform land and marine management and planning (including spatial) to deliver more for both protected sites and wider land / seascapes; building a strong foundation for future delivery through capacity building, behaviour change, awareness raising and skills development; unlocking private investment to deliver for nature at far greater scale and pace; and developing and adapting monitoring and evidence frameworks to measure progress towards the 30 by 30 target and guide prioritisation of action.

Ear mark funds for leveraging nature recovery in DLs, including SFS and other delivery mechanisms.

Farming, including grazing, uses the largest share of land in most DLs and for the DLs to add value in addressing the biodiversity crisis, the contribution of farming and grazing to nature recovery within those landscapes must be above the national average. This requires higher adoption of biodiversity-friendly measures under the Sustainable Farming Scheme than outside the DLs. Welsh Government should consider options for giving farms inside DLs improved access to the Sustainable Farming Scheme, for example by boosting their score for being within a DL.

DLs are ideally situated to identify the highest value options under the SFS for nature recovery and to promote adoption by farmers, through individual and collaborative actions. Welsh Government can learn from the experience of Defra in implementing “Farming in Protected Landscapes” in England and develop a comparable instrument to be made available in advance of the launch of the SFS. The purpose of such an instrument should be two-fold: promoting participation in the SFS and delivering a higher level of nature recovery outcomes on farms that exceeds the ambition of the SFS.

The SFS dwarfs the amount of funding that a Designated Landscape can use: SLSP, NRW’s Strategic Allocation Fund, and the Nature Network Fund are not of the same order of magnitude as an agri-environment scheme. DLs use precious resources in sourcing and administering new forms of grant funding or developing schemes in response to WG-funded and NRW-funded schemes. Public money would be saved by allocating this funding directly to the DLs, who have demonstrated their delivery capacity and expertise. DLs would also benefit from quicker outlining of SMS priorities & options and values.

Identify long term funding mechanisms for projects to be implemented beyond typical 2-3yr windows, including mechanisms for at least 10-year funding for some NR issues.

Nature recovery projects depend on the actions and goodwill of landowners and managers, requiring a painstaking process of collaboration, negotiation and mediation. These processes can be played by DLs, but they require stable funding in the long term to build and sustain teams fit for purpose. DL staff may lack the skills and experience and would benefit from traineeships or sponsored education to develop capacities. DLs can play a lead role in building relationships, convening partnerships, fostering collaboration, and enabling actors to implement large scale nature recovery. These roles require dedicated nature recovery units with adequate resources to catalyse action throughout DLs on a meaningful spatial scale.

Strengthen capacity of DLs for attracting private investment for large scale nature recovery

Substantial private investment is needed to achieve biodiversity goals and DLs have limited capacity to engage private investors in partnerships for long term impact. Welsh Government should provide DLs with additional capacity and access to technical expertise for private sector engagement and innovation in support of nature recovery. DLs are an ideal location to develop innovative private sector partnerships that aggregate investments into the multiple ecosystem services generated by nature recovery, and that aggregate the supply of those ecosystem services through collaborative action in target landscapes. DLs can also lead the way in developing results-based approaches that promote biodiversity restoration on farms.

Strengthen capacity in DLs for nature recovery planning and implementation.

WG should strengthen human resources and staff capacities to use tools for nature recovery planning, such as the CURVE maps, Resilient Ecological Networks, Landscape Character and Condition Assessment and others. Strategic planning of nature recovery should be made integral to the development of Nature Recovery Exemplar Areas and Other Effective Area-Based Conservation Measures. The use of strategic planning as a tool for mobilising and collaboration with other actors in DLs, including farmers and other agriculture actors, should be strengthened. Improved use of nature recovery planning will complement existing Nature Recovery Action Plans, strengthen collaboration, and will help prioritise scarce resources.

Reduce the bureaucratic process around consenting and funding for nature positive works in, and for active management of, designated sites.

DLs have a core mandate for Nature Recovery and should be given greater freedom and responsibility for implementing appropriate works on designated sites, including marine designated sites. DLs should be adequately resourced to actively manage designated sites in the character for which they were designated. Simplified mechanisms are needed to allow implementation of management actions for which sites were originally designated, such as fast-tracked license application, reduced fees, or waived consents. This could go beyond designated sites to promote the "joined up, and "bigger and better" thinking. It could also include positive actions beyond what a site was designated for (e.g. natural flood management actions).

We are hopeful that the Interim Environmental Protection Assessor's review of designated sites will recommend that Natural Resources Wales establishes long-term consents and assents with 'safe pair of hands organisations' such as DL authorities, freeing up NRW to focus instead on more intractable problems and owner-occupiers. We would hope to develop long-term concordats with organisations such as NRW, National Trust, Dwr Cymru Welsh Water and other relevant NGOs too.

Simplify funding operations within NRW to facilitate their staff to be able to contract works OR to allow trusted partners to deliver on their behalf.

As mentioned above, DLs and NRW have a shared mandate for Nature Recovery, and DLs should be a partner of choice for NRW to enhance delivery of nature recovery.

Monitor progress towards nature recovery in DLs, for example connecting with established initiatives.

Welsh Government and NRW have generated significant environmental data at the national level but monitoring systems do not currently match the needs of the DLs. Furthermore, condition assessments of designated sites are out of date, creating a barrier to achieving favourable conservation status as a contribution towards 30by30. Earth observation data from Living Wales, combined with surveys carried out under Erammp can provide important information about the state and trends of DLs. It is recommended to use these established data sets, and others, to evaluate environmental trends in nature recovery in the DLs, but data must be accessible to DL's in a timely manner. It is further recommended to address gaps in sampling that undermine analysis in the DLs. Established survey points in DLs could provide insights into trends in habitat condition, species populations, and ecosystem functions and services and will be useful to tracking progress up to 2030. Addition of a limited number of new survey points in DLs can strengthen this analysis and give greater confidence in the performance of the DLs in achieving Nature recovery targets. Welsh Government can enable this by mandating the DLs and other Public Bodies to work on environmental monitoring across the environment and agriculture sectors.

Welsh Government should also support skills development of DLs for survey and monitoring. DLs have access to a growing array of useful datasets, for example the Environmental Change Network sites, county and highways weather stations, river gauging stations, and other 'big data' sources and should be enabled to capture, analyse and transfer the knowledge from these data to understand the changing trends in the DL in response to climate change and nature decline. Further support is recommended for training, mentoring and emergence of future generations of county wildlife recorders and naturalists who form the backbone of nature conservation in Wales and the UK.

Identify and tackle national-level and local-level policy clashes in both terrestrial and marine environments.

At times policies clash and give conflicting direction. Examples include conflicts between local authority grass mowing policies and nature recovery / climate change policies, Important Curlew Area boundaries overlapping with National Development Framework maps for wind farm development, monitoring of bat fatalities at existing wind turbines to better inform wind energy development decisions, forestry removal off

deep peat, and policies against simple grazing infrastructure despite peat/biodiversity and carbon targets. These clashes also exist in planning, risk management authority policy and highways management. At present those clashes must be negotiated on a case by case and authority by authority basis. Conducting this work nationally would free up resources and help drive rapid and widespread action for nature. Welsh Government should conduct a national policy review to identify clashes and to provide direction on the hierarchy of policies at both national and local level.

Welsh Government is also recommended to review the effectiveness of implementation of key legislation for biodiversity conservation, such as the Town & Country Planning Act (1990), and Environmental Impact Assessment (Agriculture) (Wales) Regs.

Improve cost benefit analysis and evaluate investment pathways related to sustainable land and water management (e.g. flood and drought remediation).

Many of the highest value actions for Nature Recovery generate multiple outcomes, including biodiversity conservation, improved water quality, climate change mitigation, and climate change adaptation, including flood and drought mitigation. Nature recovery generates health and well-being benefits with significant economic benefit (reducing long term health conditions, improved mental health and well-being, and reduction in pressure on healthcare services resources / budgets etc). Improved valuation of these benefits in relation to their cost will provide valuable evidence that can be used to mobilize private investment. With increased public support, including co-convening of investment partnerships, DLs can help to increasing the flow of finance for nature recovery and ecosystem rehabilitation. This is consistent with the concept of Nature based Solutions promoted by the UK government at COP26.

Streamline NRW procurement and licensing processes for working with Land Agents

Simplifying these processes would allow DLs, as the Local Authority, to work more efficiently on their own land. This will allow resources to be utilised more effectively and efficiently on ecosystem and biodiversity restoration at scale.

Pathways to 2030: 10 key areas for investment in nature's recovery across Wales

Addressing the nature emergency - the importance of finance

Wales faces a nature emergency. Degradation of ecosystems has caused the decline of many species, impacted negatively on our economy and wellbeing, and depleted the services which nature provides and on which we all depend. Failure to act urgently could cause irreversible damage to habitats and species, while hampering our response to the challenges of mitigating and adapting to climate change.

Recognising that we are entering the sixth global mass extinction event, and that human safety and wellbeing is threatened by the loss of ecosystem services such as pollination and flood prevention, the Senedd declared a nature emergency in 2021. Noting that Wales is falling behind other UK countries and is failing to meet its international biodiversity commitments, the Senedd called for legally binding nature recovery targets and new domestic environmental governance provisions.

Urgent action for nature recovery is essential to strengthen the natural capital on which people and the economy depend, to address the climate emergency and to deliver international commitments as part of the post 2020 agenda under the Convention on Biological Diversity. The Kunming-Montreal Global Biodiversity Framework, agreed in the 15th Conference of the Parties (COP15) in December 2022, includes a new mission for the period up to 2030 "to take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet". The need for urgent collective action was recognised through the Welsh Government's Biodiversity Deep Dive, undertaken in the run up to COP15, focusing on one of the central targets - a commitment to protect and effectively manage at least 30% of our land, freshwater and sea for nature by 2030.

Delivering the actions required for nature's recovery requires an increase in public investment in nature. We need to invest more in managing land to maintain and restore habitats, in research and monitoring actions to develop our evidence base, in communications and education to enhance the awareness of stakeholders and the public, in human resources to develop and implement nature policies and programmes, in stronger governance, and in regulatory enforcement.

The failure to halt nature's decline in recent decades is partly a result of insufficient funding for the necessary actions. A recent study for the Green Finance Institute estimated that there is a gap of between £5 billion and £7 billion between the resources currently dedicated to nature recovery actions in Wales and those needed to meet priority outcomes for nature.

Part of the nature financing gap should be met by private investment in natural resources, reflecting businesses' dependencies on nature and responsibilities to support its recovery. This depends on government action to support and regulate the development of nature markets, and to co-invest alongside businesses. Alongside private finance, there is a need for increased public expenditure to help to close the nature finance gap. Many of the benefits of nature are public goods, benefiting the entire population and economy of Wales, and will not be delivered by private finance alone. Public investment in nature will enhance Wales's national infrastructure and deliver multiple benefits, supporting economic development and physical and mental wellbeing, and reducing the costs of public services such as healthcare and flood management.

This report sets out priority actions for nature recovery to 2030 (**Table 1**) and the public investment required to deliver them. These actions are arranged under 10 themes, ranging from public access to nature to peatland conservation and species protection. Under each theme, we identify priority actions to **STOP** activities that are damaging nature, **REDUCE** adverse effects, and **START** to deliver positive actions for nature recovery. In each area we define the actions needed and the financial resources required to deliver them, both in overall terms and the additional resources needed above existing public expenditures and taking account of overlaps between actions.

Tables 2 and 3 present an overall summary of financial needs across the 10 action areas. The total (gross) costs of the actions are summarised in **Table 2**, while the net additional costs of actions (on top of existing expenditures and taking account of overlaps between actions) are summarised in **Table 3**.

The additional annual expenditures needed to deliver the costed package of actions for nature recovery are estimated to amount to £158 million annually, assuming that the majority of the annual agriculture and rural development budget also focuses on actions that contribute to nature recovery.

The costings provided are indicative, and some could be refined as further evidence becomes available, but we believe they provide a reasonable assessment of the scale of financial investment required now to begin to respond to the nature crisis. The list of actions defined, and the financial resources needed to deliver them are not exhaustive, and more will be needed if nature recovery is to be achieved. However, we hope that this document helps to inform debate about priorities and financial resource needs, and how we secure the funding required to meet national needs and international biodiversity commitments.

Table 1: Nature finance actions and costs

1. Access and public participation		
STOP	REDUCE	START
Reverse the erosion of accessible wildlife rich spaces, especially in urban areas.	Barriers to co-operative environmental action.	Delivering access to environmental justice for the people of Wales.

Wildlife Rich Green Spaces

Priorities in this area are to:

1. Introduce new Green Space Standards and champion high quality, accessible and nature rich green spaces across Wales;
2. Invest in provision of high quality and accessible green spaces, especially for the most deprived communities in Wales;
3. Increase tree cover to 20% of Wales's urban area.

A new impetus is required to champion green spaces across Wales, develop new Green Space Standards, and work with local authorities and communities to enhance provision, management and access. This could be achieved by establishing a network of green space champions across Wales, to develop a new Green Spaces Programme and Standard and to co-ordinate its implementation at local level. A national green space champion and co-ordinating team would develop guidance and standards for green space and accessibility, and undertake policy advocacy, advisory and communications at national level. 30 local champions (1 per 100,000 population) would champion green spaces locally, working with local authorities, infrastructure managers, local businesses and organisations to enhance access, improve quality of green space, raise awareness of the benefits of access to nature and support designation of Local Nature Reserves. The overall cost would amount to £2.2 million per year, including staff costs of £1.98 million (33 staff + overheads) and an annual communications budget of £200,000.



