Wildlife and Countryside LINK

Net Zero Review: Call for evidence

Response from Wildlife and Countryside Link

Introduction

- Wildlife and Countryside Link (Link) is the largest nature coalition in England, bringing together 67 organisations to use their joint voice for the protection of the natural world.
- We have provided responses to the questions where the expertise of our members can add relevant evidence for the review consider. Our responses to the call for evidence questions include:
    - **Enumeration of the benefits provided by high quality nature-based solutions**, which will contribute to the delivery of net zero whilst creating new jobs in the places where they are most needed.
    - **Recommendations that the Government directly invest in and regulate for high quality nature-based solutions**, to create the conditions required for large-scale private sector investment to unlock their full benefits.
    - **A strong warning that the Government's current deregulatory agenda imperils both net zero and economic stability**. The Retained EU Law Bill should be scrapped, to help reach net zero and prevent business uncertainty.

Response to call for evidence questions

3. What opportunities are there for new/amended measures to stimulate or facilitate the transition to net zero in a way that is pro-growth and/or pro-business?

The protection, conservation and restoration of natural habitats on land and sea is essential if we are to successfully tackle the twin crises of climate change and biodiversity loss. At the moment, the agriculture sector is a net source of greenhouse gas emissions. Reaching net zero will therefore require farmers and land managers to shift to low emission practices and minimise greenhouse gases losses from the land and other operations. At the same time, even with increased efforts to reduce emissions over the next few decades, we expect there to be residual, hard-to-abate emissions which will need to be offset in order to reach net zero by 2050. It is currently expected that natural and semi-natural ecosystems will provide much of these offsets by removal of greenhouse gases.

Restored natural habitats (frequently known in this context as nature-based solutions) offers a cost-effective way to generate some of the necessary greenhouse gas removals and protect existing carbon stocks whilst also delivering a range of additional benefits. By stepping up the pace of habitat[1] protection, conservation and restoration, we can not only hasten the transition towards net zero, but also tackle biodiversity loss, increase climate change resilience, facilitate the transition to economically and environmentally sustainable

[1] Including semi-natural habitats such as permanent grassland

farming, fishing and forestry and create new market opportunities for businesses and new jobs for people in the process.

In the words of former Environment Minister Lord Goldsmith ''there is no pathway to net-zero that does not involve a massive scale up of nature-based solutions. They could provide a third of the cost-effective climate change mitigation we need.''[2]

Research undertaken by Aberdeen University for WWF and RSPB charts the extent of this climate potential, suggesting that restored land habitats have the potential to store an additional 278-492 MtCO2e by 2050. Restored marine ecosystems could store an extra 137 MtCO2e over the same time period. Restoring 22,000 hectares of saltmarsh alone, as suggested by the Natural Capital Committee, could sequester 42 Mt CO2e by 2050 (based on the rates seen at WWT's Steart Marshes).[3] For context, the UK emitted 405.5 MtCO2e in 2020.[4]

The restoration and creation of natural and semi-natural habitats to support the transition to net zero requires labour, creating new job opportunities. Green Alliance & WPI's 2021 report 'The economics of enhancing the natural environment' looked at three types of nature-based solution (woodland creation, peatland restoration and urban green infrastructure) and found a potential for over 16,000 new jobs through these workstreams this decade, with the new roles being concentrated in areas of economic deprivation, boosting growth in the places it is most needed.[5]

Habitat restoration also provides new revenue streams for farmers and rural land managers. A 2022 report from the Energy & Climate Intelligence Unit concluded that companies looking to offset emissions could create a £700 million a year market for farmers who can increase stores of carbon in vegetation and soils on their land.[6] These companies could effectively pay farmers to compensate for some of their emissions, creating a new private market and new private investment in restoring soils and carbon-storing nature.

