

Nature-Based Solutions in the Green Recovery

Summary

- Nature-based solutions should be a core part of the 'Green Recovery' from the Covid-19 crisis – delivering a wealth of public goods, helping to stabilise the climate, and protecting us from future shocks.
- Nature-based solutions, including conserving and restoring nature habitats, could significantly contribute to climate change mitigation, whilst simultaneously benefiting biodiversity and other ecosystem services.
- Key habitats need to be protected and restored including peatlands, freshwater and coastal wetlands, semi-natural woodlands, and permanent grasslands. This should be done in conjunction with a transition to sustainable agricultural practices, as well as wider legislation such as the Environment Bill and the Nature Recovery Network.

Nature-based solutions to climate change play a critical role in mitigating climate change by creating and restoring natural habitats. They could provide **30% of the global climate change mitigation, per year, required to deliver the 1.5 target by 2050** (equivalent to 15 billion tonnes of carbon dioxide). **Despite this, nature-based solutions currently receive only 2.5% of the funding worldwide which is spent on tackling climate change.**

Recently, the **IPBES** report stated that **1 million species globally are at risk of extinction, and the 2019 State of Nature report found that 41% of UK species have declined since 1970, with the UK being one of the most nature-depleted countries in the world.** Simultaneously, the UK has lost a huge amount of our natural landscapes, including 97% of our meadows since WW2, 80% of our chalk grasslands, and more than half our ancient woodland. **Ecosystem breakdown leads to vast releases of greenhouse gases; climate breakdown will lead to extinctions on a grand scale.**

The RSPB recently undertook [research](#) to map the landscapes that are both important for nature (i.e. ancient woodland, peatland, wetlands and more), and which also act as carbon stores and sinks. We found that these landscapes contain **2 gigatons of carbon – the equivalent to 4 years of the UK's annual emissions.** If these landscapes continue to degrade, they will continue to release emissions that will exacerbate climate change.

Policies to protect and restore nature can help to lock away emissions

The UK must show global leadership on nature-based solutions and climate-friendly land management in the run-up to its Presidency of UNFCCC COP26, particularly considering the Government's announcement that the conference will shine a spotlight on the role of nature in tackling the climate crisis. This must include urgently introducing a range of ambitious policies to deliver:

- **Significant additional funding for biodiversity and nature-based solutions.** Government funding for biodiversity conservation, as a percentage of GDP, has fallen by 42% since 2008. Investing an additional



£5.62 billion per year in our habitats will increase our chances of leaving our environment in a better state for future generations.

- **An Environment Bill** which includes targets for nature's recovery, an independent Office for Environmental Protection, and a Nature Recovery Network to inform planning decisions.
- **An Agriculture Bill** which commits to an ambitious 'Public Money for Public Goods' approach to agricultural subsidies, alongside a wider transition to sustainable farming. This should include a 2040 net zero target for emissions from agriculture and land use.
- **The ambitious 25 Year Environment Plan**
- Enhanced international ambition and commitment to deliver nature-based solutions under the **UNFCCC at COP26**, including significant support for the role ecosystems play in countries' Nationally Determined Contributions under the Paris Agreement.
- Enhanced multilateral cooperation towards the **Post-2020 Framework under the Convention on Biological Diversity** to halt and reverse nature's decline.
- A significant uplift in **international climate finance for nature-based solutions**, working in collaboration with other donors.
- **A reduction of the UK's global environmental footprint** by introducing legislation and trade policies that enshrine strict environmental and human rights safeguards, and working towards sustainable commodity value chains.

Peatlands

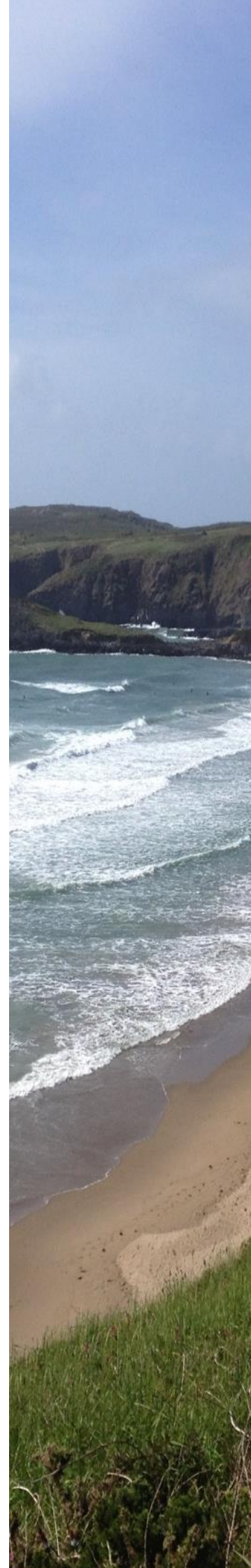
Peatland covers 12% of the UK's total land, and contains more carbon than the forests of UK, France and Germany combined. Much of the UK's peatlands is in poor condition, with dry soils releasing emissions and failing to support wetland species. This is mainly due to drainage and burning, primarily the result of intensive management for agriculture and grouse moors. Whilst our upland peatland should be a net carbon sink, due to this degradation it is instead releasing the equivalent emissions of 140,000 cars per year – 75% of as a direct result of burning. Healthy peatland has loads of co-benefits, alongside sequestering carbon and being very biodiverse – like holding more water so reducing the risk of flooding downstream, improving water quality, mental and physical health benefits for local communities, and tourism.

