



BIODIVERSITY OFFSETTING – A DISCUSSION PAPER

1 Introduction

This paper is for LINK members and aims to introduce the concept of biodiversity offsetting and provoke thought and discussion. The timing of this paper coincides with recent interest in biodiversity offsetting in England, impetus from the EU Biodiversity Strategy and the feeling that LINK needs to be prepared should it come onto the Scottish Government's agenda. This paper does not discuss offsetting generally or carbon offsetting¹. Annex 1 provides some context of how biodiversity offsetting relates to other concepts.

Biodiversity offsetting is a system predominantly used by planning authorities or other regulators and developers to fully compensate for biodiversity impacts of developments. Biodiversity offsetting is controversial and its implementation is challenging in many ways. It is supported by some ENGOs on the condition that it is both structured and administered in a particular way, and is adopted alongside a general strengthening of the planning system with regard to the environment. Other ENGOs are opposed to biodiversity offsetting, believing that: ecological sustainability cannot be achieved by integrating nature into market structures; it will be administered in the interests of developers rather than biodiversity, or it will be unworkable in practice.

2 Background

2.1 What is biodiversity off-setting?

Definitions

The UK Government define biodiversity offsets as '*conservation activities that are designed to give biodiversity benefits to compensate for losses - ensuring that when a development damages nature (and this damage cannot be avoided) new, bigger or better nature sites will be created. They are different from other types of ecological compensation as they need to show measurable outcomes that are sustained over time.*'²

Friends of the Earth defines offsetting as '*a market-based tool that assesses loss of biodiversity, usually to built development like housing or infrastructure such as roads, and requires losses to be replaced else where, in so far as this is possible*'.³

The FoE definition is looser than the official definition above, which emphasises

¹ A good overview of carbon offsetting is given in <http://www.theguardian.com/environment/2011/sep/16/carbon-offset-projects-carbon-emissions>

² <https://www.gov.uk/biodiversity-offsetting>

³ <https://www.foe.co.uk/sites/default/files/downloads/biodiversity-offsetting-friend-or-foe-45606.pdf>

the principle of no net loss. No net loss is generally a requirement of offsetting. Compensatory schemes and measures have often been a component of larger developments, whereby damage to the environment has been compensated for by enhancing/creating habitats elsewhere. Offsetting can be said to be a rigorous form of compensation that strictly adheres to the principle of no net loss and, in order to do this, uses metrics to measure the biodiversity impact.

An offset involves an exchange between the developer and the body providing the offset, and the price of the offset is based on the cost of providing an alternative habitat, equivalent to the one being lost. The offset provided can be a new habitat or an enhanced existing habitat. Different types of conservation activities can be used to offset biodiversity losses, as long as they are 'like-for-like or-better'. This means that ecologically equivalent biodiversity affected by the project should be conserved through the offset, unless there is good scientific justification for the offset to conserve a different kind of biodiversity which is of higher conservation priority than the type affected⁴.

2.2 Existing compensation and biodiversity offsetting schemes

Habitats Directive

There is a precedent in Europe for a form of biodiversity compensation when activities are proposed that could affect a site designated under the Birds and Habitats Directives. Plans or projects that would have an adverse effect on the features for which a site has been designated can only proceed in specific circumstances. In particular, there needs to be no alternative solution and implementation of the plan or project must be for imperative reasons of overriding public importance. In practice, these are very high tests to meet and only a small number of plans or projects that have an adverse effect on a site can progress beyond these. When plans or projects can meet these tests, there is then a requirement to secure *compensatory measures to ensure that the overall coherence of the network of European sites is maintained*⁵. Compensatory measures need to be of comparable ecological value to that which would be lost. The scale and nature of compensation required is such that it is generally costly for developers or Governments.

Initiatives in other countries

Over 30 countries now require some form of compensation for damage to biodiversity or have systems in place that require offsets, including Australia, USA, Canada, Germany and France. A DEFRA review of these found a number of

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http://cmsdata.iucn.org/downloads/iucn_biodiversity_offsets_draft_policy__for_consultation.pdf

⁵https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/82647/habitats-directive-iropi-draft-guidance-20120807.pdf

factors that contributed to the success of offsets in delivering no net loss or a net gain⁶.

