

UK'S FORTHCOMING BIODIVERSITY UNIT MARKET: TRADING PERMITS TO DESTROY NATURE AS A WAY TO PROTECT IT?

I. Biodiversity Net Gain requirement: what is it, what is new about it?

The Environment Act¹, which became law in 2021, acts as the UK's new framework of environmental protection post-Brexit. While much has been written on this Act, we find that little has been said about its provisions for introducing a Biodiversity Net Gain (BNG) requirement that may become law in 2023, and the related proposal for a market in Biodiversity offsets. This short brief aims at highlighting some of the questions and concerns raised by these provisions and subsequent related consultations.

While the concept of BNG already exists in the policy requirement in the National Planning Policy Framework, the Act elevates it to a statutory footing by the imposition of a deemed planning condition in England; this deemed condition makes approval of a BNG plan by the local planning authority a precondition of obtaining planning permission. The BNG plan must set out how the “Biodiversity Gain objective” is met.

The Biodiversity Gain objective states that the biodiversity value after development must exceed its pre-development value by at least 10%.

This outcome is to be achieved by implementing a mitigation hierarchy, where all steps must be taken to first avoid and minimize the destruction of biodiversity associated with the development, then to rehabilitate or restore biodiversity on-site and finally to offset any residual negative impact - in fact offset more than the residual impact in order to achieve a so-called ‘net gain’.

Offsetting can be delivered on-site, off-site or via the purchase of biodiversity credits from the government.² Indeed, the act allows the government to sell ‘biodiversity credits’ to developers as a last resort, in case developers are unable to deliver a net gain on-site, off-site or to purchase biodiversity units from other developers. The Act cautions that when setting the price of the credits, the government must ensure that it does *‘not discourage the registration of land in the biodiversity gain sites register.’*

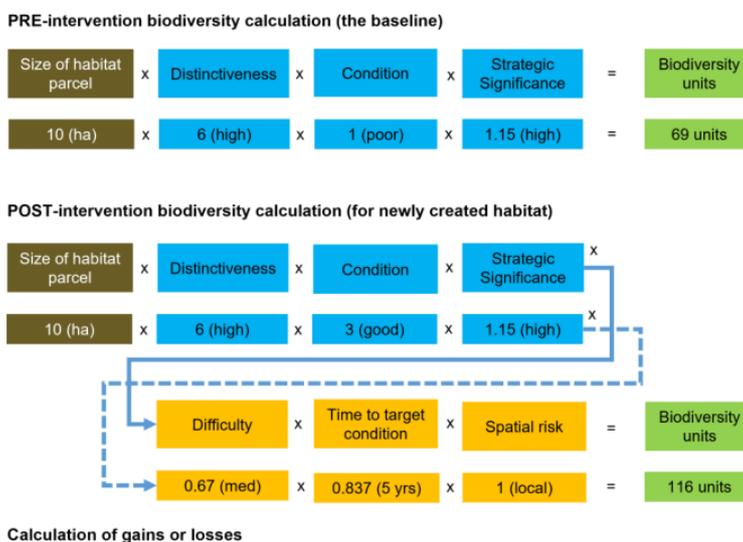
The post-development biodiversity value is calculated as the sum of the value of the on-site habitat + any registered off-site biodiversity gain + the value of any biodiversity credit purchased.

¹ UK Environment Act 2021, <https://www.legislation.gov.uk/ukpga/2021/30/enacted/data.pdf>

² Local Government Association, Biodiversity net gain, <https://www.local.gov.uk/pas/topics/environment/biodiversity-net-gain>

This value is calculated using a biodiversity metric that generates 3 types of biodiversity units (for area, hedgerow and river habitats) that cannot be summed, traded or converted.

The number of biodiversity units is determined by the size of habitat parcel x its distinctiveness x its condition x its strategic significance. As the biodiversity metric user guide puts it, *'the metric is not a complex ecological model and does not substitute for expert ecological advice.'*



Source: Biodiversity Metric 3.1 - User Guide, <http://nepubprod.appspot.com/publication/6049804846366720>

While like for like offsetting is required for habitats of high or very high distinctiveness, **'like for better' offsetting is allowed for habitats of medium and low distinctiveness.**

Like for like means that the habitats destroyed must be replaced by biodiversity units of the same habitat type. Like for better, by contrast, means that the habitats destroyed must be replaced by *'any habitat from a higher distinctiveness band.'*

