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Executive summary

- Nature-based Solutions (NbS) are actions that involve the **protection**, **restoration** or **management of natural and semi-natural ecosystems**; the sustainable **management of working lands** such as croplands or timberlands; or the **creation of novel ecosystems** in and around cities or across the wider landscape. They are actions that **support biodiversity** (i.e. the diversity of life from genes to ecosystems) and are **designed and implemented with, by and for local communities**. In this way, NbS can secure the flow of vital ecosystem services that underpin sustainable development now and into the future.

- NbS can tackle both the climate and biodiversity emergencies but only if designed well and supported by the right policies.

- **Globally, scaling up NbS to the maximum extent possible would remove 10-11 GT CO2e from the atmosphere every year**, *but only if we also decarbonise the economy.*

- **In the UK, protecting natural ecosystems will secure 16,231 Mt CO2e while the restoration of degraded peatlands and native woodland would provide additional climate change mitigation of 75-123 Mt CO2e by 2030 and 278-492 Mt CO2e by 2050**. There is also significant albeit as yet sparsely quantified mitigation potential in coastal ecosystems such as sea grass meadows, kelp forests and saltmarshes. The protection and restoring of these ecosystems in the UK would also protect biodiversity and support adaptation to climate change impacts.

- Some options currently proposed as climate solutions have **adverse impacts** on biodiversity, especially **large scale tree-planting on naturally treeless habitats with non-native species** for the purposes of commercial forestry, and over-extraction of biomass from existing native woodlands.

- Policies should support the four guidelines for successful, sustainable NbS:
    - NbS for climate mitigation are **not a substitute for decarbonising the economy**;
    - The protection and restoration of a **wide range of ecosystems** should be supported, including semi-natural grasslands, heathland, scrub, native woodland, wetlands, saltmarshes and coastal and marine habitats;
    - NbS should be designed and implemented with, for and by **local communities**;
    - NbS should be explicitly designed to deliver **benefits for biodiversity**;

- In the UK, scaling up NbS (especially the restoration and protection of key ecosystems) would benefit from policies that (i) **protect and restore a wide range of natural and semi-natural ecosystems** in the planning system; (ii) **connect habitats** across landscapes in line with the emerging Nature Recovery Networks; (iii) **build NbS into new developments** as green infrastructure (e.g. sustainable drainage systems in new developments); (iv) **use agriculture subsidies** to support ecosystem stewardship that benefit both climate and biodiversity; (e) **harmonize,** where possible, with **emerging EU legislation**.

- In relation to COP26 negotiations linking markets and NDCs (Article 6), there is a need to develop scientifically robust and transparent rules that lead to genuine emissions reductions and logically lead to a ratcheting up of future NDC commitments to reach net zero. **The development of robust metrics that assess the value of interventions for carbon, biodiversity and human wellbeing is needed to align NbS targets across the UNFCCC and CBD.**

- The Government should consider new ways to finance an up-scaling of NbS (so long as they support both carbon and biodiversity and meet the guidelines), including but not limited to:

    - Providing **tax incentives to "good investors"** in NbS schemes (i.e. those with ambitious and credible pathways to net zero carbon and zero biodiversity loss in their supply chains);
    - **Taxing carbon intensive sectors** (aviation, fossil fuels);
    - Strategic shifting of public investments away from damaging agricultural **subsidies to promoting sustainable agriculture and ecosystem stewardship**;
    - Tapping into **local investors who benefit from NbS** e.g. green infrastructure (i.e. the LENS approach – the finance model for the Nature Recovery Network);
    - **Rewarding farmers and land managers** who invest in low carbon solutions, better soil management, and biodiversity conservation;
    - Supporting agencies that can help farmers and land managers implement and scale-up sustainable agriculture and NbS and demonstrate the outcomes of their actions to other farmers and land managers.

