CIEEM, THE ENVIRONMENT AND BREXIT

Biodiversity Net Gain Briefing

The Chartered Institute of Ecology and Environmental Management (CIEEM) is the UK professional body for ecologists and environmental managers working to manage and enhance the natural environment.

CIEEM believes that the "biodiversity net gain" approach is the most effective way to halt biodiversity loss and restore natural capital[1] whilst also supporting a thriving economy. It is a transformative approach to management of the land and seas that offers us the best chance of leaving the environment in a better state for future generations.

What is 'biodiversity net gain'?

Biodiversity net gain is using land or the marine environment in a way that leaves biodiversity in a better state than before, in line with current UK governments' policies, including for example England's 25-Year Environment Plan[2]. Inevitably many human activities, often vital to society's well-being, impact on the natural world. Land, a finite resource, is needed for food production, for housing, for infrastructure and for businesses and, with a growing UK population, we are often faced with making difficult choices as to how we use our land and seas. We have also increasingly recognised the importance of a healthy, resilient environment, which includes a rich biodiversity, as a contributor to human health and wellbeing and to a vibrant economy. For many years we have tried to find ways to encourage appropriate use of land whilst minimising negative effects on the environment. Despite setting targets of 'no net loss' of biodiversity and following a 'mitigation hierarchy' in development planning of 'avoid, mitigate, compensate' we are still seeing worrying declines in species numbers and abundance[3]. **No net loss is not working and we need a more ambitious and radical approach.**

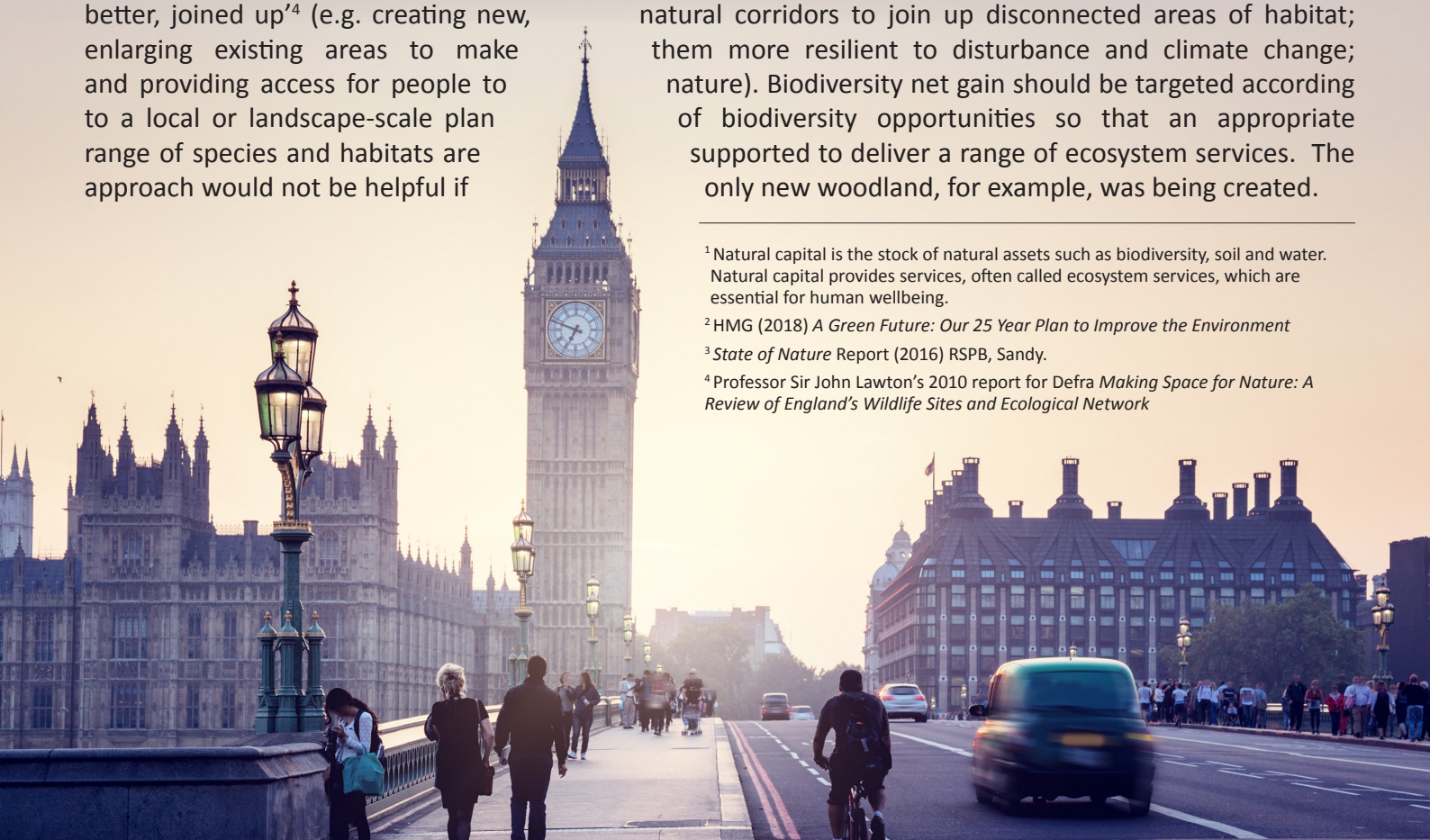
Biodiversity net gain is based on the premise that land use which has a negative impact on the natural environment, such as some types of built development and food production, should provide opportunities for more biodiversity benefit than is being lost. This can be achieved by creating new habitats, restoring damaged habitats or by funding others to do so. The biodiversity 'gain' is targeted to areas where the potential benefits can be most effective, based on the Lawton principles of 'more, bigger, better, joined up'[4] (e.g. creating new, natural corridors to join up disconnected areas of habitat; enlarging existing areas to make them more resilient to disturbance and climate change; and providing access for people to nature). Biodiversity net gain should be targeted according to a local or landscape-scale plan of biodiversity opportunities so that an appropriate range of species and habitats are supported to deliver a range of ecosystem services. The approach would not be helpful if only new woodland, for example, was being created.