Baseline habitat distinctiveness	Distinctiveness of replacement habitat required by trading rules (N.B. applies to creation and enhancement)
Very high	Losses are not permitted within the metric (<i>Principle 4 and Rule 3</i>) Bespoke assessment and compensation required
High	Must be replaced with biodiversity units of the same habitat type (<i>Rule 3</i>)
Medium	Must be replaced with: Medium distinctiveness habitat from same broad habitat type OR Any habitat from a higher distinctiveness band (<i>Principle 5</i>)
Low	Must be replaced with: Same distinctiveness habitat OR Any habitat from a higher distinctiveness band (<i>Principle 5</i>)
Very low	Replacement not required (Are of little/no biodiversity value - zero biodiversity unit score)

Source: Biodiversity Metric 3.1 - User Guide, <http://nepubprod.appspot.com/publication/6049804846366720>

Also noteworthy is the fact that the metric **does not require a mandatory minimum 1:1 habitat size ratio for losses and compensation**. If for example a habitat of 'low distinctiveness' is destroyed and offset by a habitat of higher distinctiveness, then the offset area can be smaller than the area destroyed.

II. A future market for biodiversity units?

A subsequent consultation³ earlier this year raised the possibility of creating a market for biodiversity units, where developers who exceed their net gain target can sell their excess biodiversity units or use them for other developments.

'Any landowners or managers will be able to create or enhance habitat for the purpose of selling biodiversity units, provided that they are able to meet the requirements of the policy (...) Planning authorities will be able to sell biodiversity units from their own land or act as a broker for third party units.' The UK Government does not however *'currently propose to establish a centralised trading platform for biodiversity units or for the UK Government to take on other roles which could be performed by the private sector or other third parties, such as brokering (...) We expect the price for biodiversity units to be agreed between buyers and sellers.'*⁴

It is also already foreseen that *'the market for biodiversity units will not operate in isolation, and we are aware that landowners and managers are keen to understand whether they will be able to combine or 'stack' payments for different environmental services from the same parcel of land.'*⁵ In other words, the same parcel of land could be used in the future to monetize and trade several so-called 'ecosystem services.'

A market analysis⁶ prepared for DEFRA estimates that the BNG requirement will generate demand for around 6,200 offsite biodiversity units, with a market value of £135 million to £274 million, depending on how much is delivered off-site, and with a market price for each unit of £20,000 on average.

The aforementioned consultation also foresees the possibility of creating habitats in advance and setting up a habitat bank to save the units, in order to *'smooth out supply and demand.'*

Questions and concerns

We find that the Act and related consultation raise serious questions and concerns, including the following:

1. The allowance for 'like or better' offsetting for areas of medium and low distinctiveness, while good in theory, creates in our view a risk of reduced environmental integrity compared to 'like for like' offsetting: If some habitats considered more distinctive are cheaper and faster to restore than the type of habitat that was originally destroyed, this may result in an overwhelming concentration of offsetting activities on the cheaper type, leading to an overall decline in biodiversity.

³ DEFRA, Consultation on Biodiversity Net Gain Regulations and Implementation, January 2022, https://consult.defra.gov.uk/defra-net-gain-consultation-team/consultation-on-biodiversity-net-gain-regulations/supporting_documents/Consultation%20on%20Biodiversity%20Net%20Gain%20Regulations%20and%20Implementation_January2022.pdf

⁴ DEFRA, supra

⁵ DEFRA, supra

⁶ Eftec, WSP, ABPmer, BNG Market Analysis, Final summary report, February 2021

http://randd.defra.gov.uk/Document.aspx?Document=15327_BNGMarketsAnalysis-FinalSummaryReport.pdf

2. The **option to purchase biodiversity credits from the government** instead of restoring on or off-site raises serious questions, including how many credits can the government sell, will there be an annual cap on the number of credits, and how cheap will these credits be sold to allegedly '*not discourage*' registration?

3. A positive discount rate of 3.5% will be used,⁷ that discriminates strongly against future generations. As an example, with a discount rate of 3.5%, £100 in 30 years are worth £36 today, £100 in 50 years are worth £18 today, and £100 in 100 years are worth £3 today. Put differently, it means that what happens in 30 years is considered 3 times less important than what happens today, and what happens to future generations in 100 years is considered 33 times less important than what happens today. A discount rate of 3.5% gives therefore very little incentive to change lifestyles and curb destruction today for the benefit of future generations.

4. Allowing for the possibility to create habitats in advance and setting up a habitat bank further increase the risk that compensation will be generic. We understand the main benefit of this feature to be the creation of biodiversity units that can be traded until they are being used, thereby facilitating the creation of a speculative market.