- **NbS must not be a seen as a substitute from the urgent task of decarbonising all sectors of the economy.** NbS can deliver climate mitigation via reduced emissions from careful ecosystem stewardship and increased carbon storage. However, the UK cannot meet its climate goals without shifting its economy away from greenhouse gas emitting activities. NbS have a key role to play in an economically efficient portfolio of climate mitigation and adaptation, but *investment in NbS through offsetting schemes should only be permitted if investors have ambitious and credible plans for both decarbonization and removing ecosystems loss and damage from their supply chains.*

Professor Nathalie Seddon and the NbSI

I am Professor of Biodiversity at the University of Oxford and Director of the Nature-based Solutions Initiative (www.naturebasedsolutionsinitiative.org), an interdisciplinary programme of research, policy advice, and education aimed at increasing understanding of the effectiveness of nature-based solutions to global challenges. After training as an evolutionary ecologist at Cambridge University, I developed broad research interests in understanding the origins and maintenance of biodiversity and its relationship with global change. I am a Senior Associate of the International Institute for Environment and Development and a Senior Fellow of the Oxford Martin School. I advise governments, UN agencies and businesses on Nature-based Solutions and am a Friend of CoP26, i.e. one of 28 global experts currently advising the UK government on CoP26. It is in this capacity that I am submitting evidence on the promise of nature-based solutions as well as challenges around their implementation and financing.

Co-ordination of UK environmental policy

How can policy be better integrated and aligned across government departments to address biodiversity, climate change and sustainable development?

1. Defra and BEIS should work together to consider the biodiversity impact of nature-based climate actions. In the UK, current targets for 30,000 ha of new woodland creation per year could result in adverse impacts on biodiversity if a large proportion continues to be met through commercial timber plantations using non-native species. In recent years there has been a shift from planting predominantly broadleaved woodlands to predominantly conifers. For example, 8,000 ha of the 13,000 ha that were planted in 2018 were conifers[1]. Benefits for both climate and biodiversity can be achieved by encouraging more native woodland creation, including through natural regeneration, and avoiding tree-planting on semi-natural grassland.

2. MHCLG should consider the biodiversity and climate impacts of development policies and should strengthen planning policy accordingly. In particular, the loopholes allowing destruction of ancient woodlands for major infrastructure projects such as road and rail should be closed.

3. Defra and BEIS should work together to ensure targets and indicators for scaling up ambition for climate through nature-based solutions in the UK Nationally Determined Contribution are closely aligned with climate change adaptation and biodiversity goals.

What is the role of central government in ensuring other public bodies give adequate priority to biodiversity and ecosystems protection, including local authorities and local economic partnerships?

4. Planning policy needs to be strengthened, as above. Currently local authorities wishing to protect their natural assets can be overruled by the Planning Inspector. Local Economic Partnerships do not routinely take account of the impact of growth and development policies on natural assets.

What outcomes and protections should the UK Government be pushing for at the forthcoming UN negotiations on the post-2020 global biodiversity framework at the Convention on Biological Diversity COP 15?

5. Targets and indicators for NbS should be aligned between the CBD and UNFCCC.
6. The UK Government should encourage *and support* those nations with large areas of intact rainforest or peatland and relatively low emissions (e.g. Indonesia, Brazil, Democratic Republic of the Congo, India) to scale up the protection of intact ecosystems - avoiding deforestation in such nationals provides the biggest cost-effective mitigation potential by far of any mitigation strategy[2].
7. Biodiversity is the foundation of sustainable NbS, and the UK must help to ensure that NbS are more central to CBD commitments. Methodologies and outcomes differ between the national and international contexts. For example, the amount and permanence of carbon storage in restored ecosystems will vary across different soils and climates, and different strategies (e.g. planting of native species vs. protecting

[1] https://www.woodlandtrust.org.uk/media/47692/emergency-tree-plan.pdf (p7)
[2] Griscom et al. (2020) National mitigation potential from natural climate solutions in the tropics. Philos. Trans. R. Soc. B Biol. Sci. 375, 20190126. https://doi.org/10.1098/rstb.2019.0126

existing habitats) will deliver different biodiversity and adaptation benefits. Protecting and restoring native vegetation in the tropics presents itself as a cost-effective overseas investment for UK mitigation plans, but care must be taken to ensure that overseas investments are fully additional, properly monitored and well-managed. Particular care should be given to making sure that there is full consent and participation of the local people who may rely on such habitats for their livelihoods.

Economics and biodiversity

What are the possible approaches to balancing economic growth and conservation of nature and its contributions? Is there evidence these approaches work and can be implemented?