Permanent grasslands are at the heart of England's livestock production and wider farming economy, accounting for 40% of all farmland. They are often overlooked as a nature-based solution, due to limitations in grassland soil carbon datasets and an emphasis on tree planting and peatland restoration in policy. Yet they are estimated to hold a third of the UK's terrestrial carbon in topsoils alone.[7] Appropriate land management practices and the restoration of semi-natural and species-rich grasslands, particularly by increasing diversity of deep-rooting species, offers an opportunity to protect and enhance this increased

[2] https://www.iied.org/cba14-closing-uk-minister-urges-countries-allocate-more-finance-nature-based-solutions-help-tackle
[3] https://www.researchgate.net/publication/355265428_Rapid_carbon_accumulation_at_a_saltmarsh_restored_by_managed_realignment_far_exceeds_carbon_emitted_in_site_construction
[4] https://committees.parliament.uk/writtenevidence/38933/pdf/
[5] https://green-alliance.org.uk/wp-content/uploads/2021/11/The-Economics-of-Enhancing-the-Natural-Environment-final.pdf
[6] https://eciu.net/analysis/reports/2022/levelling-up-farming
[7] https://www.sciencedirect.com/science/article/abs/pii/S0264837709000945?via%3Dihub

carbon sequestration and storage capacity.[8] Restored grasslands can also provide multifunctional benefits and wider ecosystem services, such as natural flood defences and resilience to extreme weather events, soil erosion prevention, pollutant absorption, and support for pollinators and wildlife.

Reducing grazing livestock numbers and fertiliser inputs to achieve grassland restoration will also help to reduce methane and nitrous oxide emissions, directly contributing to net zero, as well requiring less fertiliser use, reducing input costs for farm businesses[9] and boosting biodiversity. Farmers need government support, clear advice and a strong regulatory baseline to deliver these multiple benefits.

As grassland examples illustrate, restored habitats go beyond helping prevent further global temperature rise and creating new jobs; they address effect as well as cause by allowing us to adapt to the impacts of the climate crisis that are already being felt. Freshwater and estuary ecosystems provide further examples of this; restoring formerly wet habitats to their natural state helps these habitats to retain more water, reducing flooding events. Creating saltmarshes for flood management (through managed realignment) can save an estimated £33,000 per year per km in coastal flood defence costs.[10] A 2021 comparative study of a technical 'grey' flooding preventative measures and a large-scale nature-based solution (NBS) in Belgium revealed ''similar flood security, lower costs, more ecosystem services benefits and higher biodiversity values associated with the NBS option in comparison to the technical alternative.''[11]

The capacity of nature-based solutions to offer climate mitigation, climate adaptation, nature recovery, environmental services, health and economic benefits from one investment renders them formidably cost-effective. The overall value of marine reserves in the UK has been estimated by the RSPB as being between £10.2-£25.5 million.[12] Further estimates from the RSPB suggest that for every £1 invested, there is an estimated return of £4.62 for peatland restoration, £2.79 for woodland and £1.31 for saltmarsh.[13] Investment in natural habitat restoration is a cost-effective path to net zero and to economic growth.

Whilst we urgently need to scale up the protection, conservation and restoration of natural habitats and recognise the role that this will play in climate change mitigation and adaptation, it is important to note that nature-based solutions must not be used as a greenwashing tool for companies to carry on with business as usual. Greenhouse gas removals by natural habitats must be accompanied by rapid and deep emissions reductions in the first instance and even where nature-based solutions provide temporary offsets for residual emissions, there must be continuous efforts to reduce absolute emissions to zero. The UK Climate Change Committee's recent voluntary carbon markets and offsetting report made it clear that businesses need to prioritise reducing emissions at source.[14]

---

[8] https://www.science.org/doi/10.1126/science.abo2380
[9] https://eciu.net/analysis/reports/2022/farming-fertiliser-and-fossil-fuels
[10] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/517006/ncc-research-invest-natural-capital-final-report.pdf
[11] https://link.springer.com/article/10.1007/s13280-021-01548-4
[12] https://www.rspb.org.uk/globalassets/downloads/policy-briefings/nature-based-solutions-adaption-report.pdf
[13] https://www.camecon.com/wp-content/uploads/2021/03/The-economic-costs-benefits-of-nature-based-solutions_final-report_FINAL_V3.pdf
[14] https://www.theccc.org.uk/publication/voluntary-carbon-markets-and-offsetting

Government can reduce the risk of greenwashing by ensuring that high quality nature-based solutions are only used to compensate for genuinely residual emissions where companies have demonstrated that they have reduced emissions as much as possible. We also recommend that the Government provides a regularly updated analysis of residual emissions expected in 2050, alongside an assessment of predicted carbon removals capacity up to 2050. This latter assessment should inform how many residual emissions we can afford to allow and allocate fairly across sectors where there may be hard-to-abate emissions.