It has also been found that the allowance for developers to sell their surplus biodiversity units to other developers might create an incentive for developers to overpromise on their biodiversity gains,⁸ especially in the absence of strong and credible enforcement mechanisms and resources.⁹

5. Restoring damaged biodiversity does not require at all the creation of a market in biodiversity units. The creation of a market has therefore more to do in our view with the goal of creating markets for nature¹⁰ and a new environmental asset class for the City of London.

The UK government has indeed recently indicated its commitment to work with a coalition of business and big conservation NGOs in order to develop environmental markets in the UK, including markets on habitats for wildlife, carbon sequestration, nutrient reduction credits aka water pollution trading, air pollution and flood mitigation. "*I look forward to working with the Coalition to make these markets a reality*"¹¹ recently stated British MP Helen Whately, exchequer secretary to the Treasury.

The creation of such markets typically aims at both lowering the cost of compliance for polluters and destroyers of biodiversity and at generating new profit opportunities for financiers. This is for example the case in the EU ETS, where the environmental feature is the annual declining cap, whereas the allowance for trading carbon credits purely aims at minimising the cost of compliance for big polluters. This was also the case with Kyoto's flexibility mechanisms.

⁷ 'Where time discounting is used a standard discount rate is typically applied. Biodiversity metric 3.1 uses 3.5%, which is the value recommended in the Treasury Green Book.' Biodiversity Metric 3.1 user guide <http://nepubprod.appspot.com/publication/6049804846366720>

⁸ Zu Ermgassen S, Milner-Gulland EJ, Bull JW, The Conversation, Biodiversity: why new rules to ensure nature benefits from building projects could fail, 24 March 2022 <https://theconversation.com/biodiversity-why-new-rules-to-ensure-nature-benefits-from-building-projects-could-fail-179701>

⁹ An Open Letter to The Rt Hon Michael Gove, The Rt Hon George Eustice, and Tony Juniper: Ensuring that mandatory Biodiversity Net Gain fulfills its potential for nature recovery https://www.oxfordmartin.ox.ac.uk/downloads/academic/BNG-Open-Letter_020322.pdf

¹⁰ Green Finance Observatory tweet, <https://twitter.com/greenfinanceobs/status/1534834258963054594>

¹¹ Carbon Pulse, Experts publish roadmap for scaling UK nature-based environmental markets, 8 June 2022 https://carbon-pulse.com/162013/?utm_source=CP+Daily&utm_campaign=d4b76ea29a-CPdaily08062022&utm_medium=email&utm_term=0_a9d8834f72-d4b76ea29a-110288569

From a conservation perspective, there is however no need at all to create a market scheme, nor to allow the trading of biodiversity units, in order to prevent biodiversity destruction or to mandate the restoration of degraded areas. All that is required is legislations putting a cap on destruction and mandating the on-site restoration of destroyed habitats.

The proposal for a market scheme can thus be understood as a way to continue to prioritise economic growth over addressing environmental crises: it would indeed be far less profitable for real estate and infrastructure developers or mining companies to have to reduce their destruction of nature, than to buy a few biodiversity credits or pay some developer to do some restoration and plant a few trees.

This is exactly the same dynamic that we already observe with carbon offset markets, whose goal is not to mitigate climate change, as they do not aim at curbing emissions nor at sequestering past emissions, but at enabling future ones.

6. Biodiversity Net Gain is as hypocritical as climate Net Zero targets. There should be separate metrics for curbing destruction and for restoration, with a cap on the allowance to use the latter, because they are not comparable.

Indeed, *'there is evidence within the restoration ecology literature that shows that the science of restoration is still in its infancy and demonstrates mixed to poor outcomes. (...) Restoration ecology is a relatively young and inexperienced discipline with a still-embryonic and patchy evidence base. Given the complexity and variability of natural systems, the ecological community is increasingly recognizing that recreating or restoring ecosystems to some specified former state is often unlikely to be feasible, especially within reasonable timeframes.'*¹² This is why restoration is a good thing, but only if it comes in addition to, and not instead of curbing destruction, as we are unable to fully recreate all the ecosystemic functions destroyed.

Having separate metrics to measure how much we curb destruction and how much we restore would remove the illusion that both are comparable and remove the political temptation to continue to destroy and merely increase restoration objectives; it would thus improve transparency, accountability and generate real incentives to curb our destruction.