[1] Natural capital is the stock of natural assets such as biodiversity, soil and water. Natural capital provides services, often called ecosystem services, which are essential for human wellbeing.

[2] HMG (2018) *A Green Future: Our 25 Year Plan to Improve the Environment*

[3] *State of Nature* Report (2016) RSPB, Sandy.

[4] Professor Sir John Lawton's 2010 report for Defra *Making Space for Nature: A Review of England's Wildlife Sites and Ecological Network*



How it works

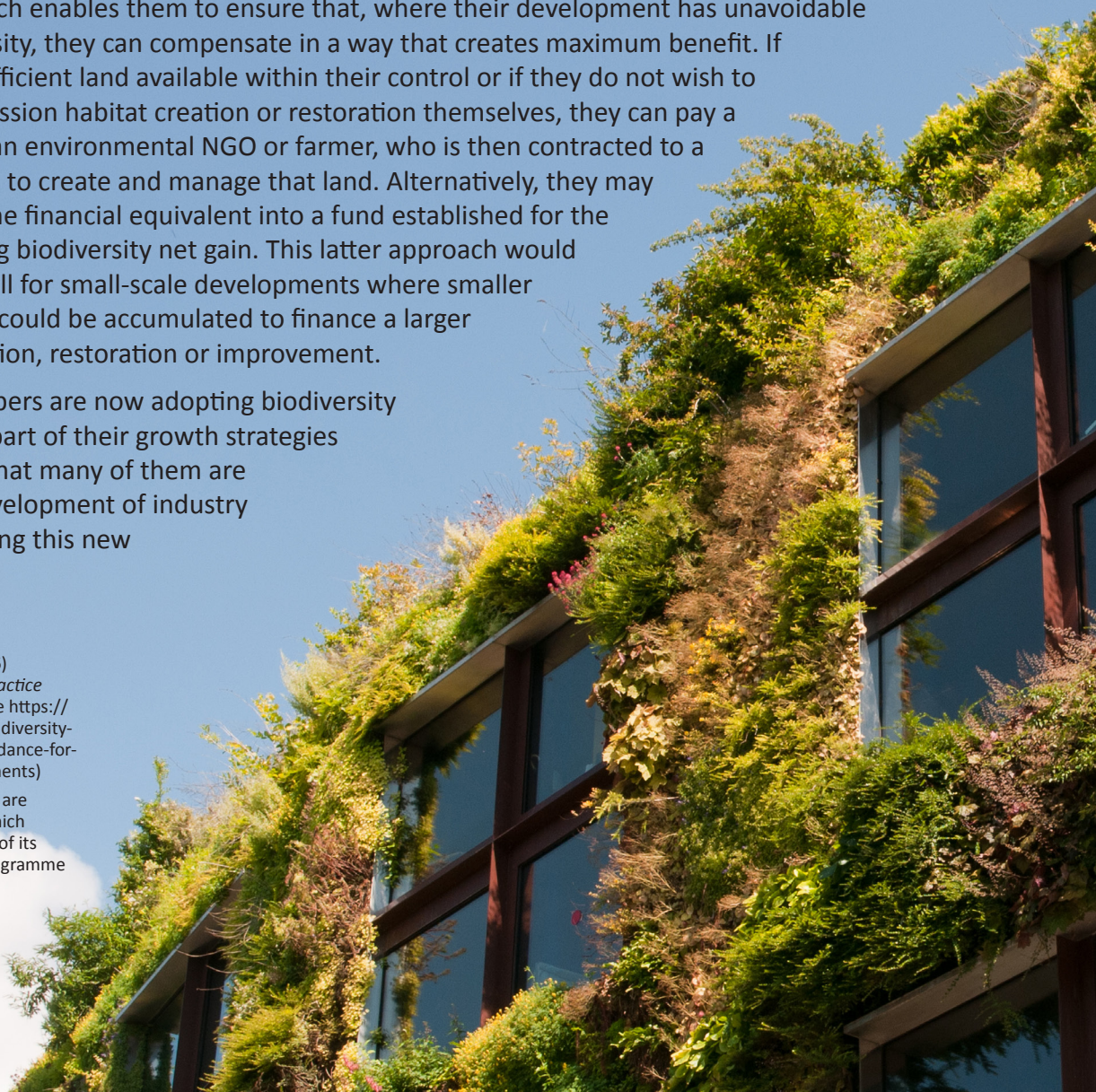
In 2016 CIEEM, together with the Construction Industry Research and Information Association (CIRIA) and the Institute of Environmental Management and Assessment (IEMA), published the first UK principles on delivering biodiversity net gain[5]. Whilst this focused on the development sector, the principles are just as applicable to land owners and tenants involved in food production or marine resource utilisation. The principles set out what genuine biodiversity net gain looks like, how stakeholders should be involved, why the mitigation hierarchy should first be followed and recognises that some habitats cannot be created in any meaningful timescale (irreplaceable habitats such as ancient woodland) but that many others can provided there is a genuine commitment to ongoing management and care.

Biodiversity net gain uses a transparent calculation or 'metric'[6] to measure the value of biodiversity being lost. This is based on criteria such as the species richness of the area, rarity, the size of the area and its condition. Once the value is agreed by stakeholders, this indicates the minimum value of any new or restored habitat that must be delivered. Again, the biodiversity value of potential new or restored habitat is assessed on the same criteria as above but with additional measures related to the risk to successful habitat creation/ restoration and the time lag between the loss of habitat and the successful creation of new habitat. In most cases developers would be expected to replace the same habitat types as would be lost but sometimes this is not possible or desirable. Ideally the local or landscape-scale plan should identify which habitats are most needed and where. In all cases good ecological advice is needed to ensure that the functioning of the natural environment is preserved.

Biodiversity net gain and development

Biodiversity net gain has initially generated most interest from house-builders and infrastructure developers who have recognised the importance of a healthy natural environment to their business success. The approach enables them to ensure that, where their development has unavoidable impacts on biodiversity, they can compensate in a way that creates maximum benefit. If they do not have sufficient land available within their control or if they do not wish to undertake or commission habitat creation or restoration themselves, they can pay a third party, such as an environmental NGO or farmer, who is then contracted to a long-term obligation to create and manage that land. Alternatively, they may be able to deposit the financial equivalent into a fund established for the purpose of delivering biodiversity net gain. This latter approach would work particularly well for small-scale developments where smaller amounts of funding could be accumulated to finance a larger area of habitat creation, restoration or improvement.