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A substantial programme of investment in the provision of new, high quality and accessible green spaces across Wales is needed, focusing especially on the most deprived urban areas. [A 2020 report by Vivid Economics for the National Trust](#) estimated that a **£5.5bn capital investment** in upgrading and creating urban green spaces across Great Britain would deliver £200bn in physical health and wellbeing benefits to the most disadvantaged communities, as well as benefits for active travel, biodiversity, carbon capture and air quality. The report used a GIS mapping approach to identify areas of under-provision of green space and mapped these against deprivation to prioritise investment needs. The report estimated the need for £5.45bn capital spend and £275m annual operating spend. The report did not provide separate estimates for Wales, but included Cardiff, Newport and Swansea in the analysis. If the investment needs for Wales were proportionate to population, this would suggest a need for capital investment of £278 million and annual operating expenditure of £14 million, at an average annual cost of £39.3 million over 2023-30.

[Wales's mean urban canopy cover was estimated at 16.3% in 2013](#), with 14,097 hectares of a total urban area of 86,331 hectares covered by trees. Achieving an overall target of 20% of urban tree cover by 2030 would provide benefits for human health and wellbeing and enhance ecosystem services in urban areas. It would require planting trees over 3169 hectares. Assuming a typical cost per hectare of £10,800 (based on £8.30 per tree for Local Authority Treescape Fund in England, and typical planting rate of 1300 trees per hectare), the total cost of reaching a 20% target would be £34.2 million, or an average of £4.3 million per annum between 2023 and 2030. This would need to be targeted in areas with less than 20% tree cover at present.

Co-operative environmental action

A priority is to reduce the barriers to co-operative environmental action by using the Sustainable Farming Scheme (SFS) to facilitate collaboration between landowners to deliver catchment scale Nature Based Solutions and build on the Project Skyline recommendations to empower communities to take control of underutilized publicly owned land/sea for nature restoration.

Collaboration between farmers and land managers has potential to enhance greatly the effectiveness of environmental land management actions, helping to achieve positive change at the landscape scale. This should have benefits for species, habitats and ecosystem services, as well as land managers themselves (helping to enhance cost effectiveness, learning and social interaction and address joint challenges and opportunities).

The collaborative tier of the new SFS will help to address this, and will require sufficient funding, promotion and facilitation.

[The Project Skyline report](#) examined the feasibility of landscape-style community land stewardship in the South Wales Valleys as a means of giving communities a connection to landscape that can provide income, jobs, a place of social and cultural activity, and a home for nature. The report recommended that Welsh Government should support the establishment of two or three pilot landscape-scale, community stewardship projects in the Valleys. We suggest that three pilots are established, each running for 2 years, to develop a landscape vision and community plan in three communities. Each pilot will require a project manager and an additional annual budget to cover overheads, expenses, event costs and fees, at an annual cost of £240,000 across the three pilots. A similar annual budget would be required between 2025 and 2030 to implement these plans in each community and/or develop plans for additional communities. More investment would be needed in future years to roll this approach out more widely across Wales.

Environmental Justice for the People of Wales

Wales must create an independent body to oversee the implementation of environmental law, facilitate public access to environmental justice, and uphold environmental standards.

We suggest that, as a minimum, a body similar to [Environmental Standards Scotland](#) is required, with [similar levels of resourcing](#) - 24 staff and an annual budget of £2.2 million.



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2. Farmland		
STOP	REDUCE	START
The ongoing loss and degradation of wildlife habitat on farmed land.	Agriculture's environmental impact at home and abroad.	Funding pilots and training programmes on regenerative land management that facilitates nature recovery.

Regulatory enforcement

There is an urgent need to stop the ongoing loss and degradation of wildlife habitat on farmed land by better targeting of support, monitoring and enforcement of regulatory requirements (including for water and air pollution).

Pollution from agriculture has a major impact on species and habitats, and urgent action is needed to enforce existing regulations more effectively. [Natural Resources Wales has stated that it requires between 60 and 200 new staff](#) to ensure compliance with existing legislation. We believe that resourcing should be at the upper end of this range if legislation on water pollution, air pollution and protected sites is to be fully and effectively enforced.

[NRW's latest annual review](#) for 2020/21 indicates that the average wage of its staff was £39,170, and that inclusion of other staffing costs (NI and pensions), as well as IT, office and operating costs increases this average to £60,000. This suggests a need for further expenditure of £12 million per year to fully enforce pollution regulations.

Sustainable land management

There is an urgent need to reduce agriculture's environmental impact at home and abroad by transitioning Wales to a low input, regenerative food system which recycles nutrients and produces within the natural carrying capacity of the land.

A [report](#) by Rayment (2019) for the RSPB, National Trust and the Wildlife Trusts assessed the financial resources needed to support land management actions required to deliver environmental priorities and targets across the UK. It is estimated that we need to spend £273 million annually on environmental land management in Wales to meet our priorities for the natural environment. This includes measures for sustainable soil and water management in agriculture, maintenance and restoration of priority habitats, boundary features and the historic environment, and support to maintain vulnerable high nature value farming systems. The report estimates that expenditure of at least £4 million is needed to provide advice and guidance to support environmental land management measures.

These estimates suggest that priorities for the natural environment can be met through the existing £300 million annual agriculture and rural development budget, but only if resources are reallocated to focus action on the provision of environmental public goods. The development of the new Sustainable Farming Scheme should include funding for pilots that trial new approaches to regenerative land management, and new mechanisms to support the delivery of environmental outcomes. This should be backed by advice and training for farmers and land managers, and information and communications to demonstrate results to the wider land management community. The costs of achieving this are included within the annual total estimated above and can be met from within the SFS budget.



3. Coasts

STOP	REDUCE	START
The continued degradation of coastal habitats such as seagrass meadows, seaweed and saltmarsh.	Coastal pollution from plastics.	An ambitious program to restore lost coastal habitats and protect the remaining areas around Wales.

Protecting coastal habitats

There is an urgent need to stop the continued degradation of coastal habitats such as seagrass meadows, seaweed and saltmarsh by regulating activities that impact on these habitats and tackling systemic issues such as water quality by implementing higher water treatment requirements, including embracing nature-based solution such as wetlands restoration.

This action depends on the enforcement of water pollution regulations, which is costed in section 2 above.

A new publication by WWF - [The Future of Seagrass in Wales](#) - sets out an action plan listing 10 immediate, medium - and longer-term actions to protect and restore seagrass in Wales. The plan calls for Welsh Government investment of around £3.2 million in seagrass protection and restoration in Wales by 2030, which equates to an annual investment of £0.4 million per year for 8 years.

Reducing plastic pollution

Wales will come under UK wide proposals for an [extended producer responsibility \(EPR\)](#) scheme for all packaging waste, which seeks to ensure full cost recovery for all larger producers. The implementation of a [Deposit Return Scheme](#) for drinks containers, as well as the commitment to extend EPR to [litter payments](#), are major priorities in tackling plastic pollution. This will be industry funded and therefore not demand public finance. However, commitment from Welsh Government to further the legislation is key to progress.

Priorities for additional funding to address the problem of plastic pollution are:

1. Employment of a volunteer co-ordinator in each coastal local authority area, to co-ordinate coastal litter collection, working with local authorities, Keep Wales Tidy (KWT), National Trust, SAS, MCS and other eNGOs and community groups. An annual cost of £70,000 per local authority area would include salary, overheads, expenses and communications, amounting to a total of £1.05 million per year across 15 coastal local authority areas.
2. A Wales level communications programme to raise awareness and education regarding the problem of marine litter. With an annual budget of £200,000, this would link to the Blue Flag Awards and other initiatives as well as the volunteer programme and provide educational resources for pupils and teachers.
3. A programme of surveys and monitoring of litter in public spaces, linking together street litter surveys, MCS Beachwatch and other surveys, and filling gaps. KWT has estimated the annual cost at £16,000 per local authority, which would amount to £350,000 across 22 LAs in Wales. These costs are based on the current litter survey model (which surveys 6% of streets in every local authority every year), extending this to a sample of all beaches. KWT currently uses its own in-house app for spatial mapping of litter survey data. There would be benefits from investment in more advanced technology for spatial mapping, at an initial cost of £100,000 for a research and development project.

The total annual cost of 3 actions above would be £1.615 million per year over the period 2023 - 2030.

Habitat restoration and re-creation

Wales should begin an ambitious programme to restore lost coastal habitats and protect the remaining areas around Wales, resulting in a 15% increase of coastal habitats by 2030.



[The RSPB report Sustainable Shores](#) estimates that 578 ha of intertidal Natura 2000 habitat will be lost in Wales – excluding the Severn estuary – by 2050 – suggesting a need to re-create 19 hectares per year for 30 years just to maintain the current stock of Natura 2000 intertidal habitat. The capital cost of this would be approximately £1.6 million annually, assuming an average per hectare cost of £84,000 (based on a review of recent intertidal habitat creation projects).

Expanding coastal priority habitats by 15%, in line with CBD commitments for ecosystem restoration, would require creation of 575 ha of maritime cliff and slope, 17 ha of coastal vegetated shingle, 1215 ha of coastal sand dunes and 1102 ha of saltmarsh. Applying unit capital and annual costs used by [Rayment \(2019\)](#) gives an estimated cost of coastal habitat creation of £81.6 million over 10 years, or £8.2 million per year for 10 years.

4. Seas		
STOP	REDUCE	START
Unsustainable fisheries.	Conflicts between marine users and threatened wildlife.	Designating offshore Marine Conservation Zones and trialling stricter protection.

Sustainable fisheries

[The 2020 SoNaRR report](#) states that, “for the most part, we don’t have a good enough understanding of stock status and the dynamics of fishing effort, its distribution and resulting catches to be able to determine the sustainability of fisheries resources in Welsh inshore waters. There is consensus across industry, Welsh Government, and NRW on the need to progress with initiatives already underway, and augment with further planned work to better understand both the status of fish and shellfish stocks and environmental impacts of fisheries activities.”

Welsh Government and NRW work together to undertake assessments of fish stocks and the impacts of fishing practices on them and the wider environment. Plans for management of stocks are delayed and need to be brought forward with urgency. In addition, WG and NRW also have a joint [project to evaluate the impacts of fishing on features of Marine Protected Areas in Wales \(the Assessing Welsh Fisheries Activities Project\)](#).

This project started in 2016, but no management measures have yet been introduced and assessments remain to be completed. Investment is needed to accelerate the process and enable the Welsh Government to meet its legal obligations under the Habitats Regulations. Completion of these assessments would be accelerated with the employment of an additional officer at NRW, at an annual cost of £60,000 including overheads.

The delay in the introduction of a bottom-towed order to deal with the high-risk assessments, which were published in 2017, has been attributed to capacity in the Welsh Government’s legal department. In general, there is also a need to increase staff resources on fisheries science.

This is the responsibility of Welsh Government, but the delays to date suggest additional staff resources are required, ideally employing specialists in sustainable fisheries management. Employment of an additional six staff would require an annual budget of £360,000 including overheads.

Marine Development Plan

There is a need for a Marine Development Plan to guide development activity in the seas around Wales. This will be based on comprehensive evidence of the Welsh marine environment, the sectors using the sea (including fisheries, renewable energy, extraction, shipping and tourism) and the priority areas for economic development, built through a call for evidence and shared through a single portal. Prospective developers will be invited to submit proposals regarding sectoral development priorities. The plan will agree the spatial priorities for development, natural resource use



and marine conservation over a 20-year time period, informed through extensive consultation with stakeholders, business and the public, and implemented through a legal instrument. The Marine Development Plan would sit alongside the existing Welsh National Marine Plan and its policies.

Developing the plan is likely to take up to five years, employing 6 core FTE staff in WG and NRW (£360,000 per year including overheads), an annual evidence budget of £100,000, and a budget of £50,000 per year for IT, communications and events. The total cost would be £510,000 per year for 5 years. Similar levels of resourcing will be required to oversee implementation.

Marine conservation

The Welsh Government should start designating offshore Marine Conservation Zones (MCZs) by 2023 and trialling stricter protections for Welsh seas.

In announcing the results of its Biodiversity Deep Dive, the Welsh Government reiterated its commitment to protect 30% of Welsh seas by 2030 and stated that it will accelerate action to complete the marine protected area (MPA) network, to ensure the shortfalls in protection of habitats and features are addressed. This would be a significant contribution towards ensuring the MPA network is ecologically coherent.

While MPAs already extend to more than 30% of Wales's marine area, many site features are in unfavourable condition, have insufficient protection and conservation management, and are insufficiently monitored.

WEL has suggested that an appropriate target is that, by 2030, at least 30% of Wales's seas are within fully or highly protected MPAs (as defined by the IUCN), within the context of wider ecologically coherent networks. At least one third of this (i.e. 10% of Wales's seas) should be within areas fully protected by 2030 (based on [IUCN](#) categories).

Further resources are needed to swiftly complete work to designate MCZs, following an extensive process of evidence gathering and consultation, and to define priorities for protection, management and monitoring.

This requires a further 4 staff (2 at WG and 2 at NRW) at an annual cost of £240,000 (including overheads and expenses), as well as an additional £100,000 annual evidence budget and a £100,000 communications budget for 2-3 years. After that similar levels of resources will need to be allocated to implementation, monitoring and enforcement.