8. **Balancing the economy and conservation is possible provided that the focus is maximizing well-being, rather than overall economic output (GDP).** Economy-wide growth measured as GDP can only achieve relative decoupling at best; there is no empirical or modelled evidence which supports the notion of absolute decoupling[3]. Further increases in economic growth will increase the absolute material food print. Sectoral growth is possible in the conservation and renewables sector, but for the economy as a whole the focus should be on bringing the amount of production and consumption within sustainable levels[4].
9. Such an approach is **integral to a successful, resilient COVID recovery**. Nature-based solutions, including green infrastructure, can harmonize environmental and economic objectives by providing an opportunity to rapidly scale up employment opportunities to improve working landscapes for the climate, biodiversity, and people[5] .
10. Key examples: for every $1 million invested in coastal habitat restoration in the US, 40 new jobs are created; compared to 19 for investment in the aviation industry, 7 for finance, and 5 for oil and gas[6]. Meanwhile, **new investment of $350 billion a year** in sustainable food and land use systems could create **>120 million new jobs** and **$4.5 trillion in business opportunities** globally each year by 2030[7].
11. Fully integrating NbS as solutions to both the climate and biodiversity crises requires a new approach in economic thinking, shifting from a focus on infinite economic growth to a recognition that the energy and material flows needed for human wellbeing must remain within safe biophysical limits' (see refs in Seddon et al[8]).
12. This would be enabled by better accounting for the value of natural capital assets – not just in terms of monetary value, which can be problematic, but also in terms of biophysical benefits (e.g. number of people protected from coastal flooding by saltmarshes).
13. Changes to the economic system are also required, typically involving a combination of environmental taxes to reduce material consumption, with measures such as a basic income to enable job sharing[3,9].

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[3] Hickel & Kallis (2019) Is Green Growth Possible? *New Political Economy*
[4] Jackson (2009) Prosperity without growth.
[5] Krebel et al (2020) Building Green Stimulus for COVID-19.
[6] Edwards et al. (2013) *Marine Policy*
[7] Food and Landuse Coalition (2019) Growing Better: Ten Critical Transitions to Transform Food and Landuse.
[8]Seddon et al. 2020. Understanding the value and limits of nature-based solutions to climate change and other global challenges. *Philos. Trans. R. Soc. B Biol. Sci.* 375.

[9]Raworth (2017) Doughnut economics: seven ways to think like a 21st-century economist. Random House

What is the role of business in protecting biodiversity and ecosystems and can government play a role in helping businesses do more?

14. The World Economic Forum's Nature Risk Rising Report[10], in an analysis across 163 economic sectors, showed that all businesses depend on nature either directly or through their supply chains, and that around $44 trillion of economic value generation (this is over half of global GDP) is dependent on nature.

15. The loss and degradation of ecosystems brings "operational risks; supply chain continuity, predictability and resilience risks; liability risks; and regulatory, reputational, market and financial risks." So, investing in NbS will reduce these risks whilst bringing new business opportunities.

16. Government could increase both environmental regulations to control damage to ecosystems and biodiversity made by businesses. They could also provide tax incentives to those investing in NbS providing they have **ambitious and credible pathways to net-zero carbon emissions and zero biodiversity loss in their supply chains.**

Pairing nature-based solutions to climate change with biodiversity

Which nature-based solutions are most effective in achieving both climate and biodiversity goals?

17. Nature-based Solutions (NbS) are actions that involve the **protection**, **restoration** or **management of natural and semi-natural ecosystems**; the sustainable **management of working lands** such as croplands or timberlands; or the **creation of novel ecosystems** in and around cities or across the wider landscape. They are actions that **support biodiversity** (i.e. the diversity of life from genes to ecosystems) and are **designed and implemented with, by and for local communities**. In this way, NbS can secure the flow of vital ecosystem services that underpin sustainable development now and into the future[7,11].

18. Globally, the most significant contribution for cost-effective (≤ $100 t CO_2e^{-1}) avoided emissions of CO_2 come from protecting intact forests, wetlands and grasslands (4 Gt CO_2 yr^{-1}), while the greatest potential contribution to the global carbon sink comes from managing working lands (5 Gt CO_2 yr^{-1} from 4.1 billion hectares of timberlands, croplands and grazing lands), followed by restoring native ecosystems (2 Gt CO_2 yr^{-1} from 678 million hectares). These estimates include coastal ecosystems (mangroves, saltmarshes, and seagrass) but exclude marine systems (coral reefs, phytoplankton, kelp forests, marine fauna) for which data are few and mitigation potential estimates uncertain[12,20].

19. Globally, bringing *green and blue infrastructure into cities* will also help mitigation climate change impacts (heatwaves and flooding) whilst also delivering multiple health benefits. There is also evidence that increasing forest cover within cities can make a significant contribution to mitigating GHG emissions[13].