4. What more could government do to support businesses, consumers and other actors to decarbonise?

As set out above, investing in nature's recovery offers a route to net zero which also creates jobs, grows skills and spurs investment. To fully unlock this potential, the Government needs to directly invest in high quality nature-based solutions to build confidence and create a well-regulated market, to encourage significant private sector investment.

Direct investment

Both the Dasgupta report[15], commissioned by the HM Treasury, and the Natural Capital Committee[16] have recommended that public bodies should be required to invest in the restoration of natural habitats, in order to help realise the benefits nature-based solutions offer and to kickstart further private sector investment. Public investment in nature can de-risk private sector investment, and we welcome financial instruments such as the Big Nature Impact Fund which sets out to encourage private sector investment in nature.[17]

Investment in high quality nature-based solutions can offer extremely high value for money when non-market benefits are properly quantified. For example, National Trust research shows that £5.5 billion Government investment in urban green infrastructure could realise physical health and wider benefits worth £200bn.[18]

For some habitats, urgent direct investment is required by Government to prevent sequestered carbon from being released into the atmosphere. As habitats degrade due to climate changes, land use pressures and poor management, many can actively start to release carbon, turning carbon stores into a source of carbon emissions. The problem is particularly acute for all UK peatlands (both upland and lowland peatland), which a 2019 study found to have transitioned ''into large emission sources''. Rather than locking away carbon, peatlands in poor degraded condition may now be responsible for around 20Mt of greenhouse gas emissions each year, adding 4% to total UK emissions.[19] The scaling up of the existing Peatland Grant

[15] https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review
[16] https://www.gov.uk/government/publications/a-natural-capital-approach-to-attaining-net-zero-nature-based-interventions
[17] https://bidstats.uk/tenders/2021/W47/763363529
[18] https://www.nationaltrust.org.uk/press-release/new-research-shows-55bn-fund-needed-to-level-up-access-to-urban-green-space-as-part-of-uks-green-recovery
[19] https://www.ceh.ac.uk/sites/default/files/Peatland%20factsheet.pdf

Scheme, following the recent lead of the Welsh Government, would help maintain a net zero asset before it is too late.

A strong case can also be made for increased public funding for natural flood management through wetland restoration, as an effective means of reducing flooding risk and averting the consequent property damage and economic disruption. The Environment Agency has said that natural flood management ''can reduce flood risk, build resilience into hard defences, and reduce the impacts of climate change'' as well as ''improving habitats and biodiversity, increasing water quality and availability of drinking water, and improving health and wellbeing.''[20] An increase in Environment Agency funding to enable more natural flood management would unlock these climate and wider benefits.

Regulating the private market

The Government should intervene to better regulate markets in nature-based solutions, to ensure certainty and a clear regulatory framework for businesses, and to ensure environmental gains are effectively directed, as set out in the Climate Change Commission's report on Voluntary Carbon Markets and Offsetting.[21] In the words of the report:
''The Government must put in place stronger guidance, regulation and standards to ensure purchase of carbon credits is not used as a substitute for direct business emissions reduction, and to improve the integrity and transparency of carbon credits."

Efficient and high integrity markets for environmental services have been shown to be very effective in attracting private investment. Well-regulated markets for air and water quality improvement, and renewable energy and energy efficiency have delivered substantial private investment in environmental outcomes in countries such as the US, Australia and Italy.

However, there is currently a lack of standards to ensure that projects are high integrity, which would give confidence to investors. Credible emissions removals projects require adequate governance structures that can accurately quantify the carbon removed as a result of the project, ensure that there are no adverse impacts on wildlife or local communities, and that the carbon is stored permanently.

In the UK we currently only have the Woodland Carbon Code and Peatland Code.[22] The development of further standards across a wide range of habitats both on land and at sea is urgently needed. For instance, the UK Saltmarsh Carbon Code will facilitate the generation of carbon offsets through the creation and restoration of saltmarsh. Finalising this code will be an important step to monetising the carbon value of restored saltmarsh, stimulating increased investment in this carbon-storing habitat.