5. Peat		
STOP	REDUCE	START
All activities that destroy peatland including burning and tree planting.	Significantly the use of peat by eliminating its use by public bodies and supporting UK ban on sale of peat for horticultural use.	Significantly increasing the scale and pace of peatland restoration.

Peatland protection

There is a need to stop all activities that destroy peatland in Wales, including burning of peat soils (e.g. by farmers and grouse moor managers) and planting of trees on peatlands. This could be achieved by development of appropriate rules and guidance (e.g. for woodland grants and agri-environment schemes) and where necessary legal measures (e.g. to ban burning), as well as appropriate management of publicly owned land (including that of NRW, MoD and others).

Urgent action is needed to end the use of peat by public bodies, and to implement a ban on horticultural use of peat. A Peatland Policy Unit could be established to support this and to protect existing peatlands.

Staff and resources are needed to develop regulations and guidance to prevent burning and tree planting, oversee efforts to eliminate the use of peat by public



bodies, develop legislation to ban horticultural use, and champion the restoration of peatland in Wales. This unit could employ two staff, at an annual cost of £120,000, including overheads and expenses.

Peatland restoration

There is a need to significantly increase the scale and pace of peatland restoration with a view to restoring 45,000 hectares by 2050.

The National Peatland Action Programme estimates that there are 90,052 ha of peatland in Wales of which 26,222 ha are in near pristine condition, and 63,830 ha require restoration (having been modified or used for agriculture or forestry).

The Biodiversity Deep Dive committed to increase the delivery capacity of the National Peatland Action Programme through a phased approach so that by 2030 the programme will be delivering at a scale capable of reaching the net zero 2050 target of 45,000 ha of peatland restored. To have 45,000ha of properly restored peatland by 2050 would require restoration works to have been completed by 2040, involving an enhanced rate of restoration compared to current plans; restoring 45,000 ha over 18 years would require restoring 2500ha/year. At an average restoration cost of £2,000/ha, the total annual cost of restoration would be £5 million.

The scale of need estimates in 2.2 above include annual costs for priority habitat bog restoration of £2.1 million; the additional costs of this action would therefore be £2.9 million. The rate of peatland restoration could be increased over time to enable peat to play a bigger role in contributing to net zero; private finance could also play an increasing role in this.

6. Grasslands		
STOP	REDUCE	START
The loss of ancient meadows and other species-rich grasslands.	Significantly the use of all harmful chemical pesticides by a minimum of 50%.	Restoring and managing grassland habitats, including public green spaces, for wild plant diversity.

Protection of meadows and grasslands

There is a need to stop the loss of ancient meadows and other species-rich grasslands through legal recognition and protection as irreplaceable habitats and strengthen the protection within the planning system. A similar approach is also needed for other irreplaceable habitats such as ancient woodlands.

This action would involve mapping irreplaceable ancient meadow and woodland habitats, then developing and communicating guidance on their protection through the planning system. This could be achieved through a three-year project, employing 3 staff at a cost of £180,000 per year including overheads. There would also be a need for a £200,000 evidence budget and a £100,000 budget for IT, events and communications. The total cost would therefore amount to £840,000 over 3 years.

Integrated pest management

At the COP 15 Convention on Biological Diversity in December 2022, the Welsh Government agreed to reduce the risk of pesticides by at least 50% by 2030 as part of the Kunming-Montreal Global Biodiversity Framework.

The use of all harmful chemical pesticides should be significantly reduced by adopting Integrated Pest Management in line with NFFN/PAN/RSPB Red Tractor recommendations and consider their expansion to UK domestic sales - including certified year on year usage reductions.

There is much evidence that adoption of integrated pest management can help to reduce costs to farmers as well as delivering benefits for biodiversity and the environment. However, while enhancing uptake of IPM is likely to reduce costs overall, there are barriers linked to farmer awareness, risk aversion and the



availability of independent agronomic advice. Pesticide use by local authorities should also be reduced substantially, such that pesticides are only used in exceptional circumstances, particularly in public places.

Increasing uptake of IPM is therefore likely to require enhanced awareness raising and provision of advice and guidance to the farming sector. This could be achieved by employing a team of IPM champions to work with the farming sector, food chain and other pesticide users such as local authorities across Wales to champion IPM and issue guidance. A team of three IPM champions, with a budget for communications and publications, would require an annual budget of £300,000.

Grassland restoration

Welsh Government should fund a programme to restore grassland habitats and manage our 30,000 miles of roadside verges and other public green spaces for wild plant diversity.

Action to enhance, restore and create semi-natural grassland habitats (at an annual cost of £65 million), and to enhance biodiversity and the provision of ecosystem services in agricultural grasslands, is included in the costings for farmland in 2. above. This should include wider use of conservation grazing to enhance grasslands and other habitats.

Improving the management of grass verges and public green spaces for biodiversity can be achieved at no net cost, as cutting is reduced, though there are implications in terms of planning and logistics, timing and equipment. These challenges could be addressed by employing a team of champions and advisors to work with local authorities and trunk road agents. These champions would work to raise awareness, liaise and provide guidance to local authorities, public bodies, businesses and the public to improve management of green spaces, road verges, business premises, parks and gardens. Employing a team of 5 would require an annual budget of £300,000 (including staff costs and overheads), as well as a communications and events budget of £100,000 per year. The total annual cost would therefore be £400,000.

7. Protected Sites		
STOP	REDUCE	START
The damage and deterioration of Protected Sites across Wales.	Reliance on poor data available for Protected Sites.	To bring all Protected Sites into favourable ecological condition and scale up to deliver the 30 by 30 target.

Site protection and monitoring

There is an urgent need to direct and resource Natural Resources Wales to stop the damage and secure appropriate management for all Protected Sites. This was recognised among the recommendations of the Climate Change Minister's recent Biodiversity Deep Dive into how Wales can meet the target to protect 30% of land, inland water and sea by 2030 (the 30 by 30 target).

NRW's 2020 Baseline Evaluation project looked to assess the condition of terrestrial and freshwater SSSI features; the first time since 2003 that an assessment exercise had been undertaken at this scale. The results showed that NRW currently has insufficient evidence to determine the condition of around half of the features on these sites (condition classed as unknown). For those features where evidence was available, only an estimated 20% were found to be in favourable condition. 30% were unfavourable, and the remaining 50% were 'not in a desired state'.

Addressing this will require improved staffing and resources at NRW for securing management, monitoring and enforcement. (We anticipate the bulk of the staffing and resource will be required by NRW but other statutory bodies - such as National Park Authorities - will also have an important role).



Because of the scale of the gaps in evidence, the additional resource required to deliver the necessary levels of protected site management, monitoring and enforcement is not known. Following the baseline assessment, NRW will work in partnership with the environmental sector, landowners and communities in Wales to help shape and deliver an innovative action plan designed to improve current approaches to monitoring the health of protected sites in the future. This will inform the development of a more comprehensive terrestrial monitoring strategy for the future and help to address the evidence and site intervention challenges identified.

Current levels of staffing at NRW for the management and monitoring of protected sites are not precisely known but could amount to around 60 people. As a minimum, it is likely that this number would need to be doubled to address the challenges identified. This would require additional staffing costs of £3.6 million (including overheads, at a cost of £60,000 per FTE). There would be additional costs for equipment, evidence and contracted services, suggesting the need for an annual budgetary increase of at least £5 million.

Improving site condition

Investment is needed to bring all Protected Sites into favourable ecological condition by 2030, contributing to resilient ecological networks across Wales.

The costs of actions for European protected sites in Wales was estimated by the [LIFE Natura 2000 project](#) (NRW, 2015) at £144 million. These costs do not include staff time, ongoing maintenance work, or costs for strategic actions in Thematic Action Plans. Most of the actions identified have not yet been implemented. This is equivalent to £173 million at 2022 prices. If it is assumed that the costs of remedial actions for SSSIs as a whole are similar on a per hectare basis to those of European protected sites, the costs of actions across the whole SSSI network would amount to £288 million (since European protected sites comprise approximately 60% of the terrestrial SSSI area). The costs of annual maintenance of SSSIs in Wales were estimated in a [recent report](#) for the Green Finance Institute at £16 million per year. Overall, this suggests that £52 million per year is needed for SSSI restoration and maintenance over the eight years 2023 to 2030.

There is some overlap between these costings and those for sustainable land management (Section 2), diffuse pollution (Section 2), SSSI monitoring (Section 7) and invasive species (Section 10). It is estimated that 50% of management and remediation costs overlap with these other categories and 50% are additional. These additional costs include among others capital and direct management works relating to hydrology and flood/coastal erosion risk management, access and recreation management, investigations, education and awareness raising actions. The estimated additional annual cost for Wales is £26 million per annum.

The Welsh Government has committed to protect 30% of land and freshwater, and seas in Wales by 2030, in line with international commitments, and undertook a Deep Dive into delivery of this target in Wales during 2022. WEL has set out that to be counted towards the 30% areas should be protected for nature in the long term, appropriately managed and monitored, and in good or recovering condition. Achieving it should include designation of new SSSIs, as well as securing equivalent protection, management and monitoring across the remainder of the 30%. A strengthened focus on nature recovery in designated landscapes, as promised through the biodiversity deep dive, will be an important element.

As SSSIs currently account for only 11% of Wales, this would require additional identification of areas over 19% of Wales. The (one-off) costs of designating new SSSIs are estimated at £194 per hectare, based on estimates of staff costs and investigations and development of management plans. Based on this average cost, completion of the 30 by 30 network on land/freshwater would cost £76.6 million over 8 years 2023 - 30, or £9.6 million per annum over this period - although it is acknowledged that not all of the 30% will be established via SSSI designation, there will still need to be consideration of candidate areas and their management needs.

The 30 by 30 target requires that appropriate management should be in place by 2030, and monitoring will be essential to ascertain that areas are in good or improving/recovering condition. Therefore management and monitoring costs will increase in line with the areas identified over the coming years (although, again, it is acknowledged that management approaches will come into play, and the intensity and cost of these will vary).



8. Rivers and wetlands

STOP	REDUCE	START
The deterioration of water habitats due to pollution.	The barriers to migratory fish across Wales.	Upscaling deployment of nature based solutions, restoring wetland habitats and species, for flood and pollution management.

Tackling water pollution

There is a need to stop the deterioration of water habitats due to pollution from agricultural activities such as dairy farming, intensive poultry units, from sewage discharges and from chemical pollutants by fully funding the enforcement of existing water pollution regulations, setting new and stronger civil sanctions for pollution offenders in the forthcoming agricultural legislation, and by ensuring that all permits in Wales are legally enforceable.

Urgent action is required to improve the condition of freshwater habitats in Wales. The 2021 WFD Classification data shows that only 40% of waterbodies in Wales are at Good Ecological Status, with a target of 100% by 2027. This is despite the current monitoring of water quality to be very likely under-estimating the overall degradation of our freshwater habitats.

NRW Compliance Reporting showed that 5 of the 9 SAC rivers in Wales are now failing for phosphate pollution.

The costs of additional staffing to increase enforcement are estimated in Section 2 above.

Migratory fish

Action is needed to reduce the barriers to migratory fish across Wales. Currently under WFD 2021 classification, barriers to migration are impacting 108 waterbodies, although it is suspected that there are a significantly higher number. In July 2022, NRW published its stock assessments for Salmon and Sea trout in Wales, internationally protected species alongside lamprey, shad and bullhead. The report concluded that 'This represents the worst level of salmon and sea trout stock performance ever recorded in Wales and is of major concern indicating that many stocks are now in serious trouble and at risk of failing to maintain sustainable populations in the future'. All rivers are now at risk of extinction of these iconic species. The [NRW Plan of Action for Salmon and Sea Trout](#) details resolution of barriers to migration as one of its top priorities, but at the current rate of delivery across Wales designated fish species will be lost before river restoration is achieved.

In 2018, NRW published 'A review of the economic value of angling in Welsh rivers'. This showed that based on historical studies, the net value of all river fishing in Wales to Welsh anglers is estimated as £3 million annually, capitalised at £30 million. The fishing industry was supporting directly 700FTE in Wales. In 2017, Lesley Griffiths, at the time Welsh Minister for the Environment, speaking in the Senedd referred to the value of fishing to the Welsh economy as £38 million. This included the economic benefit to Wales from associated income from tourism activities and significant support to rural communities in Wales.

Afonydd Cymru and NRW have mapped barriers to migratory fish in Wales and made some progress in assessing the costs of measures to resolve them. This agenda is evolving, as new barriers are found, costs are increasing through inflation, and as progress is being made in resolving existing barriers on some rivers (for example through the LIFE Dee River and 4 Rivers for LIFE projects). The current best estimate is that a further £25 million needs to be spent to resolve migratory fish barriers on Welsh rivers (£3.1 million per year over 8 years).



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Wetland restoration

Investment is required to restore wetland habitats and species through nature-based solutions for flood management and pollution abatement.

Restoration and re-creation of wetlands have an increasingly important role to play in delivery of flood management and other nature-based solutions including pollution abatement, delivering multiple benefits for people and wildlife, often more cost-effectively than built infrastructure. However, natural flood management currently accounts for a small proportion of the Welsh Government's flood defence programme, which involves expenditure of £214 million over 3 years.

Welsh Government is trialling the wider application of natural flood management methods, using techniques such as tree-planting, leaky dams, salt marsh and dune restoration, the re-introduction of meanders and natural flood plains to reduce or slow the rate of run-off into rivers and hold back water where it is safe to do so or lessen the impact of coastal inundation and storm damage. In 2020 a [£2 million pilot scheme](#) was announced, with funding to be allocated over 2 years.