20. In tropical nations, the protection and restoration of intact lowland rainforest and peat delivers significant benefits for both biodiversity and carbon storage, while the protection and restoration of mangroves delivers biodiversity, carbon storage *and*

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[10] WEF (2020) Nature Risk Rising
[11] NbS Guidelines 2020: www.nbsguidelines.info
[12]Girardin et al. (2020) Nature-based Climate Solutions: contribution to peak warming and global cooling. Nature (in revision)
[13] De la Sota et al. (2019) Urban green infrastructure as a strategy of climate change mitigation. A case study in northern Spain. *Urban For. Urban Green* 40, 145–151.

climate change adaptation (coastal resilience) benefits[14]. Other tropical coastal ecosystems, such as coral reefs, also support biodiversity and protect communities and infrastructure from the impacts of climate change[15], but store less carbon than mangroves or inland ecosystems.

21. In temperate nations, the protection and/or restoration of peatlands and native woodlands, grasslands, kelp forests and seagrass meadows can deliver climate change mitigation, adaptation and biodiversity benefits; saltmarshes and oyster reefs are also highlight effective at protecting coastlines from erosion and storm damage whilst supporting biodiversity (less is known about their role in carbon sequestration and storage).

22. In the UK, the following NbS can deliver both climate and biodiversity benefits[16]:
    a. **Protection of existing woodlands, hedgerows, trees, kelp forests, peatland and semi-natural grassland through stronger planning policy**. This would require closing the loophole in the NPPF that allows destruction of habitats (including ancient woodlands, which store large amounts of carbon) for major infrastructure projects.
    b. **Peatland protection** should include banning the production *and sale* of horticultural peat. It should also involve the extension of the current ban on planting trees on 'deep' peat (over 50cm depth in Scotland or 40cm in England) to include all depths of peat and organic soils, as recent evidence shows that even planting on shallow peat or peaty soils can cause net losses of carbon[17]. This would preclude planting trees on heather moorland; a practice which is ongoing in Scotland.
    c. **Kelp forest protection** should include reducing overharvesting of kelp (e.g. for pharmaceutical products, bioplastics or biofuel)
    d. **Restoration of native woodlands, hedgerows, grasslands, saltmarshes, kelp forests, moorlands, seagrass meadows, and peatlands** (including lowland peat i.e. fenland peat drained for agriculture).
    e. Reforestation of low quality farmland on mineral soils with mixed native species, especially on slopes in mid-catchments.
    f. **Reversion of low quality arable land to permanent grassland**, especially on slopes or on floodplains. This can also reduce soil erosion and water pollution from agricultural runoff.
    g. **Agroforestry**, silvo-arable and silvo-pasture increases carbon storage above and below ground, whilst also providing shade and shelter for livestock, important for climate change adaptation.
    h. **Regenerative agriculture** that stores more carbon in soil, e.g. no-till or low till farming, use of cover crops, addition of organic matter to the soil, buffer strips or contour hedgerows to reduce soil erosion, and other soil-water conservation methods.
    i. **Urban green infrastructure** (parks, street trees, green roofs, sustainable drainage) – especially for climate adaptation benefits.

23. **Protecting existing habitats or managing farmland more sustainably does not require additional land.** In contrast, options that require conversion of farmland to other uses (such as woodland) need to be accompanied by significant dietary change (reduced consumption of animal produce) to free up land – otherwise any climate

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[14] Strassburg et al. (2020) Global priority areas for ecosystem restoration. *Nature* 586, 724–729
[15] Chausson et al. (2020) Mapping the effectiveness of nature-based solutions for climate change adaptation. *Glob. Change Biol.*
[16] RSPB-WWF-Oxford-Aberdeen (2020) Role of Nature in a UK NDC.
[17] Friggens et al. (2020) Tree planting in organic soils does not result in net carbon sequestration on decadal timescales. *Glob. Change Biol.* 26, 5178–5188.

benefits will be offset by increased food production elsewhere. For example the CCC Land use and climate report[18] envisaged reducing consumption of beef, lamb and dairy products by 20% in order to enable large-scale afforestation of farmland.