[20] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1027997/Using_the_power_of_nature_to_increase_flood_resilience.PDF
[21] https://www.theccc.org.uk/publication/voluntary-carbon-markets-and-offsetting/
[22] https://woodlandcarboncode.org.uk/uk-land-carbon-registry

The Government should encourage the widespread agreement and adoption of an overarching set of best-practice principles to guide the development of new codes, such as ensuring that carbon benefits from nature-based solutions are real, additional, enforceable, permanent, and verifiable, and deliver positive benefits for nature recovery, and for the surrounding community. The Government should provide oversight of developing standards and environmental markets, including the creation of a comprehensive public registry to oversee the sale of environmental services to ensure transparency.

Implementing these measures will crackdown on poor quality nature-based solutions schemes, providing value for money for consumers and creating a high integrity market, encouraging private sector investment. For example, tree-planting and woodland creation schemes should be based on the principle of 'right tree, right place, right management' to ensure that existing open habitats and carbon stocks are protected and that schemes deliver genuine long-term gains for carbon and biodiversity.

Private sector investment in high quality nature-based solutions could also be encouraged by:

- Giving stronger environmental objectives to the National Infrastructure Bank, to allow for greater investment in natural capital, stimulating private investment in nature-based solutions.
- Including natural carbon stores in the UK's Greenhouse Gas Inventory.
- Ensuring that the National Infrastructure Commission abides by high integrity nature-based Solutions.

5. Where and in what areas of policy focus could net zero be achieved in a more economically efficient manner?

The current rush to deregulate is creating uncertainty for business and risks creating environmental instability in the decade to come, jeopardising the efficient delivery of net zero.

Our entire economy relies on natural capital and the ability of nature to support the services that specific sectors and businesses depend on. Farmers rely on the soil; water companies rely on healthy catchments, groundwaters, river and streams; retail and development rely on secure supply chains; businesses and communities large and small depend on nature's ability to regulate heat, fire and flood. The decline of natural capital will therefore significantly harm our economy and conditions for business. As the Treasury-commissioned Dasgupta report observes:
''Continuing down our current path – where our demands on Nature far exceed its capacity to supply – presents extreme risks and uncertainty for our economies.''

The Government's deregulatory agenda will usher in these risks; storing up environmental problems further down the line, which will in turn become economic problems.[23] Regulations that protect the bedrock of our environment—air and water quality, soil health, and wildlife— are set to be weakened by the Retained EU

[23] See for more detail on this, the open letter on deregulation sent to Liz Truss by Link and 79 other organisations: https://www.wcl.org.uk/docs/Letter%20to%20Liz%20Truss%20on%20Environmental%20Regulation%20-%2003.10.22.pdf

Law Bill[24], leading to environmental and then economic instability. Even more directly, deregulation will hasten the deterioration of the very natural habitats we need for carbon storage and sequestration.

The argument that these regulations impose unnecessary burdens on business, as suggested in the 'Growth Plan 2022' announced on 23.09.22[25], is unfounded and short-sighted, based on an old-fashioned view of business needs. Progressive businesses in key growth industries understand that a healthy environment is a prerequisite of a healthy economy, that their customers want to see them working to advance the protection of the environment and that nature recovery and decarbonisation are market opportunities. The high business take-up of schemes like 'Building with Nature' (providing guidance to developers on how projects can incorporate the highest green infrastructure standards) demonstrates the growing appetite from business to be at the forefront of nature recovery.[26]

The environmental regulations threatened by the Retained EU Law Bill provide fundamental safeguards for our economy, as well as protecting the habitats we need for carbon storage. Their removal will jeopardise both net zero and economic efficiency – the Government must urgently rethink.

25. What has worked well? Please share examples of any successful place-based net zero projects.

The Steart Marshes saltmarsh in Somerset, jointly created by the Wildfowl & Wetlands Trust and the Environment Agency, provides a robust UK example of the ability of the climate and economic benefits to be delivered from restoring natural habitats. The site restored 250 ha of saltmarsh which stored 18,000 tonnes of carbon over a four-year period[27], a rate equivalent to taking 3,830 cars off the road.[28] The site protects adjoining communities from flooding and provides recreational space to enhance local wellbeing. The site supports 53 waterbird species, including several IUCN red-listed species, nine bat species, and 21 species of dragonfly.[29]

27. How can the design of net zero policies, programmes, and funding schemes be improved to make it easier to deliver in your area?