- Political direction and support
- A clear policy intent to achieve no net loss or a net gain of biodiversity
- Strict adherence to the mitigation hierarchy and requirements to demonstrate that this has been done
- Legal requirement or strong regulatory control including provisions to secure biodiversity offsets in perpetuity
- Sufficient regulatory capacity and resources
- Requirement and capacity for monitoring
- Accessible and reliable information on affected biodiversity
- Clearly defined biodiversity priorities combined with accessible and reliable information on biodiversity potential and opportunity
- A sufficient supply of land suitable for delivery of offsets
- Opportunity and mechanisms for community involvement
- Clearly defined responsibilities
- Offset arrangements which are secure, robust, and likely to produce a long-lasting benefit in reasonable time
- Offset requirements which are clearly defined, readily implementable, measureable and enforceable.

It should be noted that the lack of success of existing offset schemes is cited as a reason for opposing offsetting in England. *'There is little to no evidence that biodiversity offsetting has been effectual in the countries where it has been tested for longest, whether in the USA, Australia or Canada'*⁷. (FERN).

2.3 A global standard

The IUCN is developing a global policy framework which intends to provide a minimum standard and bring clarity and safety to the application of biodiversity offsetting. *'The purpose of this policy is to provide a framework to guide the design, implementation and governance of biodiversity offset schemes and projects. The policy also aims to help identify when offsets are and are not an appropriate conservation tool, and ensure that when offset schemes are used they lead to positive conservation outcomes compared to business as usual and minimize the risk of negative conservation outcomes. Biodiversity offsets should also advance national conservation goals and international biodiversity commitments'*. The IUCN consulted on a draft policy statement in Autumn 2015⁸.

⁶https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/218689/BiodiversityOffsets12May2009.pdf

⁷<http://www.fern.org/sites/fern.org/files/FERN%20response%20to%20UK%20consultation%20on%20offsetting.pdf>
<http://www.fern.org/sites/fern.org/files/Critical%20review%20of%20biodiversity%20offsets.pdf>

⁸http://cmsdata.iucn.org/downloads/iucn_biodiversity_offsets_draft_policy_for_consultation.pdf

2.4 What is driving current interest?

Europe

The EU Biodiversity Strategy to 2020 includes the aim to halt loss and degradation of biodiversity and ecosystem services. A No Net Loss (NNL) initiative is being introduced to ensure no net loss of biodiversity and ecosystem services by 2015. NNL means that losses in one geographic area must be balanced by a gain elsewhere.

The EU has commissioned several studies into how biodiversity offsetting might be an appropriate mechanisms for NNL. Various studies have looked at policy options, habitat banking, metrics and mechanisms.⁹ Additionally, a public consultation was held in 2014 to explore how NNL might be achieved. The consultation found that *'slightly over half of the respondents were positive to the inclusion of offsetting/compensation measures in a future EU initiative on No Net Loss'* but 70% of these were conditional on strict measures and robust safeguards¹⁰.

England

There has been considerable interest in offsetting in DEFRA in recent years, although this appear to have tailed off. Government papers show that initial interest was inspired by the recognition that the planning system could rectify the failure of the market to protect biodiversity: *'Biodiversity provides a range of non-market and non-economic values free of charge, leading to over-consumption and under-production of biodiversity. However, it may be possible to correct this "market failure" in the development sector, by ensuring developers secure action to re-create biodiversity lost through development. Whilst planning policy already includes provisions on compensation for biodiversity loss resulting from development, there is no standard approach to use. This has led to continued losses in biodiversity beyond what is economically efficient'*¹¹

Subsequently, in DEFRA's Green Paper, the possibility that it enables the twin challenges of growing the economy and improving the natural environment is highlighted: *'Our economy cannot afford planning processes that deal with biodiversity expensively and inefficiently or block the housing and infrastructure our economy needs to grow. Our environment cannot afford the wrong type of development which eats away at nature. Although the planning system is already delivering some truly sustainable development, we should look at new ideas that could help it maintain and improve our ecosystems, air, water and soils as they underpin sustainable economic growth in the long-term'*¹².