7. It is also worth noting that **biodiversity offsetting already exists and has an appalling environmental track record**: In Australia, a report by the Nature Conservation Council¹³ found that *'in 75% of cases, offsets resulted in 'Poor' or 'Disastrous' outcomes for wildlife and bushland, while only 25% resulted in 'Adequate' outcomes. None resulted in 'Good' outcomes for nature.'* It concluded that instead of helping, offsetting pushes species to the brink, adding *'extinction*

¹² CEEweb for Biodiversity, Critical review of Biodiversity Offset track record – For the purposes of IEEP in their review of 'Policy Options for a potential EU No Net Loss Initiative'. Online. Available at: <http://www.ceeweb.org/wp-content/uploads/2011/12/Critical-review-of-biodiversity-offsets-for-IEEP-Final.pdf>

¹³ Nature Conservation Council of NSW, Paradise Lost - The weakening and widening of NSW, biodiversity offsetting schemes, 2005-2016, 2016. Online. Available at: https://www.nature.org.au/media/265228/bio-offsetting-report_v14.pdf

pressure to the very species these schemes are supposed to protect.’¹⁴ Scientific evaluation studies also found 2/3 of expected offsets completely failed to materialise in Australia.¹⁵

In Canada, researchers found that 63% of projects that offset fish habitat loss failed to achieve their targets.¹⁶ Another study analysing 558 offset projects between 1990-2011 found that despite offset attempts the net loss of habitats was 99%.¹⁷

In the USA, scientists looking at 12 of the longest established wetland mitigation areas in Ohio found that many did not even meet the regulation’s objectives.¹⁸ More broadly, a study looking at a broad range of restoration projects around the world found that up to two-thirds of offsets aiming to restore an ecosystem were unsuccessful.¹⁹ The figure was even higher for offsets that created ecosystems from scratch.

Offsetting more generally has been amply documented to be often associated with human rights issues, conflicts over land rights and land use,²⁰ as well as Welsh farmers being priced out in farm auctions by investment funds seeking to plant trees and collect carbon credits.²¹

III. The Climate and Ecology Bill

The UK Climate and Ecology Bill currently going through parliament confirms in our view the strong focus of the UK government on offsetting the ‘*harm caused by consumption, trade, finance and production*’ rather than on curbing it.

The measures aimed at halting and reverting the degradation of nature seem indeed more focused on a net increase of habitats and species than on mandating a decline in destruction, despite the much greater importance of the latter.

The bill also makes a surprising reference to offsetting ‘*the adverse impacts overseas of United Kingdom-generated cycles of consumption, trade, financing and production on ecosystems and human health*.’²² The reference to overseas requires some clarification in our view: should we

¹⁴ Hunter Valley News, Nature Conservation Council believes offsetting pushing species to the brink, March 2017. Online. Available at: <https://www.huntervalleynews.net.au/story/4518198/new-study-finds-development-trumpsenvironment/>

¹⁵ Nordic Council of Ministers, Planning biodiversity offsets – Twelve Operationally Important Decisions, 2018. Online. Available at: <https://norden.diva-portal.org/smash/get/diva2:1201285/FULLTEXT01.pdf>

¹⁶ Quigley JT1, Harper DJ, Effectiveness of fish habitat compensation in Canada in achieving no net loss, Environmental management, 2006. Online. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/16456631>

¹⁷ Nordic Council of Ministers, Planning biodiversity offsets – Twelve Operationally Important Decisions, 2018. Online. Available at: <https://norden.diva-portal.org/smash/get/diva2:1201285/FULLTEXT01.pdf>

¹⁸ Mack John J., Micacchion Mick, An ecological assessment of Ohio mitigation banks: Vegetation, Amphibians, Hydrology, and Soils. Ohio EPA Technical Report WET/2006-1. Ohio Environmental Protection Agency, Division of Surface Water, Wetland Ecology Group, Columbus, Ohio, 2006. Online. Available at: https://www.epa.state.oh.us/Portals/35/wetlands/Bank_Report_Ohio_Final.pdf

¹⁹ FERN, Briefing note 3: Biodiversity offsetting in practice, Jan 14

²⁰ Kill Jutta, Franchi Giulia, Rio Tinto’s biodiversity offset in Madagascar – Double landgrab in the name of biodiversity? World Rainforest Movement, Re:Common, https://wrm.org.uy/wp-content/uploads/2016/04/RioTintoBiodivOffsetMadagascar_report_EN_web.pdf

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International Institute for Environment and Development, ‘Land grabbing’: is conservation part of the problem or the solution?,