An investment in skills and training is required, to equip people to take up the new nature jobs that high quality nature-based solutions will create.

It is estimated that thousands of skilled people will already be required in this decade to meet the objectives arising from current Government green policies and existing environmental commitments. These job numbers will increase further, if recommendations for large scale nature restoration to aid the transition to net zero are taken up.

[24] https://www.mcsuk.org/news/analysis-the-retained-eu-law-bill/
[25] https://www.gov.uk/government/publications/the-growth-plan-2022-documents/the-growth-plan-2022-html
[26] https://www.buildingwithnature.org.uk/about
[27] https://www.biorxiv.org/content/10.1101/2021.10.12.464124v1.abstract
[28] https://www.wwt.org.uk/news-and-stories/news/new-study-shows-allowing-the-sea-back-in-could-help-uk-meet-climate-goals/
[29] https://www.wwt.org.uk/our-work/projects/creating-steart-marshes/

These growing nature jobs markets include:

- England Trees Action Plan - A recent report by the IPPR estimates that this would create 46,000 jobs in forestry alone, if fully implemented.[30]
- Flood management – The IPPR estimate that scaled up investment in flood risk management, including Natural Flood Management, could create 6,500 jobs.
- Environmental Land Management (ELM) – This will pay farmers and land managers to provide environmental public goods. This could support 14,000 direct jobs, if delivered to a high ambition over the coming years (see more below).[31]

Providing people with the skills and career routes to access these growing nature job markets will contribute to both the delivery of net zero and economic growth.

28. Are there any other implications of net zero or specific decarbonisation projects for your area that the Review should consider?

We would highlight the contribution that ambitious environmental policies at sea, in wetlands and in the agricultural sector would make to net zero, while also boosting growth.

Marine ambition

The English North Sea alone is estimated to store 100.4 Mt carbon in just the top 10cm of the seabed, which equates to 880 tC per km2.[32] This carbon storage is threatened by continued bottom trawling practices, which release stored carbon into the atmosphere and degrade the capacity for future carbon storage, turning a carbon store into a carbon emitter. Marine Conservation Society (MCS) research estimates that carbon emissions released by bottom trawling across the UK continental shelf between 2016 and 2040 could cost up to £9 billion to mitigate.[33]

Further MCS research shows that action to address marine carbon store deterioration, through a swift ban on bottom trawling, would deliver significant benefits. On the economic side, the consequent recovery of fish stocks and carbon storage potential would deliver (after 13 years) £3.41 returned for every £1 spent. This equates to a cumulative net economic gain of £7.2 billion over a 20-year period.[34]

Wetland ambition

[30] https://www.ippr.org/files/2020-07/transforming-the-economy-after-covid19-july2020.pdf
[31] Based on 1 direct FTE job per £70,000 investment, from RSPB data on habitat restoration and creation projects
[32] https://www.wcl.org.uk/docs/WCL-Tackling%20climate%20change%20through%20ocean%20protection.pdf
[33] https://www.mcsuk.org/ocean-emergency/marine-protected-areas/marine-unprotected-areas/
[34] https://www.mcsuk.org/news/report-finds-more-reasons-to-ban-bottom-trawling/

Over the last 500 years, England alone has lost approximately 90% of its wetlands.[35] WWT have recommended that the UK restores 100,000 hectares of wetlands, including a minimum of 22,000 hectares of saltmarsh by 2050. WWT estimate that this would save an extra 1.5 megatons of CO2 equivalent per year in the saltmarsh instead of being released into the atmosphere.[36] This should be done alongside effective protection and management of the UK's existing 48,545 hectares of saltmarsh[37], to make sure the carbon remains buried. If the habitat is maintained, saltmarsh carbon can accumulate indefinitely in some situations.[38] Restored UK saltmarshes also have great economic value, due to their role as a valuable habitat for key fish species. They are conservatively estimated to be worth around £3 million annually to the commercial landings of European seabass, common sole and European plaice.[39]

Agricultural ambition

In 2019 the agricultural sector was responsible for 10% of total UK carbon emissions.[40] This is an outsize contribution from a sector that makes up 0.52% of our GDP.