In England, a voluntary approach to offsetting has been piloted in 6 local authority areas (2012 – 2014). A report on this is awaited. A green paper

⁹ http://ec.europa.eu/environment/nature/biodiversity/nnl/index_en.htm

¹⁰ http://ec.europa.eu/environment/nature/biodiversity/nnl/results_en.htm

¹¹ <http://webarchive.nationalarchives.gov.uk/20130402151656/http://www.archive.defra.gov.uk/environment/natural/documents/newp-ia-offsets-110607.pdf>

¹² https://consult.defra.gov.uk/biodiversity/biodiversity_offsetting

'Biodiversity offsetting in England' was published in 2013¹³ with a consultation which closed in November 2013. Since then it appears to have left the political agenda.

2.5 The state of play in Scotland

The Scottish Government's Consultation on the 2020 Challenge for Scotland's Biodiversity (2012) included questions on offsetting¹⁴. Responses were summarised as: *'A variety of concerns were raised about the potential for biodiversity offsetting. Given the range of concerns raised the Scottish Government does not plan to consider biodiversity offsetting further at this time but recognises that Scottish planning authorities have used planning agreements to secure biodiversity actions to offset damage to a site caused by a development in particular cases.'*¹⁵

However, the SG has indicated that it is not a 'closed door': *'If there is a marked change in view coming from stakeholders and a clear body of evidence that things should be done differently then the SG will listen to that ...'* (SG at ECCI workshop, June 2013)

Currently, the SG RESAS (Rural and Environment Science and Analytical Services Division) tender document 2016 – 2021 (which is developed by SG with input from a range of stakeholders) has a component on gathering information on offsetting – to discuss views about offsetting with a range of stakeholders and to consider practical challenges to implementing offsetting across a range of species and habitats.

3 A discussion of issues

3.1 Development and the need for mandatory compensation of some kind?

Few would dispute that development has a large impact on biodiversity. Many of the larger, higher profile developments do voluntarily compensate for their impact on biodiversity, but many don't and the accumulation of the affect of all the smaller developments is significant. There is an argument for a mandatory system so that all developments are required to compensate for their impact on the environment. Some ENGOs take the view that a well designed and regulated biodiversity off-setting system could benefit biodiversity by doing this.

Support for biodiversity offsetting by environmental groups is qualified and depends on the ability to optimise potential benefits and minimise potential

¹³ https://consult.defra.gov.uk/biodiversity/biodiversity_offsetting/supporting_documents/2013_0903Biodiversity%20offsetting%20green%20paper.pdf

¹⁴ <http://www.gov.scot/Publications/2012/07/5241>

¹⁵ 2020 Challenge for Scotland's Biodiversity – Consultation report, June 2013
<http://www.gov.scot/Publications/2013/06/6266>

risks and the details of the framework being proposed. There is concern that biodiversity offsetting will become a 'license to trash' and used as a justification to relax planning decisions because, theoretically, any harm can be compensated for. To avoid this it is of utmost importance that the planning system strengthened and the mitigation hierarchy¹⁶ is rigorously applied^{17 18}.

3.2 What are the aims and interests?

There are several aims to which offsetting can be seen as a solution:

- To achieve a minimum of no net loss (NNL) of biodiversity
- To simplify the planning process
- To allow development and growth (whilst ensuring no net loss)

No net loss (NNL)

Can offsetting achieve NNL of biodiversity? Some ENGOs think not: '*Friends of the Earth opposes the use of biodiversity offsetting in the UK because there is no convincing evidence that it will be an effective way to protect and enhance biodiversity and because the approach has significant risks.*'¹⁹ (FoE EWNI).