A number of developers are now adopting biodiversity net gain policies as part of their growth strategies and it is significant that many of them are now funding the development of industry guidance on delivering this new approach.



[4] CIEEM, CIRIA and IEMA (2016) *Biodiversity Net Gain: Good practice principles for development* (see https://www.cieem.net/news/364/biodiversity-net-gain-eo-principles-and-guidance-for-uk-construction-and-developments)

[5] Most calculations used today are based on the 'Defra metric' which was developed for use as part of its biodiversity offsetting pilot programme from 2012 to 2014.

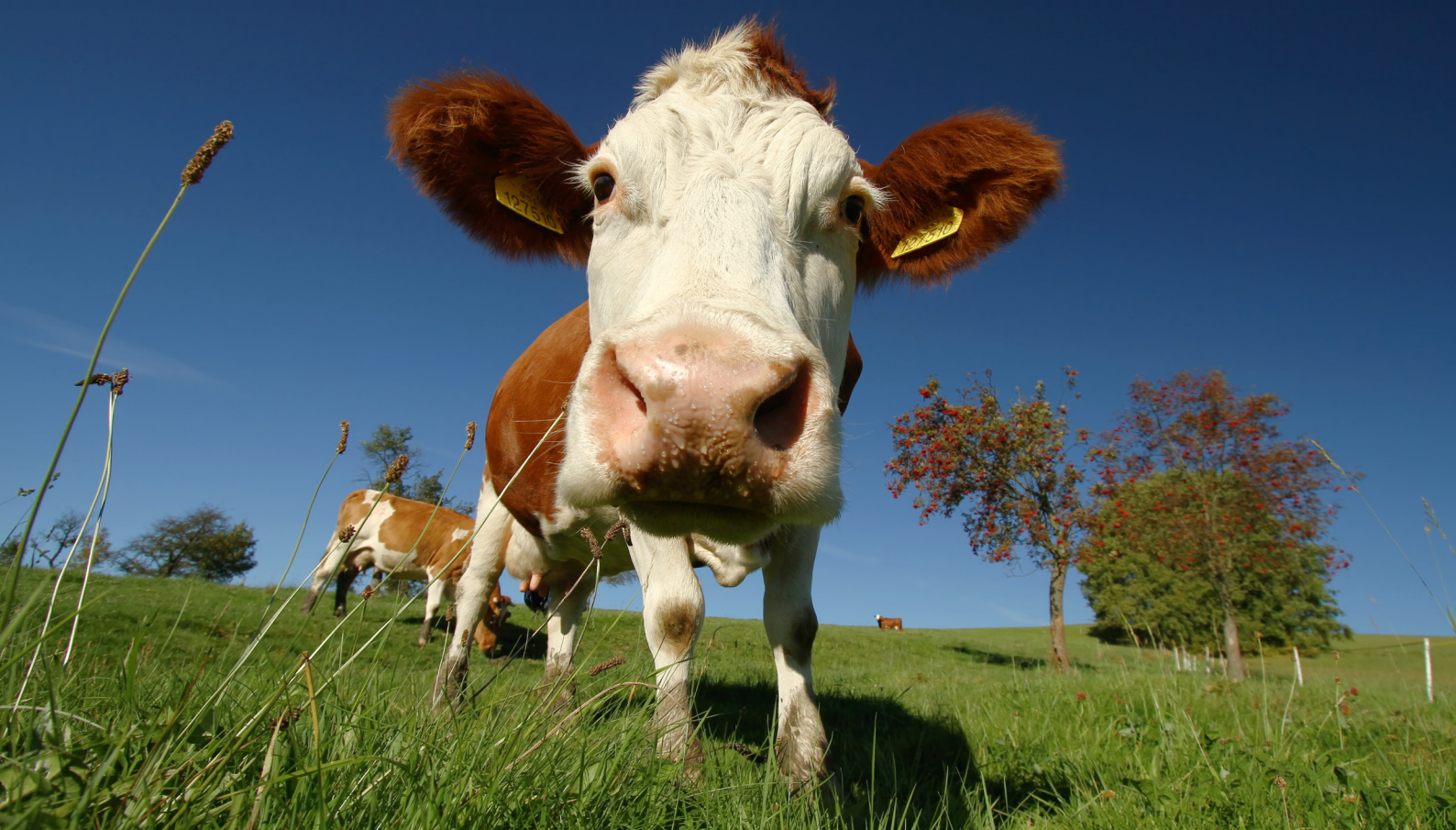
Biodiversity net gain and agriculture

Whilst delivering biodiversity net gain through development is a significant step forward from our current position, there are even more valuable benefits if we extend the approach to agriculture. Approximately 70% of land in the UK is classified as agricultural land. The externality costs from agriculture (e.g. habitat and biodiversity loss, soil erosion, impact from emissions, increased flood risk) which do not appear on the UK farming balance sheet, are highly significant and have largely been driven by the availability of Common Agricultural Policy direct income support. If we could transform agri-environment funding to deliver biodiversity net gain as part of a new 'public money for public benefit' approach we could halt biodiversity loss and restore habitats and species, with all the attendant benefits, at a pace and scale not previously envisaged.

We have the opportunity to design a new funding system that drives forward sustainable food production, facilitates a mass restoration of ecosystems, improves public health and produces environments that the public can enjoy. Biodiversity net gain can be both the process and the outcome. Farmers and landowners, working co-operatively at a landscape or catchment-scale, would be set clear environmental net gain targets for their land, including healthy soils and flood risk management, based on a transparent calculation approved by all stakeholders and according to a strategic plan such as a biodiversity action plan. Advice and help would be provided but would not be prescriptive, allowing those who work the land to decide the best way to achieve the desired outcomes. Farmers and landowners would be paid to deliver the desired outcomes via long-term (25-year) contracts and other potential financial incentives, such as reductions in future inheritance tax, in return for their contribution to a healthy environment. This in turn will help to reduce the impacts of market volatility on farm incomes and provide more financial security.