The full potential of NFM is difficult to predict and requires a case-by-case approach to assess the feasibility of nature-based solutions and integrate them into flood management proposals. However, as an illustration, allocating 10% of the flood defence budget to natural flood management techniques could generate funding of £7 million per year for habitat creation and restoration - this would not be an additional cost as it would reduce current hard defence investments.

9. Woodland and trees		
STOP	REDUCE	START
The ongoing loss of veteran trees.	The loss of woodland biodiversity.	Increasing the pace of restoration and recovery of native woodlands and Celtic Rainforest.

Protection of veteran trees

Action is needed to stop the ongoing loss of veteran trees by improving their care and protection.

The Ancient Tree Inventory records 169,967 ancient/veteran/notable trees in the UK of which 5.3% are in Wales, suggesting there are 9,000 recorded trees in Wales (Nolan et al, 2020). However, the authors suggest that the actual number of such trees is much larger than that recorded and could be as many as 2 million in the UK.

Based on advice from the Woodland Trust, the required actions for ancient and veteran trees are as follows:

- Develop the Ancient Tree Inventory (ATI), fully mapping ancient and veteran trees in Wales. Cost - £173,000 per year, ongoing until at least 2030 (and including staff time, volunteer expenses, equipment and contracted surveys).
- Analysis of ATI data - to assess distribution of ancient trees and identify threats and conservation priorities - one off research study with cost of £100,000.
- Risk assessment fund - to finance risk assessments and inform conservation strategies for trees in high-risk areas (those threatened by development of buildings and infrastructure, and pressure from people) - £100,000 per year to deliver risk assessments for 100 trees annually.
- Farm advice service - advisory visits to inform farmers about measures to protect ancient trees from machinery, livestock and chemicals. This would be delivered through the farm advisory service costed in Section 2.
- Fencing of ancient hedgerow. The SoNaRR report estimates the extent of hedgerows in Wales at 120,000km. According to [Buglife](#), 42% of hedgerows in the UK are estimated to be ancient or species-rich. A [2011 survey](#) of farmers in England and Wales found that 73% had fenced hedgerows in the previous five years to exclude livestock. Double-fencing of just 5% of ancient hedgerows, targeting those most valuable and those most at risk, could require 2,500 km of hedgerows to be fenced, or 125,000m in 8 years. At a cost of £12 per metre, the annual cost would amount to £3.6 million in Wales.



The total cost of these actions would amount to £3.9 million per year over the period 2023-2030, in addition to farm advisory actions costed in Section 2.

Restructuring conifer forests

The loss of woodland biodiversity in Wales should be reduced by diversifying the composition and structure of conifer forests and managing open space for wildlife (increasing the requirement for species diversity and properly funding ride and riparian management).

The value of Wales's conifer forests for biodiversity could be greatly enhanced by diversifying their composition and structure when they are replanted, creating more open-space habitats and improving ride and riparian management. This could be achieved through incentive measures for private forest management, and habitat enhancement measures in the public forest estate, to be introduced when forests are replanted.

Typical costs of management of open ground habitats (lowland heathland and grassland) are £250 per hectare per year (from Rayment, 2019).

The UK Forestry Standard currently requires 10% of forest to be managed as open ground habitat for biodiversity, and this is a condition of grants. The area of coniferous woodland in Wales in 2021 was 152,000 hectares - 96,000 public and 56,000 ha private. Managing an additional 10% of this area as open ground habitats would create 15,000 hectares of open ground habitats in forests, at an annual management cost of £3.75 million, gradually phased in over the life of the forest rotation. Costs between 2023 and 2030 would amount to £2.7 million, or an average of £342,000 per year.

Further changes in woodland structure could be achieved through amendments to woodland standards and grant conditions. This could be achieved without additional costs, as [Forestry Commission analysis](#) indicates that financial returns from broadleaved and coniferous woodlands are comparable, while broadening the species mix also enhances resilience to climate, pests and diseases.

Woodland restoration

Investment is needed to increase the pace of restoration and recovery of ancient woodlands, especially those converted to conifer plantation, and threatened Celtic Rainforest across Wales and make this central to the delivery of the National Forest for Wales.

SoNaRR data indicate there are 95,000 ha of ancient woodlands in Wales, of which at least 41,790 are Ancient Semi Natural Woodlands (ASNW, 3,467 publicly owned) and 25,750 Plantations on Ancient Woodland Sites (PAWS, 11,433 ha publicly owned). A reasonable aspiration would be to bring two thirds of ancient woodlands in Wales into suitable protective and restorative management by 2030. This suggests a need for restoration of at least 53,600 ha (27,900 ha of ASNW + 25,750 ha of PAWS).

A Woodland Trust restoration project in England, funded by the Green Recovery Challenge Fund, involves restoration management work across 64 sites, and is considered broadly comparable of the type of restoration work needed across Welsh woodlands. The project has average restoration costs of £4089 per hectare overall, with those for PAWS averaging £2236 per hectare and ASNW £4959 per hectare.

Applying these unit costs suggests the total cost of restoration in Wales would amount to £196 million across both public and private land, an average cost of £24.5 million per year over 8 years 2023-30.

These costs are included within the estimated annual scale of need for environmental land management of £273 million included in Section 2. The scale of need figures estimate annual woodland restoration needs of £50 million, covering a wider area of priority habitat native broadleaved, mixed and yew woodlands and not just ancient woods.

10. Species

STOP	REDUCE	START
The direct mortality of species caused by humans.	The impact of Invasive Non-Native Species (INNS) on native wildlife.	Bending the curve of wildlife populations through a fully funded, long-term national species recovery programme.

Species protection

Action is needed to stop the direct mortality of species by raising awareness and enforcement action to address persecution, disturbance, development, habitat damage and other pressures.

Wales has appointed a Rural & Wildlife Police Crime Coordinator, who co-ordinates action across the four police forces. This includes species action through groups dealing with Bird Crime and Mammals & European Protected Species. As well as legal enforcement, action is taken to raise awareness of the pressures on species through disturbance and accidental damage, and to train stakeholders to alleviate these impacts. For example, Operation Seabird has addressed impacts on seabirds, seals and other coastal wildlife from disturbance by boats, cliff walkers, climbers and other groups and activities.

This provides a good framework for action. However, effective action is constrained by limited resources, and funding is needed for publications (leaflets and posters for awareness raising), a website, training and events, travel and equipment, as well as employment of a part time communications and administrative assistant to support current and planned activities, at a total annual cost of £100,000.

Invasive Non-Native species

There is a need to increase resources for management to reduce significantly the presence of invasive non-native species (INNS). Action is needed to control invasive species in rivers and waterways, as well as in the terrestrial environment, and to implement biosecurity measures to prevent the further spread of invasive species.

[A report by Wildlife and Countryside Link](#) estimated the costs at UK level of biosecurity measures, as well as the employment of a national labour force for INNS control. The WCL report called on Government to commit to the recommendation of the Environmental Audit Committee (October 2019) report on invasive species, tripling the invasive species biosecurity budget to £3 million and providing a further £3 million to form a dedicated invasive species inspectorate. Additional annual costs are estimated at £5 million in the UK, of which £425,000 would be in Wales (based on share of land area).

The WCL report calls for additional investment in people to undertake management of widespread invasive species at a strategic scale. Scaling up the Local Action Group network to full capacity across the country would require an estimated 4,000 LAG staff, working with 75,000 volunteers and 2,000 contractors. Employing extra 340 staff in Wales (assuming recruitment is proportionate to land area) would cost £15.8 million (assuming £30k per FTE plus 55% mark-up for overheads). A volunteer budget would amount to £3.2 million (assuming annual expenses of £500 per volunteer per year) and contracting budget £1.7 million (assuming average expenditure of £10,000 per contractor). The total cost of IAS control would amount to £20.7 million per year in Wales.

Species recovery

Investment is needed to reverse the decline of wildlife populations through a fully funded, long-term national species recovery programme, involving the expertise and passion of people in Wales, to ensure that large-scale habitat restoration projects provide a resilient home for nature.



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The recovery of species in Wales depends on action to restore, re-create and improve the management of habitats, and to manage farmland for widespread species. In addition, there is a need for dedicated species recovery programmes, to deliver actions targeted at the needs of individual threatened species and groups of species. These include research, surveys, monitoring, advice and communications, species policy and licensing, and targeted site management actions.

The EU LIFE Nature Fund played an important role in funding species recovery projects in Wales, as well as large scale habitat restoration projects. An evaluation by ICF (2019) found that the total value of LIFE Nature and Biodiversity projects amounted to EUR 104 million between 2014 and 2017, an average value of EUR 26 million (£23 million) per year. Wales's share of this was approximately 12%, or £2.8 million annually, equivalent to £3.2 million at 2021 prices.

The [report](#) for the Green Finance Institute on the finance gap for nature estimated the cost of a programme to prevent extinction of red listed species in Wales at £86 million over 10 years 2022-31, an average of £8.6 million per year.

The cost of agri-environment actions to maintain the abundance of more widespread species were estimated at £41 million annually, based on the Rayment (2019) scale of need work. This estimate is included in Section 2 above.



Table 2: Summary of total costs of nature recovery actions (£m p.a.)

Theme		Action	£m	Total (£m)
1. Access and public participation	Wildlife rich green spaces	Invest in new urban green spaces	39.3	48.2
		Increase urban tree cover to 20%	4.3	
		Network of green space champions	2.2	
	Co-operative action	Pilot community empowerment projects	0.2	
	Environmental justice	Environmental standards body	2.2	
2. Farmland	Regulatory enforcement	Enforce pollution regulations	12.0	285.0
	Environmental land management	Support nature friendly food system	273.0	
3. Coasts	Habitat protection	Seagrass project	0.4	11.8
	Reducing plastic pollution	Measures to reduce plastics litter	1.6	
	Habitat restoration	Creation of coastal habitats	8.2	
		Intertidal habitat recreation to offset climate losses	1.6	
4. Seas	Sustainable fisheries	Fisheries assessments and management plans	0.4	1.3
	Conflict avoidance	Marine development plan	0.5	
	Marine conservation	Designate offshore MCZs	0.4	
5. Peat	Peatland protection	Peatland Policy Unit	0.1	5.1
	Peatland restoration	Peatland restoration programme	5.0	
6. Grasslands	Habitat protection	Ancient meadows mapping and guidance	0.1	66.3
	Pesticide reduction	Champion Integrated Pest Management	0.3	
	Pollinators	Pollinator Champions	0.4	
	Grassland restoration	Grassland restoration, creation, maintenance	65.5	
7. Protected sites	Monitoring and implementation	Additional staff and resources for SSSI monitoring and management programme	5.0	66.6
	Site restoration and maintenance	SSSI restoration and maintenance	52.0	
	New site designation	Designate new protected areas by 2030	9.6	
8. Rivers and wetlands	Migratory fish	Resolve barriers on rivers	3.1	10.2
	Nature based solutions	Implement NBS through flood management budget	7.1	
9. Woodlands and trees	Veteran trees	Map and protect ancient trees	3.9	28.7
	Forest restructuring	Expand management of open ground habitats in coniferous woodland	0.3	
	Woodland restoration	Restoration of ASNW and PAWS	24.5	
10. Species	Species protection	Awareness and enforcement measures	0.1	74.0
	Tackling IAS	Actions to control IAS	20.7	
		Increase biosecurity measures to combat IAS	0.4	
	Species recovery	Threatened species recovery programme	8.6	
		Replacement LIFE Nature Fund for Wales	3.2	
Farmland actions for species abundance		41.0		

Table 3: Summary of net additional funding needs of nature recovery actions, after deducting current spending and double counting (£m p.a.)

Theme		Action	£m	Total (£m)
1. Access and public participation	Wildlife rich green spaces	Invest in new urban green spaces	39.3	48.2
		Increase urban tree cover to 20%	4.3	
		Network of green space champions	2.2	
	Co-operative action	Pilot community empowerment projects	0.2	
	Environmental justice	Environmental standards body	2.2	
2. Farmland	Regulatory enforcement	Enforce pollution regulations	12.0	12.0
3. Coasts	Habitat protection	Seagrass project	0.4	11.8
	Reducing plastic pollution	Measures to reduce plastics litter	1.6	
	Habitat restoration	Creation of coastal habitats	8.2	
		Intertidal habitat recreation to offset climate losses	1.6	
4. Seas	Sustainable fisheries	Fisheries assessments and management plans	0.4	1.3
	Conflict avoidance	Marine development plan	0.5	
	Marine conservation	Designate offshore MCZs	0.4	
5. Peat	Peatland protection	Peatland Policy Unit	0.1	3.0
	Peatland restoration	Peatland restoration programme	2.9	
6. Grasslands	Habitat protection	Ancient meadows mapping and guidance	0.1	0.8
	Pesticide reduction	Champion Integrated Pest Management	0.3	
	Pollinators	Pollinator Champions	0.4	
7. Protected sites	Monitoring and implementation	Additional staff and resources for SSSI monitoring and management programme	5.0	40.6
	Site restoration and maintenance	SSSI restoration and maintenance	26.0	
	New site designation	Designate new protected areas by 2030	9.6	
8. Rivers and wetlands	Migratory fish	Resolve barriers on rivers	3.1	3.1
9. Woodlands and trees	Veteran trees	Map and protect ancient trees	3.9	4.2
	Forest restructuring	Expand management of open ground habitats in coniferous woodland	0.3	
10. Species	Species protection	Awareness and enforcement measures	0.1	33.0
	Tackling IAS	Actions to control IAS	20.7	
		Increase biosecurity measures to combat IAS	0.4	
	Species recovery	Threatened species recovery programme	8.6	
		Replacement LIFE Nature Fund for Wales	3.2	
Total additional funding needs (£m p.a.)				158.0

Wales Environment Link (WEL) is a network of environmental, countryside and heritage non-governmental organisations in Wales.