<https://pubs.iied.org/pdfs/17166IIED.pdf>

²¹ Webster B, The Times, Welsh farm dream is lost in investors’ carbon credit forest, 5 February 2022

<https://www.thetimes.co.uk/article/welsh-farm-dream-is-lost-in-investors-carbon-credit-forest-vf8t5nvtld>

²² UK Climate and Ecology Bill, <https://publications.parliament.uk/pa/bills/cbill/58-02/0061/21061.pdf>

understand it as allowing offsetting to take place overseas in low-income countries, or as promoting offsetting in England for damage done overseas? The former option would be very problematic, as evidenced by Kyoto's Clean Development Mechanism, which used to allow rich countries to offset their carbon emissions by planting trees on cheap land in low-income countries, instead of curbing their emissions at home. Not only was it found that 85% of the offset projects failed from an environmental perspective,²³ but it has also been shown that many of these projects were associated with human rights abuses, land-grabbing and increased conflicts for land-rights and land-use.

Last, the bill makes a worrying call to follow *'the commitments set out in the Leaders Pledge for Nature.'* The reference to the Leaders' Pledge for Nature is extremely problematic in our view, as this pledge calls to *'appropriately value nature and (...) recognize that the business case for biodiversity is compelling'* and to *'achieve land degradation neutrality.'* The Pledge signatories commit to *'ensuring that across the whole of government, policies, decisions and investments account for the value of nature and biodiversity'*, to *'incentivizing the financial system, nationally and internationally, including banks, funds, corporations, investors and financial mechanisms, to align financial flows to environmental commitments and the Sustainable Development Goals, to take into account the value of nature and biodiversity.'*

In layman terms, the Pledge calls to put a price on nature, even though it has been shown that we are unable in practice to come up with meaningful monetary values.²⁴ We understand its reference to the compelling business case for nature and call for private finance involvement to make conservation policies conditional upon short-term profitability considerations. Yet, conservation based on economic incentives and profitability considerations has been found to be far ficker than conservation based on binding regulations, as there will always be a time where it is more profitable to destroy than to conserve.

Equally problematic in our opinion is the Pledge's call to incentivise the financial system to put a price on nature's destruction and to shift financial flows towards environmental commitments. This could indeed make conservation decisions conditional upon the short-term financial bets of speculators, letting private financial interests decide what is the price of destruction and thus what is to be saved or destroyed, as well as making conservation vulnerable to the well-known irrational mood swings of financial markets.

Do British citizens want to transfer critical conservation decisions that will impact future generations to financial markets and private investment funds? Given financial markets' track record of wild fluctuations and regular crashes, we believe that a public debate is warranted before such a transfer of power is made to financial markets.

²³ Öko Institut, Study prepared for DG CLIMA, How additional is the Clean Development Mechanism? March 2016, https://ec.europa.eu/clima/sites/clima/files/ets/docs/clean_dev_mechanism_en.pdf

²⁴ Hache F, Spash C, Nature, life & relations - 'optimised', a policy brief on the Dasgupta review, April 2021 <https://greenfinanceobservatory.org/wp-content/uploads/2021/05/Nature-Life-relations-finales.pdf>

Conclusion

In light of all the above concerns, and with a view to truly address the current 6th extinction of species, we believe that:

1. Biodiversity Net Gain objectives should be replaced by separate metrics for curbing destruction and for restoration, and credibly prioritize the former. This would go a long way towards increasing transparency and accountability and improving conservation outcomes.

2. Only like for like restoration should be allowed. This is to remove the risk that developers prefer to restore off-site with only the fastest and cheapest types of habitats, leading to an overall decline in biodiversity.

3. No market scheme should be created, no allowance for selling excess biodiversity units and for restoring in advance granted, and the government sale of biodiversity credits should be removed or strictly limited. These features are indeed absolutely not necessary for conservation purposes. We understand them to aim primarily at minimizing the cost of compliance for companies destroying biodiversity and at creating a new profitable asset class for the City of London, but at the cost of much reduced environmental integrity. While we have no objection at all to minimizing the cost of compliance, we strongly believe that this should not be prioritized over environmental integrity, given the climate and biodiversity emergencies that we are facing.

4. The Climate and Ecology Bill should be revised to prioritise legally binding measures mandating a decline in the biodiversity destruction caused by consumption, trade, finance and production. **Its reference to the Leaders’ Pledge for Nature should also be removed,** to ensure that conservation critical to our future is not transferred to erratic and short-sighted financial markets that caused the last economic crisis.