The aim of biodiversity offsets is to achieve NNL and preferably Net Gain of biodiversity with regard to species population, the composition of communities of species, habitat structure, ecosystem function and associated biocultural values. It is unrealistic to suggest that the reliable quantities of all the various biodiversity components can be established the IUCN policy paper (2015) proposes that different types of conservation activities can be used to offset biodiversity losses, as long as they are like-for-like or better; meaning that '*ecologically equivalent biodiversity affected by the project should be conserved through the offset, unless there is good scientific justification for the offset to conserve a different kind of biodiversity which is of higher conservation priority than the type affected.*'²⁰ Metrics are needed to assess the biodiversity loss and there is an acknowledgement that there is a tension between the complex and the practical. There is no international agreement on a system of metrics and the IUCN Technical Study (2014)²¹ suggests that, in order to combine good science

¹⁶ The mitigation hierarchy is a tool that guides users towards limiting as far as possible the negative impacts on biodiversity from development projects:

- 1 – Avoidance – avoid impact
- 2 – Minimise – reduce impacts that can not be avoided
- 3 – Rehabilitation/restoration – restore affected habitats from impacts (that can not be avoided and have been minimised)
- 4 – Compensation – measures taken to compensate for residual adverse impact.

¹⁷ http://www.rspb.org.uk/Images/letter_to_chancellor_of_the_exchequer_tcm9-362512.pdf

¹⁸ http://www.rspb.org.uk/Images/response_to_biodiversity%20offsetting_paper_tcm9-362515.pdf

¹⁹ <https://www.foe.co.uk/sites/default/files/downloads/biodiversity-offsetting-friend-or-foe-45606.pdf>

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http://cmsdata.iucn.org/downloads/iucn_biodiversity_offsets_draft_policy_for_consultation.pdf

²¹ http://cmsdata.iucn.org/downloads/final_biodiversity_offsets_paper_9nov2014_1.pdf

with practicality, offset metrics should be developed and used in a way that balances any potential risks to biodiversity of substitution with having a system that is fungible enough to facilitate exchanges. The most widely used systems to date have been habitat level metrics which usually combine measurement of a range of different attributes of biodiversity to give an indication of habitat quality. These can be combined with separate metrics for conservation priority biodiversity components.

There is also the issues of time delays between one habitat being lost and a replacement being developed and functioning. The IUCN policy paper (2015)²² proposes that *'offsets should be avoided if the time lag itself could cause damage that cannot be remediated or if such a lag puts biodiversity components at an unacceptable risk'*. There is also the need for assurance that the offset site will be maintained and protected into the future.

Another risk is associated with the difficulty in ensuring that an offset is additional to conservation work that was intended anyway. Also, if offsetting attracts additional private money into conservation, this could be seen as an opportunity to divert public funds to other areas of spending. In these cases, although NNL might be achieved in terms of the offset, the overall affect on conservation might be less favourable.

Simplifying the planning system

Mandatory offsetting would simplify the planning system and give developers an indication of what will be required of them. However, to meet the aim of NNL and also take into account social and cultural significance of sites, procedures need to be sophisticated and require increased capacity in LAs (or other governing body). Additionally, although English planning policy includes the mitigation hierarchy with regard to environmental damage, the Scottish framework is less robust. Any discussion about offsetting should stress the importance of the mitigation hierarchy, or equivalent, and a strengthening of the planning system in this regard.

Enabling development

There is a real fear that planning will be relaxed because there will be the assumption that offsetting will address environmental concerns of development (licence to trash). The IUCN policy paper²³ includes in its policy statement *'biodiversity offsets are only appropriate for projects which have rigorously applied the Mitigation hierarchy ... and when a full set of alternatives to the project have been considered. Biodiversity offsets must never be used to circumvent responsibilities to avoid and minimise damage to biodiversity, or to justify projects that would otherwise not happen'*.

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http://cmsdata.iucn.org/downloads/iucn_biodiversity_offsets_draft_policy__for_consultation.pdf

²³

http://cmsdata.iucn.org/downloads/iucn_biodiversity_offsets_draft_policy__for_consultation.pdf

The IUCN paper gives consideration of the role of biodiversity offsetting within the mitigation hierarchy.