WEL is a respected intermediary body connecting the government and the environmental NGO sector. Our vision is a thriving Welsh environment for future generations.

This report was written by economist Matt Rayment, commissioned by Wales Environment Link members and funded by WWF. We'd like to thank everyone who has been involved in this report's development; if you have any queries, please get in touch with WEL staff directly.



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The need for a 'Nature Positive' Bill in Wales

April 2023

Introduction

In June 2021, the Senedd [declared](#) a nature emergency and called for stronger action to address biodiversity loss, including statutory biodiversity targets and the establishment of a statutory governance body for Wales.

The Welsh Government supported this declaration, which is reflected in the updated Programme for Government embedding the [Co-operation Agreement](#) with Plaid Cymru. The Welsh Government has repeatedly promised legislation on environmental principles, governance and nature recovery targets; most recently it has been included in the [commitments](#) arising from the Biodiversity Deep Dive. However, the timeframe for bringing forward this vital legislation remains unclear.

In March 2023, WEL joined over 300 organisations under the banner of Climate Cymru in [writing](#) to the First Minister calling for the promised Bill – a 'Nature Positive Bill' – to be brought forward in the July 2023 legislative statement.

Why do we need a Nature Positive Bill?

We need this Bill to do two key things:

- Help Wales to avoid another lost decade for nature by establishing a duty on Welsh Ministers to achieve a Nature Positive Wales, implemented via a framework of legally binding nature recovery targets.
- Create a robust, independent environmental governance body to close the environmental governance gap that has existed in Wales since the UK left the EU.

In December 2022, the long-awaited Convention on Biological Diversity COP15 summit agreed the Kunming-Montreal [Global Biodiversity Framework](#). It embeds a global mission to halt and reverse the loss of nature by 2030 and achieve recovery so

that, by 2050, nature is thriving once more, “sustaining a healthy planet and delivering benefits essential for all people”. This is in line with the [Nature Positive](#) goal called for by organisations around the world in the years leading up to COP15.

The new Global Framework includes outcome-oriented goals and targets, to: halt extinctions and recover species abundance; tackle ecosystem loss; restore degraded ecosystems; effectively protect and manage 30% of land and sea (the ‘30 by 30’ target); reduce pollution from all sources; and drive sustainable production.

There is a clear consensus that the new global targets must be more effective in driving action to stop and reverse biodiversity loss than their predecessors have been. We cannot afford another ‘[Lost Decade](#)’ of inaction and decline, [when 1 in 6 species are already at risk of extinction](#) in Wales.

[‘Putting Wales on a Path to Nature Recovery’](#), a report published in 2021 by RSPB Cymru and WWF Cymru and supported by Wales Environment Link, drew on evidence around targets from a range of different countries and policy examples. The report set out a clear case that an ambitious, legally binding set of long term and interim targets should be introduced to bolster Wales’ current environmental legislation, and drive action for nature recovery at a pace and scale commensurate with the nature and climate emergency.

Legally binding targets, against which the Welsh Government can be held to account, will provide a strong imperative for the necessary mainstreaming of action for nature across all Ministerial portfolios and provide clarity for the public, voluntary and private sectors. They will help drive delivery of the wider suite of Biodiversity Deep Dive commitments, including transforming our protected sites, unlocking the potential of our designated landscapes, and supporting communities to drive nature’s recovery. WEL’s recently launched report – [Pathways to 2030](#) – sets out some 10 key areas where public investment in nature’s recovery needs to be increased.

There is precedent within the UK for this approach: nature recovery targets for England have been [established](#) in law under the [Environment Act 2021](#). This Act also established the Office for Environmental Protection (OEP), a new independent

environmental watchdog, whose [remit](#) includes scrutinising and advising the UK Government on its delivery against these targets.

What should the legislation include?

1. A clear headline goal – Nature Positive Wales

As an overarching headline goal, we want to see a duty on Welsh Government to achieve a Nature Positive Wales. As the Minister for Climate Change has [said](#), ‘nature positive’ is the rallying cry that nature needs. Achieving a Nature Positive Wales would mean:

- The systemic loss of nature has been stemmed by 2030 and nature is demonstrably on the path to recovery, with species and habitat indicators showing improvement against a 2020 baseline.
- Recovery of species and habitats by 2050 against a baseline of circa 1970, so that species abundance and distribution is on average rising, extinctions have ceased, and habitat quality and extent are increasing to the benefit of biodiversity.

This definition should be set out clearly in primary legislation so that Nature Positive is both meaningful and measurable. There should be key milestones along the way (e.g. 2035, 2040) to see species populations and habitats improving – so that nature decline is halted, site protection is enhanced, and recovery is well underway. This will be necessary to establish sufficient ambition, provide impetus for immediate action, direct the necessary finance and ensure maximum accountability for meeting the targets.

2. A framework of targets to measure progress against

Success in achieving a Nature Positive Wales will need to be measured based on a number of components. The primary legislation should include a duty to set long-term and interim, outcome-based targets in secondary legislation for: species abundance, species distribution, species extinction risk, habitat quality and habitat extent (including condition of protected sites and 30x30 (area protected and

effectively managed for nature)). Each component should be assessed across terrestrial, freshwater and marine biomes.

This set of targets aligns well with the concept of the ‘resilience of ecosystems’ set out in the Environment (Wales) Act, which lists diversity, extent and condition along with connectedness and adaptability as key aspects of ecosystem resilience. The [State of Natural Resources Report](#), which NRW is required to publish towards the end of every Senedd term, provides an appropriate vehicle for reporting on these targets along with other environmental targets, although more regular updates on progress could also be required.

3. Reporting and accountability

Ministers should be required to set out detailed plans for delivering the targets, based on independent advice, and to report on progress. If adequate progress is not made, and/or interim targets are not met, Ministers should be required to set out their plans to remedy this to the Senedd and provide regular updates.

The Bill must also, as promised by the Welsh Government, establish a new environmental governance body for Wales. This body should have a remit to hold the Welsh Government to account in respect of its plans to meet the statutory targets, and progress made; Welsh Ministers should be required to show how they are taking account of the new body’s recommendations.

The primary legislation must also include a duty to periodically review targets in light of available evidence and independent expert advice, supported by a power to amend targets to make them more ambitious where a need for this is identified.

The governance gap

When the UK left the EU, the role of EU institutions in providing oversight and enforcement of EU environmental laws ended. This governance framework provided accountability and access to justice for citizens, who were able to raise complaints with the European Commission, free of charge, if they felt their national government was failing to implement or abide by the law. The Commission could investigate,

advise, and ultimately take enforcement action. Our departure from the EU also meant the loss of a high-level framework of guiding environmental principles enshrined in the EU Treaties.

The Welsh Government recognised this governance gap, and promised in 2018 to take [“the first proper legislative opportunity”](#) to bring these environmental principles into Welsh law and to introduce new domestic arrangements for environmental governance. Ministers have since accepted the recommendations of a specially convened stakeholder task group on how to do this. These recommendations included:

- legislating to embed the core environmental principles - with a high level environmental objective - into Welsh law, with a duty on Ministers to apply them; and
- establishing a new, independent environment commission to oversee the implementation of environmental law in Wales, including providing a route for citizens to raise complaints, powers to investigate breaches, undertake inquiries, and take enforcement action where necessary.

Equivalent laws have now been enacted for Scotland, England and Northern Ireland, and new bodies – Environmental Standards Scotland and the Office for Environmental Protection (the latter covering England and Northern Ireland) – have been created. In Wales, there is still no clear timeframe to bring this legislation forward, leaving us with a gap in our environmental legislation and a de facto weakening of protection, as well as a reduction in citizens’ access to environmental justice (a right that is enshrined in the [international Aarhus Convention](#)).

Interim arrangements do not fill the gap

In lieu of legislation, the Welsh Government has produced internal guidance to support continued application of the environmental principles, and appointed an Interim Environmental Protection Assessor for Wales (IEPAW) who came into post on 1st March 2021. The initial two year tenure of the IEPAW has been extended by a further year, to February 2024.

The interim measures are welcome, but they are no substitute for statutory measures. The IEPAW's role is to consider concerns raised regarding the functioning of environmental law and provide advice to ministers (with ministers' responses to be published along with IEPAW reports). While people can raise relevant concerns free of charge, IEPAW cannot investigate challenges regarding compliance with environmental law by Welsh Government or other public bodies. Such challenges would need to be pursued via Judicial Review, which is inaccessible and costly.

In its [report on the interim arrangements](#), the CCEI Committee stated: *“Despite continuous calls from this Committee, and from our predecessor committee in the Fifth Senedd, for the Welsh Government to prioritise legislation to establish a statutory oversight body, there will be no Bill in year two of the legislative programme. As pointed out by the First Minister in his recent letter to us, the Welsh Government has committed to bringing forward several Bills in the coming year “aimed at creating a greener Wales”. As welcome as this new law may be, it is imperative that environmental law is underpinned by a robust governance framework that provides effective oversight of implementation and accountability of government when it fails to deliver. This is sorely missing in Wales.”*

The report went on to say: *“It would be unthinkable for a statutory oversight body not to be in place before the end of the appointment [of the IEPAW] in February 2024.”*

The Interim Assessor [affirmed](#) that “clearly, these interim arrangements are not as powerful as what was in place previously, and clearly that's something that we need to put in place in Wales so that we have more permanent arrangements in place”.

Example: The Environment (Clean Air and Soundscapes) Bill highlights the governance gap

In March 2021, the Court of Justice of the EU [ruled](#) that the UK had systematically and persistently failed to fulfil its obligations under EU rules on air quality (after the European Commission started proceedings against the UK in 2014). Failures on air quality standards, by both UK and Welsh Governments, have also been challenged successfully in the domestic courts by Client Earth.

The Environment (Clean Air and Soundscapes) Bill establishes a framework for Ministers to set air quality targets for Wales. The Bill includes a process for Reporting on Targets (clause 5) under which Ministers have to report to the Senedd as to whether or not a target has been met. If a target has not been met, Ministers have to lay before the Senedd a report explaining why not, and the steps to be taken to rectify this.

The equivalent framework for England (under their 2021 Environment Act) includes an additional layer of scrutiny: the OEP reports regularly ([e.g. this report on improving England's natural environment](#)) on the UK Government's progress including assessing compliance with targets and commenting on the adequacy of policy measures to meet them. The UK Government is required to respond to the OEP's recommendations.

The OEP will also be able to consider any future challenges or complaints from citizens about failures to deliver on air quality targets, by the UK Government or other public bodies in England, filling the vitally important gap of providing access to justice for citizens once more. The IEPAW does not have the powers or remit to do either of these things. Until we have fixed this gap through legislation, the risk of environmental damage gone unchecked will only increase.

Wales Environment Link (WEL) is a network of environmental, countryside and heritage Non-Governmental Organisations in Wales. WEL is a respected intermediary body connecting the government and the environmental NGO sector. Our vision is a thriving Welsh environment for future generations.

This paper represents the consensus view of a group of WEL members working in this specialist area. Members may also produce information individually in order to raise more detailed issues that are important to their particular organisation.



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BD02 Environment Systems

Senedd Cymru | Welsh Parliament

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith | Climate Change, Environment, and Infrastructure Committee

Biodiversity and the nature emergency | Bioamrywiaeth a'r argyfwng natur

Ymateb gan Dr Katie Medcalf, Environment Systems | Evidence from Dr Katie Medcalf, Environment Systems

Written Evidence to Support Climate Change, Environment, and Infrastructure Committee to shape WG domestic response to COP15 outcomes through legislation, policy updating or implementing recommendations of the Biodiversity Deep Dive.

For ease of reading, this response has been drafted around the key targets and actions of COP15 and enacted through the activities of the Biodiversity Deep Dive, Nature Recovery Action Plan and Natural Resources Policy in Wales.

Environment Systems delivers natural capital evaluations, habitat mapping, climate change analysis and environmental monitoring and our comments reflect our experience in this field. We have highlighted where we feel initiatives could be strengthened or enhanced further, and where there may be further opportunities to deliver required outcomes by thinking 'out of the box'

High level response

Wales is amongst the world's most nature-depleted nations, so whilst there is both urgency and the need for ambitious action this must be carefully targeted, with the correct place based action to support nature recovery, if we are to deliver the targets by 2030. It will require cross-sectoral buy-in and effort to embed biodiversity as a core consideration across all sectors.

There is an inextricable link between the delivery of net zero targets and nature positive action, reflecting the dual crises. If we pass the 1.5°C threshold then retaining existing natural ecosystems that are already in poor condition, may not be possible, as their resilience to climate change is low. Action to strengthen resilience

of these vulnerable areas should be a priority, using an ecosystems approach. This will likely deliver co-benefits for reducing the impacts of pollution.

Protecting Ecosystems (at least 30% of land and 30% of the sea by 2030)

We strongly support safeguarding critical areas for biodiversity and ecosystem function.