The Government must:

- **Ban burning on blanket bogs**, including grouse moors, rather than the current voluntary agreements.
- **Ban the use of peat in horticulture.**
- Increase funding for peatland **re-wetting** and restoration.

We support the establishment of Defra's new lowland peat soils task force. We call on this group to:

- Develop measures to halt the serious, ongoing loss of lowland peat soils under intensive agricultural production.
- Recommend and incentivise economic uses and land management compatible with the sustainable management of this wetland soil type



Semi-natural forests and woodlands

The UK has lost much of its native woodland and is now one of the least forested countries in Europe. The Government needs to ensure that environmental land management schemes:

- **Prioritise the conservation, enhancement and restoration of the few remaining areas of ancient and semi-natural woodland** in the UK. This should include protecting the best sites for wildlife and restoring important habitats damaged by plantation forestry.
- Supporting **new woodland creation in appropriate locations**, at the right scale and supporting appropriate **native species**, to deliver multiple benefits for carbon, the environment, wildlife and people.
- Develop robust plans to **sustainably deliver tree planting** targets

Species rich grasslands

Permanent species rich meadows and grasslands have high levels of soil carbon and high biodiversity value, with an average of 40 species per square metre. However, 97% of our meadows & grassland has been lost since WW2 – either ploughed up, sprayed with pesticides, or developed on. 75% of the remaining meadows are just tiny fragments of less than 2 hectares, which limits their biodiversity and carbon sequestration.

They also provide lots of co-benefits like sequestering carbon, flood plain meadows capturing and holding back water, nutritional benefits and a reduced need for antibiotics for grazing livestock. They're also a key part of our cultural heritage.

Government policies should support:

- **Protection of the tiny amount of meadow remaining**
- **Reversion to permanent, natural grasslands**, including wet or chalk grasslands as part of a varied farming landscape.

Coastal wetlands/saltmarsh habitat

Estuaries and coasts are vital for carbon & biodiversity, as well as protection from flooding, and boosting fishing and tourism. Our coasts are estimated to provide £48 billion in ecosystem services per year, and **they can sequester up to 4 times more carbon than tropical rainforest.**

Since WW2 the UK has lost 15% of our saltmarsh, 18% of our sand dunes, and 46% of our shingle habitat. We're predicted to lose another 3,000 hectares per year by 2050 due to climate change, sea level rise, coastal squeeze and coastal erosion.

Managed realignment is when traditional flood defences are replaced with wetlands and saltmarshes. For example, RSPB's Medmerry provides flood protection, saves £300,000 per year in flood preventing costs, and includes 138 hectares of intertidal habitat. Some of the saltmarsh is now also grazed by cattle. It protects 348 properties that were at risk of flooding, and main roads serving 5000.

Across England, 26.5k hectares of saltmarsh could be created, using partnerships that connect local communities, NGOs, government and private investors, to deliver jobs, a resilient economy, health communities and biodiversity & carbon benefits.

The Government must:

- Use nature-based solutions to restore habitat and reduce flood and coastal erosion risk, such as natural flood management and managed realignment.



- Undergo a widespread seagrass restoration programme of our underwater meadows to restore ocean health and sequester carbon.

Oceans, kelp and seagrass

We have twice as much 'forest' cover at sea as we do have on land – through seagrass, kelp forest, and seaweed. As well as being great for biodiversity, they capture carbon at a much faster rate than land-based ecosystems. Seagrass globally covers 1% of the ocean floor, but captures over 10% of all the organic carbon stored by the ocean. They're mosaics of life that are also key to coastal communities – by restoring fish stocks, stabilising coastal defences, and improving water quality. The UK has lost between 50 and 90% of our seagrass over the past 100 years. Globally, kelp captures between 200 to 600 million tonnes of carbon each year. At the lower end this is higher than emissions of New York, and at higher end its as much as UK's total annual emissions. The Government must:

- **Protect our seagrass and kelp forests** – the economic benefits of protecting what we have are much greater than restoration
- **Invest in restoring sea grass and kelp** that has been lost
- **Ban super trawlers**
- Make all UK **MPAs fully or highly protected**. MPA's currently cover 20% of the UK's coast, but many activities aren't restricted within them – we need '**no take**' zones.
- **Reallocate fishing quotas** based on social and environmental benefits

Agroforestry and orchards

While restoring specific habitats is important, 70% of the UK is farmed. Orchards are multi-functional, with many co-benefits: new sources of incomes, additional jobs, sustainable food (fruit & nuts), biodiversity gains, carbon sequestration, protecting against soil erosion, and physical and mental health benefits for local communities. Agroforestry is where woodland is incorporated into the farming system, rather than farming being replaced with trees. This protects against top soil erosion, prevents flooding, provides shelter for livestock and diversifies farm income. Agroforestry can increase carbon in the soil by 34% compared to cereal crop, and an extra 10% when converted from pasture. Government should:

- **Provide financial support and advice** through Environmental Land Management scheme that enables farmers to transition to orchards and agroforestry
- Establish a **2040 net zero target** for land emissions in the Agriculture Bill.
- Introduce **ambitious baseline regulation for farming** under the Agriculture Bill to ensure farming does not continue to damage the

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