We envisage two types of contracts: a) those that require farmers and landowners to deliver prescribed outcomes via a targeted approach (i.e. biodiversity net gain) for the creation, enhancement and protection of key natural capital assets and b) for novel interventions and land management approaches that maximize environmental performance, allowing successful methods to be implemented elsewhere (e.g. testing rewilding at a range of different scales (from small-scale to landscape-scale) to identify the feasibility of building investment and creating a viable market for products as part of a healthy local economy as well as other ecosystem services benefits).

Oversight/contract management could be provided by appropriate bodies such as national park authorities, Areas of Outstanding Natural Beauty boards or by the relevant statutory nature conservation body.



Biodiversity net gain and the marine environment

Again, there is the potential to extend the net gain approach to marine environmental management, including marine fisheries. Here net gain focuses less on an individual's actions but more on a strategic approach. For coastal habitats, this could be brought into land management agreements as described above to deliver net gain, for example, through management of diffuse pollution, tackling litter and plastic contamination, but below the mean low water mark, this would require a 'seascape-scale' approach. These community net gains could be funded by contributions from:

- coastal landowners;
- marine and coastal developers (for example offshore oil and gas exploration);
- local authorities; and
- fishing communities.

Specifically, to achieve net gain, we would envisage:

- Strategies to reduce plastic use and disposal.
- Working to remove microbeads and microfibres from products in the value chain.
- Managing fisheries co-operatively in the areas where the UK fleet operates in line with the best scientific advice, including an ending of subsidy for catch of over-fished stocks.
- Ending dumping of by-catch at sea and developing sustainable use for by-catch.
- Developing a larger, more coherent network of rigorously protected Marine Protected Areas.

Action required

- Better integration of biodiversity net gain objectives with national planning policies, together with upskilling of planners to ensure delivery of net gain through the planning system, both in terms of Local Plans and development control.
- Ensuring biodiversity net gain is a key part of new agri-environment funding policies and programmes, together with practical support to farmers and land managers to deliver it.
- New integrated marine management policies that incentivise delivery of net gain through the planning system.
- Development of appropriate standards for recognising effective delivery of net gain and prevent unfounded claims of net gain benefit.

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