24. In the UK, scaling up NbS (especially the restoration and protection of key ecosystems) would benefit from policies that (a) protect all natural habitats in the planning system; (b) connect habitats across landscapes in line with the emerging Nature Recovery Networks; (c) build NbS into new developments as green infrastructure (e.g. sustainable drainage systems in new developments); (d) use agriculture payments to support actions that benefit both climate and biodiversity; (e) synergise where possible with emerging EU legislation.

25. In relation to COP26 negotiations linking markets and NDCs (Article 6), there is a need to develop scientifically robust and transparent rules that lead to genuine emissions reductions and logically lead to a ratcheting up of future NDC commitments to reach net zero. **The development of robust metrics that assess the value of interventions for carbon, biodiversity and human wellbeing is needed to align NbS targets across the UNFCCC and CBD.**

What would constitute clear indicators of progress and cost-effectiveness of nature-based solutions?

26. The four NbS Guidelines can equate to indicators that NbS are being sustainably managed, though further work is required to translate these to measurable indicators. These are:
    a. NbS for climate mitigation are not a substitute for decarbonising the economy;
    b. NbS should be explicitly designed to deliver benefits for biodiversity;
    c. NbS should be designed with and for local communities;
    d. NbS in a wide range of ecosystems should be supported including semi-natural grasslands, floodplain meadow, heathland, scrub, native woodland, wetlands, saltmarshes and coastal and marine habitats (kelp, seagrass, saltmarsh, dune systems).
27. Cost-benefit and cost-effectiveness which solely focus on economic gains will inevitably fall short of capturing the true potential of nature-based solutions to contribute to a well-being economy. There is a need for socio-cultural, pluralistic valuation, to go beyond the standard cost-benefit and cost-effectiveness analyses. Importantly, NbS should not be viewed as 'utilitarian solutions' because they can deliver a range of values including relational values which has critical implications or well-being[19]. This can be achieved through integrated valuation methods such as multicriteria analysis (see refs in 13).

How should trade-offs and co-benefits associated with nature-based solutions, biodiversity and socioeconomic outcomes be considered?

28. Equity and human rights are central to successful sustainable NbS. NbS actions to protect carbon and biodiversity may lead to restrictions in access to resources by vulnerable groups, including Indigenous Peoples with compromised access to ancestral lands, and this may exacerbate poverty. From design to implementation, NbS must be fair at every stage: who owns the land and who influences how it is managed will impact the perceived legitimacy and outcomes of NbS.

[18]Climate Change Committee (2018) Land use and climate change report
[19]Pascual et al. (2017). Valuing nature's contributions to people: The IPBES approach. *Current Opinion in Environmental Sustainability*, 26, 7– 16.

29. The NbS Global Standard provides 28 indicators under 8 criteria to monitor progress and cost-effectiveness. These indicators draw on a strong evidence-base, and can be tailored to the UK context. Criterion 6 specifically addresses how to manage trade-offs to achieve short and long-term gains**. The most important aspect of managing trade-offs through nature-based solutions is to ensure that it is done through a transparent, equitable, and inclusive stakeholder engagement** process because by definition, the extent and magnitude of any trade-off varies depending on the stakeholder group considered**. Such a process should be underpinned by a set of robust safeguards under the 4 guidelines for NbS** to ensure that ecosystem services are sustained in the future. The three indicators from criterion 6 that reflect trade-off management are:

    Indicator 1 - The potential costs and benefits of associated trade-offs of the NbS intervention are explicitly acknowledged and inform safeguards and any appropriate corrective actions

    Indicator 2 - The rights, usage of and access to land and resources, along with the responsibilities of different stakeholders, are acknowledged and respected

    Indicator 3 - The established safeguards are periodically reviewed to ensure that mutually-agreed trade-off limits are respected and do not destabilise the entire NbS

30. NbS by definition should support biodiversity as well as people[20]. Biodiversity benefits can be increased by harmonising NbS with Nature Recovery Networks (NRNs), which should comprise a mosaic of habitats appropriate for the local area (e.g. native mixed woodland, grassland, heathland, scrub, wetland, peatland or coastal habitats).

31. The full range of co-benefits and trade-offs must be considered for an accurate cost-benefit analysis. As well as climate mitigation, other potential co-benefits include flood and erosion protection, water and air quality regulation, urban cooling, habitat for pollinators and other beneficial insects, green space for recreation, aesthetic value, and opportunities for people to interact with and learn from nature.

