Biodiversity Offsetting in the UK: Implications and Policy Recommendations

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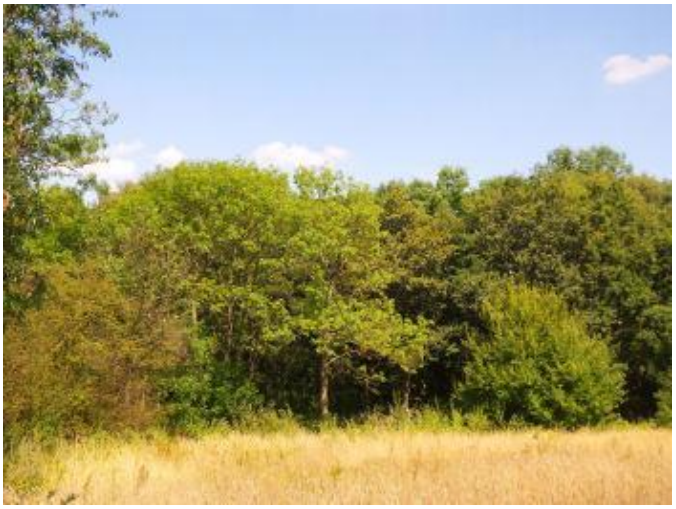
Introduction



Biodiversity offsetting (see Box 1) is rapidly expanding across the globe because it seems to offer the chance of 'win-win' outcomes to the challenges of sustainable development. Promoters argue that biodiversity offsetting can facilitate development and economic growth without the loss of biodiversity (so-called 'No Net Loss'). Biodiversity offsetting involves a series of complex technical issues (for example what metrics can be used to measure the quality of biodiversity threatened by development or protected in offset sites). However, the policy has also more fundamental implications for nature, its conservation and nature-society relationships. This *Policy Brief* identifies four such implications.

Box 1 What are biodiversity offsets?

Biodiversity offsets are defined as 'measurable conservation outcomes designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken' (BBOP, 2012).

"If you are a developer offsetting is a wonderful get out of jail free card."
STOP HS2 campaigner

Ecological relations are oversimplified

'Biodiversity' may seem a simple word, but it covers a huge amount of complex and diverse natural systems, at genetic, population and ecosystem levels. No two ecosystems or areas of habitat are identical, and the best attempts to classify living systems are crude at best. In biodiversity offsetting, the complexity of ecological relations is oversimplified through the use of metrics to summarise habitat quality (e.g. habitat hectares). It is widely recognized that it is not possible in practice to measure all aspects of biodiversity or to guarantee the standards set by the Convention on Biological Diversity [i]. Nonetheless, the need for metrics to compare development and offset sites (Box 1) demands simplification. There are risks that such metrics will be inadequate, especially where they are over-simple: the UK government's proposed offsetting system in England is designed to enable a developer to calculate how much biodiversity activity is needed to offset the impacts of a given project through multiplying the distinctiveness, condition and extent of habitats 'in as little as 20 minutes'[ii] (Box 2).

Box 2 The UK Biodiversity Offsetting Metric[ii]

Value of 1 ha in 'biodiversity units'		Habitat distinctiveness		
		Low (2)	Medium (4)	High (6)
Habitat quality	Good (3)	6	12	18
	Moderate (2)	4	8	12
	Poor (1)	2	4	6

Ecosystem Creation and Restoration is expensive and difficult (sometimes impossible)

Biodiversity offsetting assumes that it is feasible to restore or create ecosystems that can substitute for ecosystems lost to development. However, ecological restoration science has not reached a level of sophistication where all habitats can be replicated. Restoration takes time and money, and outcomes are uncertain. The conservation outcomes of biodiversity offsetting are therefore risky. This is especially true where development threatens high value habitat that

can only be partially recreated, and where establishment will take centuries not years. Thus high-speed rail line HS2 affects ancient semi-natural woodland, a habitat within the DEFRA 'very high' distinctiveness category (see Fig. 1). In the Lodge Hill housing development in South East England, it is proposed to create compensatory habitat for nightingales in Essex, although this has never been done before.

Fig. 1. The proposed scheme for the high speed rail link HS2 between London and Birmingham (UK) seeks to achieve NNL at a route-wide level by using biodiversity offsetting. It demonstrates the implications of biodiversity offsetting for nature conservation more generally. The proposed metric for HS2 is a modified version of the Defra pilot methodology, and will attribute "biodiversity units scores" to affected "habitat parcels" by multiplying their distinctiveness, condition and position within ecological network. The Phase 1 London and West Midlands route of HS2 directly affects 27 ancient woodlands (under continuous cover since c.1600AD). The value of semi-natural ancient woodland (and some other habitats) is scored as "very high" in terms of habitat distinctiveness, and offset must be "like for like" (unlike habitats of low distinctiveness where the offset can involve a "trade up" to medium or high distinctiveness habitat). The HS2 time-frame of restoration ranges from 5 years to >32 years for ancient woodland. Proposals like relocating soils from affected ancient woodland are being tested[iii].