Our environment is our life support system, maintaining it and enhancing it's biodiversity will help us meet many of the challenges of climate change through working with nature to help store water and prevent flooding, capture and store carbon, purify pollutants such as nitrates and phosphates from water and reduce noise and air pollution.

Our environment is an inherently complex system with multiple interacting processes. Understanding the landscape context of our biodiversity rich areas is key to enabling us to protect and enhance them. The 30% restoration of degraded systems should represent the areas which are most robust to change, in particular climate change, this should be areas which match the DECCA Framework:

- Where specialist ecosystems are still functioning well and there is a good and maintained diversity of habitats and species
 - Larger and 'rounder' patches, which are more resistant to change (noting intrinsically smaller habitats must also be afforded protection, such as quaking bogs formed from old glacial pingo features)
 - Habitat patches with good connectivity to other habitat patches,
 - Include areas in good ecological condition that can buffer change
 - Areas with characteristics, such as large seed banks, that make them able to recover more rapidly in a changing climate.
- The development of Biodiversity Net Benefit and the DECCA Framework will help safeguard biodiversity and the ecosystem services they provide by requiring a holistic analysis of sites targeted for development.
 - Our experience is that sophisticated spatial data modelling and mapping can assist decision making to identify the most appropriate areas to protect, especially when used in conjunction with field surveys at local level to avoid omitting important restorable areas that may not be captured through strategic scale mapping and analysis.
 - Action taken to address environmental issues must consider the whole landscape context of a habitat patch; it is not enough to consider just the biodiversity rich sites in isolation:
 - For example, the recovery of a degraded but species rich, nationally important valley mire complex (which is also capturing carbon and storing a great deal of water), lying directly downslope of intensive arable land, cannot flourish because upslope pollutants will reach and adversely alter the site. Therefore, the solution requires a buffer around the arable fields, set up using nature-based solutions to help intercept and remove pollutants before they reach the valley.

- As well as protection through statutory designation, there is likely to also be a role for Payments for Ecosystem Service (PES) schemes, whereby land managers undertake long-term nature-based actions (such as native woodland planting) paid for via mechanisms such as water credits, biodiversity or carbon credits. Using the data collated for delivery of the Biodiversity Deep Dive Action Plan and spatial data it would be possible to identify target areas for these types of credit and predict the benefits to the habitat and ecosystems services. The market for these mechanisms is young, but significant headway is being gained where government funding supports local project groups who deliver the necessary land management changes, monitor outcomes and collect and distribute payments. We recommend that public guidance is enhanced to include guidance for claiming biodiversity, carbon or water credits.
- At a local level larger landowners / charities might want to sign up to deliver the 30 by 30 vision on their land, so enabling actions at a local as well as a national scale will be important. We see this as very advantageous, because, communication around the significance of biodiversity and its fundamental role in our lives in the light of climate change is key, involving local people will not only help spread understanding but will also help provide people a way of engaging in local action.

Protecting Species

- Some species are indicators of habitat health, ensuring they thrive by adequate protection and monitoring is essential. They can provide an early warning system for more action to be taken.
- Some species act as keystone species when they are lost the whole ecosystem degrades, action still needs to be targeted at their maintenance and health.
- We feel there is still a place for measurable outcomes for species recovery

Heading 3: Tackling Pollution

- The use of nature-based solutions to help tackle pollutants is advantageous to both industry and biodiversity and should be encouraged. Opportunity also lies in innovation within industry, but this requires support - for example, the injection of Farm Yard Manure has multiple benefits and significantly reduces pollution, yet the machinery required is beyond the reach of many dairy farmers. Supporting dairy farmers to access this machinery would significantly reduce pollution events especially in the streams and rivers in Wales.

Heading 4: Implementation and Domestic Targets

- The Biodiversity Deep Dive and other environmental policy has gone a long way to set the scene for Wales to successfully implement the COP15 targets.
- Applying innovation, for example using remote sensing and complex modelling to show ecosystem services enables us to have an increased

understanding of our environment. If undertaken, these can be integrated into Local Development Plans to highlight areas for protection. Additionally, at the Design Stage of Development, this approach can highlight areas that should be actively considered as assets to a development scheme, ultimately resulting in an enhanced scheme.

- Biodiversity Net Benefit, the DECCA Framework, Nature Recovery Action Plan and Natural Resources Policy position planners well to help large infrastructure projects to change their attitudes and behaviours towards the natural environment. Formerly, biodiversity was something to mitigate against, rather than something that could be worked with to achieve positive outcomes for the development.
- In relation to Biodiversity Net benefit and DECCA, we strongly recommend that plans should be requested to show not only mitigation and enhancement requirements, but also how the wider environment is being considered in the planning Design Stage of a development.
- In order for this to be fully realised as described in the policy, further funding is required for policy teams to engage at an early stage with developers (to attend early meetings and help develop the best outcomes) well ahead of plans being submitted for consideration by planning departments. Although this is already part of their jobs, workload pressure on a scarce resource means it is not always realisable.

Heading 5: Funding Conservation

- We fully support the need to consider biodiversity impact in budgetary planning across policy areas. Understanding more fully, how the environment is beneficial (e.g. mature trees for urban cooling and the wildlife they host). This type of holistic thinking is not lacking in policy, but technological advances in system thinking as well as an increasing understanding of the importance of our environment and the danger of climate change may provide a pathway to integration.

Heading 6: Additional Aspects

The importance of monitoring

- Monitoring and measurement is essential to ensure actions are having the desired effect, designation of sites alone will not be enough. The effects on biodiversity arising from continuing with current land management practices in a changing climate change is not well understood. Management may well have to be altered to ensure biodiversity stays healthy. Monitoring target species is useful for tracking wider biodiversity health.
- New techniques of monitoring including eDNA tracking and in situ sensors and the use of other remote sensing technology are cost-effective options for monitoring programmes.

- Funding for on-site field surveys is also essential to identify environmental issues (new colonisations by invasive species, pollution events etc) that may not be visible using remote monitoring, are identified at an early stage. Mitigation will become far more difficult if problems are not identified and addressed early because of the pressure on sites already occurring as a result of climate change.

Climate Change

- Because of the impacts of climate change in the future, the next ten years is critical in building resilience for biodiversity in Wales and careful planning and targeted action will be needed to maximise the likelihood of success in achieving the 30 x30 target. In about ten years, we can expect to experience the effects of potential tipping points that are likely to severely stress or alter our natural systems, affecting species survival and habitat viability.
- The biophysical requirements of climate vulnerable habitats and species may no longer be met in their current locations. Nature recovery planning needs to build in knowledge of the vulnerability of habitats and key species, how this varies within Wales and how action will increase climate resilience. This can be assisted using spatial data analysis and modelling.
- Rapid progress and sustained support over multiple parliamentary terms, is essential.

Senedd Cymru | Welsh Parliament

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith | Climate Change, Environment, and Infrastructure Committee

Biodiversity and the nature emergency | Bioamrywiaeth a'r argyfwng natur

Ymateb gan Dr Tim Pagella, Prifysgol Bangor | Evidence from Dr Tim Pagella, Bangor University

A short paper on implementation of the COP15 International Agreement on Biodiversity

Dr Tim Pagella, Bangor University

June 1 2023

Introduction

[1] I was a member of the Biodiversity Deep Dive group and I broadly endorse the recommendations of that panel. As the focus of this session is on implementation, I feel that there are some areas that I would like to emphasise in the evidence I provide at this point around achieving that agenda. Implementation requires us to distinguish between high level target setting (i.e. setting out and agreeing the broad policy agenda around implementation) and delivery on the ground (operational implementation) and the links between these two elements. Below I will set out four areas that I regard as being critically important to effective implementation.

1. The need for Theories of Change
2. Integration of Landscape perspectives (and systems thinking)
3. Building buy-in for changes in tree cover
4. Institutional capacity

[2] Very briefly as a quick overview of my expertise. I am a Forestry Researcher based at Bangor University. My particular area of expertise focuses on trees on farmland (agroforestry) and I have twenty years of experience of working with people and trees on restoration projects both in Wales, in Europe and in broader development contexts in the Global South.

Section 1: Theories of Change

[3] The Biodiversity Deep Dive set out eight high level recommendations. These were quite broad in their focus, ranging from what I would describe as sensible iterations of existing

policy (for example 'Recommendation 3: Unlocking the potential of designated landscapes' to more ambitious recommendations e.g. Recommendation 5: Build a strong foundation for future delivery through capacity building, behaviour change, awareness raising and skills development) which begins to move us away from 'business as usual'. For implementation of the recommendations to be effective there is a need to plot an implementation pathway that a) sets out the recommendations in terms of their priority for implementation (i.e., which of these recommendations will likely deliver the most significant changes, to what degree can they be delivered concurrently and if they cannot be delivered at the same time, how will they be prioritised?) and ensuring that recommendations that steer us away from 'business as usual' are properly integrated at an operational scale (as these are likely to be harder to implement).

[4] The first draft of the post-2020 global biodiversity framework included a high-level Theory of Change to describe this process. Similarly, an adapted version of the Theory of Change was presented in the initial Deep Dive documentation. A Theory of Change is a way of mapping out the steps and connections between an intervention's actions and the intended results. It helps us understand why and how we believe the intervention will work and what assumptions we are making. This is typically done through a diagram and a written explanation that provides the context and details of the intervention's logic, as well as how we plan to measure its success. Theories of Change are increasingly important in development projects (particularly large-scale restoration projects in the Global South – where much of my research activity has focused). My advice then and now is that the recommendations needed to be integrated into an updated Theory of Change which sets out how we translate the high-level policy ambitions into operational deliverables on the ground.

[5] Critically a Theory of Change emphasises the need to identify and provide evidence for specific cause-and-effect connections between the outputs and outcomes of an intervention. It outlines the expected paths through which the intervention will achieve its desired effects and establishes measurable indicators to gauge its progress over time. Additionally, it makes a point of explicitly stating the assumptions about these cause-and-effect relationships, including an analysis of the barriers and enablers that may influence the intervention's success.

[6] The more ambitious suggestions proposed in the Biodiversity Deep Dive are likely to face several such barriers, given they divert away from business-as-usual model. A Theory of Change explicitly states what barriers are most likely to be encountered and sets out pathways to address them (i.e., it provides an explicit 'reality check'). For example, there are clear and obvious problems with delivery of the current iteration of the Sustainable Farm Scheme which seeks to impose area targets for tree cover and wildlife on farmers (strongly linked to achieving our biodiversity targets) – this is very much viewed as an imposition by many farmers and will inevitably face significant resilience. We need to explore alternative mechanisms to achieve the same outcomes and understand and mitigate for the consequence of failing to meet this target by utilising other approaches (I have suggested a shift to a landscape target below). A Theory of Change is designed to address these issues transparently to provide confidence that an intervention will have durable and transformative impact.

[7] Where we are working with a high-level programme such as this (where we are effectively setting out a national agenda for change) we also need to look at developing 'operational' Theories of Change at the scales of implementation – as 'context' is critically important in prioritising actions and varies considerably around Wales. My use of the term "context" refers to the specific conditions (both biophysical and socio-economic), circumstances, and factors that surround a particular situation or decision-making process. It encompasses the environment, background, and relevant variables that may influence or shape the options available and the potential outcomes. These operational Theories of Change work best if they are developed in participation with local stakeholders. They explicitly look at how high-level changes are then converted into changes on the ground. No such Theories of Change exist at present and there is a 'missing middle' between the stated aspirations and implementation.

[8] Whilst I have discussed this in direct relation to the delivery of the Deep Dive recommendations, I feel that having an explicit, transparent framework describing the change logic is critical for bridging between high level policy and operational scales to deliver the biodiversity outcomes through any pathway proposed to achieve these goals.

Section 2: Actions at landscape scale (and the need for systems perspectives)

[9] Something that was also highlighted in the Deep Dive was the need to see our protected areas in their broader landscape context. The term 'landscape' is used frequently in relation to our aspirations for achieving our biodiversity objectives – and indeed is integral for enhancing habitat connectivity, for example. A landscape perspective is also critically important for understanding both positive and negative 'spill over effects' where ecological processes (and the consequences of different management actions) "spill over" from one habitat to another, influencing neighbouring areas. Monitoring and managing these spill over effects will be critical for maintaining and improving the functional integrity of the areas protected by the 30x30 goals and requires a broader focus on the habitats adjacent to those systems – in effect it requires a 'landscape' perspective.

[10] In my professional opinion we currently have very limited capacity to plan and manage at the landscape scale in Wales. We have very few people with the skill set to evaluate and direct interventions at landscape scale – nor are we strong at recognising emergent processes at those scales. This is a major institutional barrier and currently is likely to limit effective implementation. The area statements were designed, in part, to move us towards this goal but their implementation to date has not delivered against this objective.

[11] This is possibly best explained by using an example. A major concern I have is that climate change will quite rapidly drive changes in freshwater temperature across Wales: Rising temperatures can impact aquatic ecosystems by altering species composition, reducing dissolved oxygen levels, and increasing the likelihood of harmful algal blooms all of which create significant issues for biodiversity (and is an example of a negative 'spill over' effect that will impact protected areas). A relatively recent study by the Environment Agency (and others) found that enhancing riparian tree cover in headwater areas was the most effective mechanism for keeping streams cool (effectively by managing the shading regime

at source). At present tree cover in riparian areas in the headwater areas of Wales are very low and most of our catchments would be considered heavily degraded in this regard (and we have good data on this). Maintaining freshwater temperatures requires targeted tree planting in these headwater areas. At present a generic 10% tree cover target on farm does not deliver this outcome and no targeted measures exist. The adoption of a landscape perspective highlights the need for freshwater systems to be managed as a whole and enables the targeted landscape scale interventions required to achieve both the biodiversity and climate goals associated with them (by recognising that these are interconnected and interdependent systems).