32. Some NbS have benefits for food production (e.g. by improving soil quality) but there could also be trade-offs, which can be reduced by retaining food production on the best quality agricultural land (e.g. Grade 1 and 2), to avoid displacing impacts elsewhere, though this farmland could still be enhanced for nature.

33. There can also be either benefits or trade-offs for water supply, e.g. afforestation can reduce groundwater infiltration (refs in 13).

34. There will be **adverse biodiversity impacts from tree-planting on naturally treeless** habitats such as natural or semi-natural grasslands or savannahs, heathlands, and peatland. In the UK, some locations such as floodplains would be better used for restoring floodplain meadows rather than planting trees, as 97% of floodplain meadows have been lost. This could store additional soil carbon and provide flood protection as well as habitat for pollinators, and the land could still be used for grazing.

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[20]Seddon N et al. (2020) Getting the message right on nature-based solutions to climate change. *Global Change Biology* (est. pub. 11/20).

35. The **climate benefits of afforestation with plantations of non-native species may be only short term,** given that most harvested wood is used for paper and other short-lived products, or burnt for wood fuel. Although there is scope to expand the use of timber in sustainable construction, the long term climate impacts are limited as this market will eventually saturate. **Current UK targets for 30,000 ha of new woodland creation per year could result in adverse impacts on biodiversity if a large proportion continues to be met through commercial timber plantations using non-native species.** In recent years there has been a shift from planting predominantly broadleaved woodlands to predominantly conifers. For example, 8,000 ha of the 13,000 ha that were planted in 2018 were conifers[1]. Benefits for both climate and biodiversity can be achieved by encouraging more native woodland creation, including through natural regeneration, and avoiding tree-planting on semi-natural grassland.

How can funding be mobilised to support effective nature-based solutions to climate change? How can the private sector be encouraged to contribute to funding?

36. **Voluntary schemes have failed** and will not deliver the rate of decarbonisation required to cut agricultural emissions in line with the CCC's recommendations.

37. The Government should consider **new ways to finance an up-scaling of NbS** (so long as they support both carbon and biodiversity and meet guidelines), including but not limited to:
    a. Providing tax incentives to "good investors" in NbS schemes (i.e. those with ambitious and credible pathways to net-zero carbon emissions and zero biodiversity loss in their supply chains);
    b. Taxing carbon intensive sectors (aviation, fossil fuels);
    c. Strategic shifting of public investments away from damaging agricultural subsidies to promoting sustainable agriculture and ecosystem stewardship;
    d. Tapping into local investors who benefit from green infrastructure (the LENS approach – the finance model for the Nature Recovery Network);
    e. Rewarding farmers and land managers who invest in low carbon solutions, better soil management, and biodiversity, and supporting government extension agencies which can help farmers implement and scale-up sustainable agriculture and NbS and demonstrate the outcomes of their actions to other farmers and land managers.
    f. Helping to establish biodiversity markets or carbon+ markets (where + is the biodiversity premium). Biodiversity offset markets aimed at net gain are targeted at increasing an index of biodiversity, and will not necessarily deliver carbon benefits as well. Similarly, initiatives aimed at offsetting carbon emissions may have adverse impacts on biodiversity (e.g. planting trees in an unsuitable location or using inappropriate species).

38. It is vital to **develop clear metrics and guidelines** to ensure sustainability and allow investors to demonstrate and verify the benefits of a wide range of biodiversity-friendly NbS. There are tools available to estimate the carbon benefits of tree planting and, to some extent, peatland restoration, but there are major data gaps on the carbon impacts of restoring natural grassland (including floodplain meadows), heathland; saltmarsh, seagrass or kelp beds, or natural regeneration (as opposed to planting) of native woodland / scrub / grassland mosaics. Data on biodiversity impacts is also needed; these are rarely explicitly measured. Often there is an implicit assumption that any tree-planting will benefit biodiversity, while actually impacts can

be either positive or negative depending on the species mix and the current land use.

39. **NbS must not be a seen as a substitute from the urgent task of decarbonising all sectors of the economy.** NbS can deliver climate mitigation via reduced emissions from careful ecosystem stewardship and increased carbon storage. However, the UK cannot meet its climate goals without shifting its economy away from greenhouse gas emitting activities. NbS have a key role to play in an economically efficient portfolio of climate mitigation and adaptation, but **actions and investment in NbS through offsetting schemes should only be accepted if investors have ambitious and credible plans for both decarbonization and removing ecosystems loss and damage from their supply chains.**

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