Offsetting creates winners and losers

Biodiversity offsetting sanctions the loss of biodiversity and associated amenity in one place (the development site) in return for the creation or protection of biodiversity in another (the offset site). This has potentially serious implications for environmental justice (one place is destroyed, another enhanced, one community loses, another gains). Standard approaches to calculating offset metrics take no account of the cultural importance of place, the social consequences of development, the existence of social ties between communities and particular areas of habitat, or differential access to green space and associated wellbeing in different communities.

Offsetting puts markets first in conservation

Biodiversity offsetting contributes in bringing environmental markets to the heart of conservation practice. In the UK, this is part of a wider shift towards treating nature in terms of natural capital, and the economic value of ecosystem services. In biodiversity offsetting, conservation credits can be subject to monetary payments; thus in the UK Green Paper, biodiversity is reframed as a commodity that "can be bought 'off-the-shelf' from a market"[ii]. The creation of a market for offsets makes it possible for biodiversity to be manipulated for reasons of profitability. Landowners become sellers of its conservation value. The value of nature (lost or saved) is set by price and is subject both to the balance of supply and demand and the dynamics of markets, with all the dynamics this entails. The prevalence of problems of discounting and corruption in carbon trading schemes suggests that offsetting holds similar risks for conservation.

"The greenbelt is greenbelt. And what the applicant is saying is we are going to build a county park where local people can have access to, so that altering the green belt boundaries will be your gain, you get a county park out of it… You can say to the developer: thank you for your offer for the county park, but we don't want that county park. We already live in greenbelt. We want the countryside that surrounds us as it is. I mean we are surrounded by fields full of crops and hedgerows and trees. We don't have all access to that field in front of our houses. But there are public footpaths through the countryside, numerous ways by which people can gain access to…"
Campaigner against Coventry Gateway

Biodiversity offsetting supports the destruction of nature

In biodiversity offsetting, conservation activities are funded as compensation for residual damage to nature. Offsetting not only promises to achieve NNL of biodiversity without limiting economic growth, but helps to boost development in the form of activities such as mining, construction or house-building. In its creation of equivalence between the loss and establishment of biodiversity, offsetting effectively assumes an endless supply of space available for offsets to use up, yet given the finite physical bounds of earth this is impossible. By introducing biodiversity offsetting, the UK government tried to circumvent the standard mitigation hierarchy (Box 3), making it easier for developers to proceed with their plans on the basis that they could compensate for biodiversity loss. Experience with the offsetting pilots in the UK has shown that the option of offsetting has led to an under-use of the earlier stages of the mitigation hierarchy[iv] and that biodiversity offsetting was largely interpreted as an opportunity to buy a way out to environmental harm.

Box 3 Mitigation Hierarchy

According to the mitigation hierarchy activities which have 'unnecessary' impacts on the environment[ii]:

- In the first instance harm should be **avoided;**
- Where this is not possible the impacts should be **mitigated;**
- Lastly any residual impacts should be **compensated** for.

At each successive step down the hierarchy the degree of environmental protection is thus diminished, moving in turn through avoidance, minimization, rehabilitation or restoration of degraded ecosystems to offsetting.

Policy Recommendations

The implementation of biodiversity offsetting in England brings a number of risks and problems that were not fully foreseen when the idea was introduced. To tackle these, the following policy changes are suggested:

1. Reconsider current plans to implement biodiversity offsetting, payments for ecosystem services and habitat banking in the UK.
2. Strengthen the planning mitigation hierarchy by emphasizing the first steps and particularly the step of avoidance.
3. Improve Environmental Impact Assessments in order to provide integrative analysis of the ecological, social, economic, and cultural impacts of development projects to biodiversity.
4. Explicitly incorporate socio-spatial and environmental justice concerns in evaluating the impacts of development to biodiversity both in analyzing the impacts of development and by giving local people more voice and power.
5. Design meaningful participatory consultation processes that take account of the views of all stakeholders that are directly and indirectly affected by development projects, with particular emphasis on direct involvement by local communities.
6. Empower local communities in order to be able to evaluate ecological assessments of biodiversity loss.

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Further reading

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Nature Not For Sale Campaign: http://naturenotforsale.org.

[i] https://www.cbd.int/convention/articles/default.shtml?a=cbd-01

[ii] Defra (Department for Environment, Food and Rural Affairs). 2013. *Biodiversity Offsetting in England Green Paper* (https://consult.defra.gov.uk/biodiversity/biodiversity_offsetting/supporting_documents/20130903Biodiversity%20offsetting%20green%20paper.pdf).

[iii] HS2 - London-West Midlands Environmental Statement. 2013. Volume 5. Technical Appendices, HS2, Scope and methodology report addendum CT-001-000/2 (https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/260153/Vol5_Scope_and_methodology_report_addendum_CT-001-000.2.pdf).

[iv] Defra (Department for Environment, Food and Rural Affairs). 2014. *Evaluation of the Biodiversity Offsetting Pilot Programme.* Defra project code: WC 1051. Final report Volume 1.