[12] Framing interventions like this is also critical for local uptake of these measures—farmers and other actors are more likely to buy in to proposed interventions if they understand the rationale for the change. Generic targets (such as a 10% tree cover target on farm) make little sense to farmers whereas targeted action to achieve a specified goal helps to create a common concern entry point which improves participation that underpins the behaviour change required to deliver the goal.

[13] More broadly there is a need for systems perspectives that recognises that natural resources, such as forests, water, land, and biodiversity, are part of complex ecological and social systems that interact with each other and with human activities. Systems thinking involves explicit consideration of feedback loops, which are the mechanisms through which changes in one part of a system can influence other parts. Feedback loops can be reinforcing (positive feedback) or balancing (negative feedback). Identifying and understanding these feedback loops is essential for predicting and managing the dynamics of natural systems. While some of these feedback loops will be captured as part of our broader monitoring and evaluation many feedback loops, particularly those associated with social changes (such as drivers behind changes in management), are not typically a focus for monitoring and evaluation. Going forward it is my opinion that these are explicitly considered as part of future monitoring and evaluation activity (as set out in Recommendation 7: Develop and adapt monitoring and evidence frameworks to measure progress towards the 30x30 target and guide prioritisation of action).

Section 3: Building buy-in for changes in tree cover on farmland.

[14] Target 10 of the Kunming-Montreal Global Biodiversity Framework sets out the need to ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches contributing to the resilience and long-term efficiency and productivity of these production systems and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

[15] This has relevance for Wales where agriculture dominates our landscape and farmland will be critical for the future delivery of biodiversity objectives and many public goods. Central to this will be how we manage and enhance tree cover on our farmlands (through better management of our farm woodlands and hedgerows or through the expansion of

agroforestry systems). Currently tree cover outside of woodland accounts for approximately a third of our tree cover but sits awkwardly between agriculture and forestry and is largely ignored. At present our approach has been to set central targets (either national scale tree planting targets or area targets at farm scale) neither of which are satisfactory solutions (not least as they ignore context – even small areas of targeted tree planting can deliver significant changes in ecosystem function if they are planted in the right place). In my opinion both are likely to be unsuccessful, for a range of reasons, especially given our recent history of tree ‘expansion’. As suggested earlier, an area of concern is that these centralised objectives are likely to have very limited buy in from farmers which ultimately makes adoption challenging – this is an area where I have particular expertise.

[16] My strong suggestion is that instead of focusing on the tree targets we should instead focus on the behaviour change required to enable farmers and other landowners to change their attitudes to trees. Farmers can and will adopt trees on farms where they value the benefits that trees provide. To change farmers attitudes to trees it is important that our communication about trees focuses on the *in-situ* value of those trees (in terms of their ability to provide on farm functionality rather than solely focusing on the biodiversity emergency or the climate emergency which are seen as externally imposed). These functions would include shelter for livestock (both from wind and sun), soil stabilisation, soil health, and potentially diversified production (i.e., farm scale timber). All these interventions will also deliver immediate climate and biodiversity benefits (including significant below ground benefits) whilst moving farmers towards more sustainable and resilient farming systems.

[17] A shift of focus to behaviour change also recognises that adoption is unlikely to be even across all farms. There are farmers who naturally experiment and early adopters who capitalise on that experimentation. At the other end of the scale, we would expect that four out of ten farmers will show high reluctance to change. There will be little or no return from immediate engagement with these farmers. Understanding and mapping this helps with more effective and efficient delivery.

[18] Our aim should be to target those people (and areas) most likely to adopt trees; and highlight their successes (and learn from their failures). The aim is to normalise tree planting on farms so that it is something that farmers value and will do of their own accord (with support where appropriate). By changing the cultural values around trees on farm (by targeting and addressing the norms associated with them) we can completely change the dynamics around tree planting. There are several examples globally where this has happened – most notably with farmer managed natural regeneration is the Sahel. At present there are already farmers that are interested in regenerative farming practices and agroecology – we should attempt to capitalise on farmer led initiatives and work with them.

[19] Finally, there is a clear link between the need for landscape approaches and changes in tree cover. A simple shift of the 10% tree cover target from farm scale to landscape scale would provide an enhanced framework to enable farm to farm cooperation, deliver targeted changes in ecosystem function (see riparian cover in headwater section above as an example) particularly if those ‘landscapes’ incorporate upland and lowland areas – where

farmers negotiate with each other to deliver the target tree cover change. This shift of focus forces everyone to take a landscape perspective (which whilst it is a very different delivery model has several advantages over farm level implementation – not least making habitat connectivity interventions viable).

Section 4: Institutional Capacity

[20] All of the above have a common theme. They point to areas where currently we have limited institutional capacity in Wales. Whilst much of the emphasis has been on farmers and landowners to make the changes needed to deliver these objectives, I think it is critical that we also understand and enact the changes in behaviour required from our institutions to underpin these changes. At a time where we are actively seeking to have more trees on farms in Wales there is currently not a single person in either Welsh Government or Natural Resources Wales with the word “agroforestry” in their job title – and very limited capacity in these areas. There is very limited extension capacity to support farmers with tree planting and strong likelihood of farmers and other landowners getting mixed messages in communication around trees. In conversations I have with farmers there is very limited trust in government – and if this represents a national pattern presents a significant barrier to deliver of the COP15 recommendations. These barriers need to be acknowledged and actioned.

[21] In addition to farmer focused activity, I have highlighted the need for better systems understanding (particularly around scale) and social science specialists (who can engage with landowners around behaviour change and cultural norms). We are asking for a significant move away from business as usual and part of that discussion needs to focus on the skill sets (and capacity) required to deliver this. The farmers will only be able to deliver against this agenda with the right support in place – and this capacity is not currently there. This critically includes a shift to more participatory approaches. Again, this has become very normalised in development work in the Global South – but is largely and inexplicably absent in Europe and the UK.

[22] My final point relates to uncertainty. My impression is that policy wants to be seen as authoritative in an area where there is high uncertainty about what will work and what might not. I think it would be more helpful to acknowledge this uncertainty – and instead set out the principles that are feeding into policy design and implementation transparently and adopt a joint learning agenda that encourages experimentation and shares mistakes so that we can accelerate development of best practice.

Post Script

[23] I was advised not to provide explicit citations in the text I provided. I am happy to provide references that underpin the evidence I present today if required.

—
**Climate Change, Environment,
and Infrastructure Committee**

Julie James MS,
Minister for Climate Change

25 May 2023

Dear Minister,

The Climate Change, Environment and Infrastructure Committee considered the First Minister's letter to the Llywydd concerning the Environmental Protection (Single-use Plastic Products) (Wales) Bill in its meeting on 29 March. The Committee agreed that I should write to you on this matter.

The First Minister's letter suggests that there should be a "reasonable interval" of "usually six months" between the passing and publication of legislation which impacts on trade and its coming into force. When you appeared before the Committee on 29 September 2022, you referred to this as a "standstill period" and confirmed it would apply to the Single-use Plastic Products Bill.

You told the Committee there would not be a "grace period for businesses" because the Welsh Government had engaged extensively. You added that the six-month "standstill period" would be used to support the transition.

In response to the issues raised by stakeholders about the need to raise awareness amongst suppliers and retailers, you said the Welsh Government would use the six-month standstill period to "continue to work with business manufacturers, all the public sector groups and communities, protected characteristic groups, to develop comprehensive guidance...to support the Bill."

I would be grateful if you would provide the Committee with a detailed update on any work the Welsh Government has undertaken on developing this detailed guidance. I would also like an update on any work undertaken since the Bill was passed to raise awareness amongst businesses and any work due before the end of the sixth-month period. I would also like you to confirm that you still

intend to make regulations introducing a ban on certain single-use plastics as soon as the six-month "standstill period" is over.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Llyr', is centered within a light yellow rectangular box.

Llyr Gruffydd MS,
Chair, Climate Change, Environment and Infrastructure Committee

Croesewir gohebiaeth yn Gymraeg neu Saesneg.

We welcome correspondence in Welsh or English.

Agenda Item 4.2

Correspondence from the Association of British Insurers – 16 May 2023 Gohebiaeth gan Gymdeithas Yswirwyr Prydain – 16 Mai 2023

Dear Mr Gruffydd,

I'm writing from the Association of British Insurers (ABI) regarding the [debate](#) on the Climate Change, Environment, and Infrastructure Committee Report—'Annual report on the National Infrastructure Commission for Wales—2022-23' which you took part in at the Senedd last week.

We were pleased to see the focus on flooding during this debate. Our sector is cognizant of the impact climate change is having in creating an increase in extreme weather events and insurers and long-term savings providers have long been at the forefront of efforts to better understand and prepare for risks resulting from impacts of the Earth's changing climate.

As a sector, we have long been calling for increased investment in flood defence maintenance and infrastructure spending and have welcomed the funding provided by the Welsh Government to combat flood risk and increase Wales' resilience to climate risk.

Alongside Flood Re, we published '[Modelling the Impact of Spending on Defence Maintenance on Flood Losses](#)' in May 2021 which was carried out by flood risk specialists JBA Risk Management.

The report showed the cost effectiveness of maintaining flood defence infrastructure - for every £1 increase in maintenance spending almost £7 is saved in capital spending on defences. The report also found that increasing current maintenance spending by 50% could extend the lifespan of defences by an average of eight years.

This research showed that the Average Annual Loss which represents the expected cost of flooding on average per year was £12.7m for residential property in Wales and £3.9m for commercial property.

I hope you find this information useful – if you would like to discuss any of these matters further, please do not hesitate to get in touch.

Kind regards,
Callum

Callum Judge
Public Affairs Assistant
Association of British Insurers (ABI)

Agenda Item 4.3

Letter to Llyr Gruffydd MS, Chair of the Climate Change Committee

22/05/23

Dear Llyr,

Climate Cymru priorities for the Committee to consider for forward work programme

Climate Cymru is a coalition of over 300 organisations and 14,000 individuals who work together to stop climate change. We launched a successful campaign with a call to bring 13,000 voices to COP26 in Glasgow, and continue to work with others to help make long-lasting, sustainable change in Wales. We do this through campaigns such as our Warm this Winter action which focuses on interlinking the cost of living, energy crisis and climate emergency, through to our work on Nature Positive and transition to Net Zero, to our Green Tour of Wales every year, outlining the amazing work that people do in their communities in running renewable energy projects and energy efficiency schemes.

As the Committee with Climate Change and Infrastructure at the heart of everything you do, we appreciate that you have sought to prioritise your work programme and adapt to change as and when Government legislation reaches you. We welcome the opportunity to co-work with you, and would be more than willing to come and give evidence, invite you to visit some of our partners' projects across Wales, or assist you with ongoing policy work.

Warm this Winter campaign

We are in the grips of multiple crises – the cost-of-living crisis, energy crisis, and the climate and nature emergencies. These crises are connected and intertwined. They have shared causes and solutions. Emergency support is needed for the most vulnerable. Beyond that, the best solutions for a genuine pathway out of the cost-of-living crisis are also key steps to addressing energy security and the climate crisis – like a rapid scale up of energy efficiency and rolling out community energy all over Wales. The financial case for these programs is also compelling.

Unless we take urgent and informed action now, short term or false solutions risk locking us into the worsening impacts of climate change and future energy crises.

We are calling on the Welsh Government and other institutions to act urgently to ensure that solutions to address the cost-of-living emergency also address the climate and nature emergencies. Levers that are within devolved control need to be used to support vulnerable households, and to prioritise renewables and energy efficiency schemes.

The Warm this Winter campaign in Wales would like Welsh Government to deliver the following, and we have an open petition at the moment on this matter:

1. Emergency support for vulnerable households
2. An ambitious energy efficiency programme
3. A rapid scale-up of low-cost renewables
4. Free us from fossil fuels

We would appreciate it if the Committee could focus some of its work on the themes above. We have sent a detailed briefing to all MS's on it, and we have a drop in for MSs to sign the Warm this Winter pledge on the 6th of June. We are awaiting a new and updated Warm Homes programme to shape future work on energy efficiency and would appreciate your continued scrutiny on this.

We also wish for the committee to consider carrying out a piece of work on the announcement by the Welsh Government in October 2022 to launch a publicly owned renewable energy developer. The Climate Change Minister has said energy profits created in Wales will deliver greater benefits for people in Wales, and that surplus funds generated through the new developer will go back into the public purse to be reinvested in improving energy efficiency in homes in Wales and creating good quality, home grown, clean energy jobs. However, since its announcement, we have seen very little public detail on its development. Alongside the organisation Cwmpas we have written to the Climate Change Minister to discuss how it can be shaped, and while we have had positive engagement from civil servants, we wish for this committee to look into the matter in more detail in relation to taking evidence from civil society to understand what the people of Wales want to see happen in this regard, and comparing it to International examples where Government's run their own such energy system. How does it benefit the economy in their respective countries? How can we ensure that we implement it in Wales having learnt from best practice elsewhere?