Without net zero, farming itself will suffer. As the Government's own Food Security Report 2021 highlighted: *"Climate change and emissions pose significant risks to production and food security. As a consequence of unusual weather patterns associated with climate change, wheat yields in 2018 were 7% below the 2016 to 2020 average, and in 2020 were 17% below that average."*[41]

Happily, the new Environmental Land Management (ELM) system of paying farmers for environmental goods announced following Brexit should help to reduce the carbon emissions from the sector, whilst helping to mitigate the direct threat climate change poses to the future of farming.

Any plans to weaken ELM, reported as a possibility being considered by Ministers this autumn, should be dropped, to ensure the system contributes to net zero and boosts the rural economy as intended. To secure these benefits, the overall budget for ELM should be maintained and guaranteed beyond 2024, with the equal funding split between the three ELM schemes protected until it is clear how funding needs to be prioritised in order to meet our nature and climate goals.[42]

---

[35] https://www.global-wetland-outlook.ramsar.org/

[36] https://www.researchgate.net/publication/355265428_Rapid_carbon_accumulation_at_a_saltmarsh_restored_by_managed_realignment_far_exceeds_carbon_emitted_in_site_construction

[37] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1097875/The_extent_and_zonation_of_saltmarsh_in_England_2016-2019_-_report.pdf

[38] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6883032/

[39] https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/csp2.363

[40] https://www.gov.uk/government/statistics/agri-climate-report-2021/agri-climate-report-2021

[41] https://www.gov.uk/government/statistics/united-kingdom-food-security-report-2021/united-kingdom-food-security-report-2021-theme-2-uk-food-supply-sources#united-kingdom-food-security-report-2021-theme2-indicator-2-1-1

[42] https://www.wcl.org.uk/defra-farming-review-whats-needed-for-success.asp

ELM schemes should also reward farmers for increasing access to the countryside, as promised at their inception.[43] Increased access to green spaces will help widen and deepen public appreciation for the environment, growing understanding of the need for net zero and smoothing the path towards it.

As set out above, regulatory standards also provide certainty to farm businesses to undertake measures that support achievement of net zero. We support the proposal to develop a Land Use Framework in England which would play a similar role by giving farm businesses confidence in where to invest and a better understanding of the sector's role in meeting climate targets. Although the Government's Net Zero Strategy set out the total emissions reductions expected from this sector by 2050, there is little clarity about how this will be achieved and the relative proportions of emissions reductions for different targets and programmes across the sector. Research also shows that existing plans for land use emissions in the UK's Net Zero Strategy could be more ambitious.[44]

Currently, this sector is one of the few sectors without its own emissions reduction strategy. Providing this vision for the sector through a Land Decarbonisation Strategy would allow farmers and land managers to take action to decarbonise their practices and increase removals. Furthermore, a decarbonisation strategy should address the current lack of spending and guarantees for programme delivery and funding, which deters farmers and land managers from acting.

For questions or further information please contact:
Matt Browne & Imogen Cripps, Wildlife and Countryside Link
E: matt@wcl.org.uk imogen@wcl.org.uk

25 October 2022

This response is supported by the following Link members:

The Wildlife Trusts
The RSPB
Wildfowl & Wetlands Trust (WWT)
The Ramblers
Friends of the Earth (England, Wales and Northern Ireland)
British Ecological Society
RSPCA
Plantlife
Chartered Institute of Ecology and Environmental Management (CIEEM)
Open Spaces Society

[43] https://www.wcl.org.uk/docs/Public_access_is_a_public_good-ELM_Link_briefing_Nov21.pdf
[44] https://www.wwf.org.uk/updates/land-of-plenty

Bat Conservation Trust
Bumblebee Conservation Trust
A Rocha UK
Whale and Dolphin Conservation
Institute of Fisheries Management
Woodmeadow Trust
Rare Breeds Survival Trust
FOUR PAWS UK
The Angling Trust