Nature Positive

We need the Welsh Government to take urgent action to ensure that we pass on a Nature Positive Wales to future generations. Nature is our life-support system and essential to the well-being of everyone in Wales. Yet currently Wales is one of the most nature-depleted countries in the world, and our wildlife is in serious decline with one in six of our species at risk of extinction from Wales.

COP15 set a new mission to halt and reverse the loss of nature by 2030 and achieve recovery so that nature is thriving once more by 2050. This is what Nature Positive means, and Wales must play its own part in achieving the Nature Positive goal. Global targets in the past have failed because Governments did not take them seriously enough at home; with nature in crisis, we have run out of time for delays and we cannot afford to fail again. Leaving the EU has left a significant environmental governance gap, and we are the last home nation to address this gap meaningfully - we are lagging far behind. A new Environmental Protection Bill has been promised "at earliest opportunity" and pushed back year after year.

To uphold Wales's reputation as an environmental leader Welsh Government must bring forward a new Bill in the next (2023-24) legislative programme, to set in law a duty to achieve a Nature Positive Wales, underpinned by legally binding nature recovery targets and robust, independent environmental governance.

We would welcome any work that the Committee sees fit to take on this important issue.

Just transition to Net Zero

As a network we wish to support the work being carried out on transitioning to green jobs for the future in Wales, and we are keen that we do this while understanding the challenges that face those in jobs within industries that must transition. The ideas and thoughts of industry regarding skills is key, as well as the work being carried out by Qualifications Wales on the matter at the moment.

Many of our partners work in this area already, and have a wealth of experience and expertise to share. To this aim, we hosted a roundtable titled 'Good Green jobs for All. Getting there together' in February to seek to tackle some of the challenges, and address our common aims. Over 70 people attended from varying sectors, and we sent in a joint consultation response to the Welsh Government's Net Zero consultation process that was created from this event.

We wish to ensure that we consider the global justice picture, especially when looking at industries which have global presence or supply chains. We need to assess what more Wales can do as a globally responsible Nation to stand in solidarity with communities most impacted by climate change. The climate change impacts we see here in Wales are intimately connected with the impacts around the world. We need to better understand our global impact and tackle the systemic issues that are at the root of climate injustice – resulting in the worst effects of climate change being felt by people living in the poorest communities here in Wales and globally, especially women and girls and those from Black and Ethnic Minority communities.

Race to Zero

Climate Cymru has been encouraging Welsh Councils to join Race to Zero by COP28. We have consulted over 300 Climate Cymru Partners, and with their approval we will deliver a pan-Wales Race to Zero Campaign building solidarity between councils and the general public. Welsh local authorities are working very hard to cut emissions in their own operations to meet the Public Sector Net Zero commitment - this is important work. But they also have a crucial bigger role to play in decarbonisation. Only local councils are in the position to lead the development of systematic emissions reduction plans tailored to local needs, and to coordinate the efforts needed to deliver action.

Now we need them to lead Paris Agreement-aligned decarbonisation across their local areas. Ten of the 22 unitary authorities are in the process of joining via Cardiff Capital Region. In April last year, over 100 council climate officers joined a two-hour meeting hosted by the Welsh Local Government Association to introduce them to Race to Zero.

Race to Zero is important to civil society in Wales because it is a clear framework for climate action that introduces clarity, rigour, consistency and transparency, and because it is designed to facilitate community involvement in shaping the future of our low-carbon communities. There is a wealth of untapped energy, ideas and effort from communities across Wales because of the inconsistent and opaque approach to area-based decarbonisation by councils.

Other areas of interest

Biodiversity

As aforementioned, Wales has many planned commitments on nature, environmental protection and targets that work in parallel with pre-existing carbon and climate frameworks. We think it is of great importance that this is carried out at a pace, and as a higher priority within Welsh Government legislative timetables; it's been disappointing to see the Environmental Protection Bill pushed down the road, year after year. We would urge the Committee to keep pushing on Ministerial scrutiny in terms of implementation and monitoring of these targets and promises. We would urge the Committee to keep pushing WG on Ministerial scrutiny of implementation and monitoring of these targets and promises, remembering that this is a cross-departmental responsibility (not the Climate Change Department alone). We would also wish to say that all members of the Senedd need to ensure nature and climate run through all their work.

We are facing species extinction; we have seen wildfires, floods and dramatic impacts on crops, pollinators and natural ecosystems' functioning. Alongside Wales Environment Link, we want to see nature at the heart of all land management, especially when it comes to spending public money on subsidising land management.

The National Nature Service is another overlooked and overdue policy, set within the Green Recovery Taskforce, which we urge the Committee to follow up urgently with Ministers. This could be a huge job creation project in the specialist and future-proof skills we need for the next generation, as well as being an appropriate response to a nature crisis. Proper funding for nature-based solutions and a robust governance framework are all vital to nature thriving. Too often, we see plans and targets with no resource put behind them.

Non-devolved issues of concern

We wrote to the Senedd's Economy Committee to carry out work on the following as we believe that this has strong economic benefits for Wales, but we were informed in a response on the 22nd of May that it would be sensible to approach your committee to carry out this work. To that end, we wish for you to carry out an inquiry on the possibility of devolving the Crown Estate to Wales. The Estate recently confirmed six new offshore wind energy lease agreements, worth an estimated £1 billion. The Keeper of the Privy Purse has written to the Prime Minister and Chancellor to share the King's wish that this windfall be directed for wider public good, rather than to the Sovereign Grant, through an appropriate reduction in the proportion of Crown Estate surplus that funds the Grant. One of the 6 projects will be located off the North Wales coast, and is an opportunity for offshore wind to support and help grow the Welsh economy. Management of the Crown Estate in Wales is reserved, yet in Scotland, the management has been devolved to the Scottish Government since 2017. There is growing support for the Welsh Government to receive the same powers as Scotland

so that we can benefit directly from the economic opportunities presented by the potential renewable energy production in question. We believe that the Committee should explore this matter, with a view to understanding how devolution in this area could better aid our economy.

Profits of Oil and gas companies

Profits for these companies were released a few months ago now, with media reports stating that Oil giants are making a profit of £5,000 a second while millions continue to struggle with rising energy bills. Analysts predict the annual profit will have doubled. US company Chevron has announced record annual profits of £28.6 billion, a big rise on the £12.6 billion it made in 2021. The huge tax breaks for oil and gas that the Prime Minister introduced in the windfall tax will see the Exchequer forgo in the region of £11 billion - that's enough to give an inflation-matching pay rise to every NHS worker and teacher for a year. The UK Government needs to stand up for ordinary people and fix our energy system that, at the moment, forces us to rely on these companies. The Prime Minister needs to close the loophole in the windfall tax, invest in homegrown renewables and free us from oil and gas.

We would welcome any public statement or communication from the Committee to the UK Government, and possible consideration of a scrutiny session with companies in this field in the near future.

We would request that the Committee show support for the community energy sector's (CEW and CEE) calls to be able to sell power locally to their community as proposed in the [Local Electricity Bill](#). As they are asset based, they can operate if the regulations allow, but in the UK, they do not. It happens in Europe, as you can see from this [article](#).

Summary of key asks from this letter

- a) Action from the committee on the key themes of Warm this Winter-
 - Emergency support for vulnerable households
 - An ambitious energy efficiency programme
 - A rapid scale-up of low-cost renewables
 - Free us from fossil fuels

- b) We would urge the Committee to affirm with us that the Welsh Government must:
 - Set in legislation a duty to achieve a Nature Positive Wales by mainstreaming action for biodiversity across all Welsh Government portfolios.
 - Bring forward an Environmental Protection Bill to set out a framework for legally binding nature recovery targets and create a strong independent environmental governance body for Wales at the earliest opportunity.
 - Increase public investment in nature's recovery, ensuring that all government departments' spending reflects the Nature Positive goal, as well as harnessing private investment in nature while supporting communities, via well managed and regulated markets.

- c) carry out work on what a just transition to Net Zero looks like and create a report as a Committee on the findings.

d) We would urge the Committee to keep pushing Welsh Government on Ministerial scrutiny of implementation and monitoring of Biodiversity targets and promises, remembering that this is a cross-departmental responsibility (not the Climate Change Department alone)

e) We would welcome any public statement or communication from the Committee to the UK Government on a genuine windfall tax from oil and gas companies, and possible consideration of a scrutiny session with companies in this field.

f) We request that the Committee show support for the community energy sector's (CEW and CEE) calls to be able to sell power locally to their community as proposed in the [Local Electricity Bill](#).

g) work on the devolution of the Crown Estate.

Kind Regards

Bethan Sayed on behalf of the Climate Cymru Team

Agenda Item 4.4

Correspondence from Daniel Therkelsen, Coal Action Network regarding Ffos-y-fran opencast coal mine – 11 May

Gohebiaeth gan Daniel Therkelsen, y Rhwydwaith Gweithredu Glo, ynghylch mwynlawdd glo brig Ffos-y-fran – 11 Mai 2023

Dear Mr Gruffydd, Ms Finch-Saunders, Mr Irranca-Davies, Ms Jewell, Ms Rathbone, and Ms Watson of the Climate Change, Environment, and Infrastructure Committee,

I contact you about an urgent and ongoing threat to the Welsh Government's policies against new and extended coal extraction, and Wales' climate commitments. The Welsh Government is refusing to exercise its power under S182 of the TCPA 1990 to stop the ongoing illicit coal mining at Ffos-y-fran, where the local Council (Merthyr Tydfil County Borough Council (MTCBC)) has been unwilling or incapable of enforcing a stop on the coal mining despite an absence of planning permission for 8 months and counting.

Background

In response to the attached legal letter from our expert legal team, the Welsh Government said *"Once the Council has taken its decision, and in the event it decides not to take enforcement action, the Welsh Ministers will require a reasonable period thereafter to consult and reach its own decision on enforcement action."* The problem with this approach is that MTCBC has already stalled, and failed to take expedient enforcement action to stop around 1,000 tonnes of coal mining each day this goes on for (based on Coal Authority statistics). This inaction has so far resulted in 270,000 tonnes of coal, adding 840,000 tonnes of CO2 to our climate crisis - all without planning permission and in direct contravention of national policy.

This week [6,800 emails](#) were sent to MTCBC staff, imploring that they issue a *Temporary Stop Notice* to prevent further illicit coal mining and irreversible harm by the mining company, Merthyr (South Wales) Ltd, at Ffos-y-fran. But MTCBC continue to make vague statements about trying to meet with the company, arranging site visits, and negotiations around a restoration plan. It's more stalling, despite a unanimous decision of the MTCBC Planning Committee on the 26th April to reject the application to extend this coal mine. Over the next couple of days, Julie James and Lee Waters will receive [1000s of emails](#) from people demanding they step up to their responsibilities and actually implement the policies they claim to represent.

A summary of the case for immediate Government action

If the Welsh Government exercises its power under S182 of the TCPA 1990, it will be implementing a local democratic decision made by elected councillors, not overriding it. And immediate action is needed by the Welsh Government due to the contravention of its own policies and irreversible harm being caused on a daily basis (this is not in dispute - the local council has confirmed ongoing coal mining this week, and we hold photographic evidence). The LPA's failure to take expedient enforcement action to prevent this harm necessitates swift national Government intervention. If the Welsh Government continues to delay intervention, it damages the progressive green credentials of Wales. A policy is worth nothing if it's not acted upon.

Recent website post which hosts drone footage evidence of the coal mine in operation from the 19th May: <https://www.coalaction.org.uk/2023/05/22/ffos-y-fran-the-uks-biggest-illegal-coal-mine/>

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Will you raise this as a matter of urgency with Minister Julie James and the Welsh Government?

We would appreciate any details you are able to share on what action the Committee is able to take in this matter.

Regards,

Daniel Therkelsen

Coal Action Network

www.coalaction.org.uk

Julie James AS/MS
Y Gweinidog Newid Hinsawdd
Minister for Climate Change

Agenda item 4.5

Llywodraeth Cymru
Welsh Government

Ein cyf/Our ref: JJ/PO/145/2023

Huw Irranca-Davies MS
Chair
Legislation, Justice and Constitution Committee

Llyr Gruffydd MS
Chair
Climate Change, Environment and Infrastructure Committee

22 May 2023

Dear Chairs,

I am writing in accordance with the inter-institutional relations agreement, to report on the latest meeting of the Net Zero, Energy and Climate Change Inter-Ministerial Group, held on 27 April 2023, with discussions focused on the grid network investment and inter-Government collaboration.

The meeting was attended by Mairi McAllan MSP, Cabinet Secretary for Net Zero and Just Transition; Katrina Godfrey, Permanent Secretary at the Northern Ireland Department of Agriculture, Environment, and Rural Affairs; Graham Stuart MP, Minister of State Energy Security and Net Zero; and Gareth Davies MP, Exchequer Secretary to the Treasury.

Yours sincerely,



Julie James AS/MS
Y Gweinidog Newid Hinsawdd
Minister for Climate Change

Canolfan Cyswllt Cyntaf / First Point of Contact Centre:
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Rydym yn croesawu derbyn gohebiaeth yn Gymraeg. Byddwn yn ateb gohebiaeth a dderbynnir yn Gymraeg yn Gymraeg ac ni fydd gohebu yn Gymraeg yn arwain at oedi.

We welcome receiving correspondence in Welsh. Any correspondence received in Welsh will be answered in Welsh and corresponding in Welsh will not lead to a delay in responding.

Agenda Item 7

By virtue of paragraph(s) vi of Standing Order 17.42

Document is Restricted