Offsets must only occur after all previous steps in the mitigation hierarchy have been considered and no alternatives are available. Avoidance is the first and most important step in the mitigation hierarchy.

An appropriate application of the mitigation hierarchy must follow the following fundamental principles:

1. Explicitly consider the project within a broader landscape or seascape context.
2. Thoroughly examine lower impact alternatives in the project design, including not proceeding with the project at all, recognising that not all impacts can be offset to achieve NNL.
3. Give priority to avoiding any damage to biodiversity.
4. Take full account of direct, indirect and cumulative impacts, geographically and over time.
5. Clearly separate impact avoidance, minimisation and on - site restoration measures from offsets.
6. Design offsets to achieve at least NNL and preferably a NG of biodiversity
7. Ensure any biodiversity offsets used as part of the mitigation hierarchy secure additional conservation outcomes that would not have happened otherwise.
8. Use approaches that are science-based, transparent and participatory.
9. Follow a Rights-based Approach, as defined by IUCN resolution WCC-2012-Res-099
10. Identify and put in place the legal, institutional and financial measures needed to ensure long-term governance of all mitigation measures (including any biodiversity offsets).
11. Apply a rigorous monitoring, evaluation and enforcement system that includes independent verification of all mitigation measure

3.3 The Governance of offsetting

The governance of offsetting is critical. Some of the central themes of those who object to offsetting are that it could effectively be an open market in biodiversity. *'Then there is the question of whether the market and finance can ... act as a regulator ... in matters of the environment'* ²⁴ (FERN). It is worth mentioning that the market and finance become significantly relevant only if habitat banking is used.

Habitat banking involves the inclusion of a 'middle man' whereby conservation activities that create or restore a habitat can be sold to the habitat bank which holds them as credits available to developers who need to offset damage. For more information about how this works please see <http://www2.epa.gov/cwa-404/mitigation-banking-factsheet>. This is seen as a potential way of scaling up biodiversity offsetting, but many do not endorse this additional step. The IUCN policy guidelines do not include habitat banking and many NGOs who support a form of biodiversity offsetting do not endorse this separate element.

²⁴ <http://www.fern.org/biodiversity-offsetting>

Local control of offsetting is seen as important by some ENGOs. The RSPB supports a biodiversity offsetting system in which the parameters are set by Central Government, but the responsibility for managing the scheme lies with Local Authorities. Basically, national guidelines would establish habitats for which offsetting is not appropriate and the means of assessing habitat quantity and quality, social benefits and the cases where one type of habitat could substitute for another; but LAs would have the scope to add weightings dependent on local significance, socio-cultural factors and other local considerations.

In Scotland, the Scottish Borders Council has been facilitating compensation, mainly from wind farm developers, to fund restoration and habitat improvement in other parts of the Borders. This has been perceived as a successful initiative where the LA has had control and has worked with landowners and NGOs.

Offsetting programmes need to be administered in such a way to avoid potential conflicts of interest between those who might financially gain through selling offsets and those managing the scheme.

3.4 Financialisation of nature

Some NGOs associate biodiversity offsetting with the financialisation of nature and 'putting a price on nature'. '*Central to the idea of biodiversity offsetting are pricing mechanisms and the workings of the financial market*²⁵' (FERN). As already mentioned, for many, biodiversity offsetting stands alone separately from the additional concept of habitat banking and, for these people, pricing mechanisms, the financial market and trading are not a component of offsetting.

Offsetting does generally involve a financial transaction between the developer and the offset provider. The price is generally based on the cost of providing a newly created or restored habitat, equivalent to that lost to the development.

3.5 Place

Issues arise associated with place which biodiversity offsetting, in its simplest form, does not take account of. The local social and cultural significance of nature sites should be considered along side the potential loss of habitat and biodiversity, and the accessibility of nature should be maintained. Another risk is the temptation to replace biodiversity in areas of high development pressure in return for habitat where land is cheaper.

²⁵ <http://www.fern.org/biodiversity-offsetting>

4 Taking a discussion forward

The preceding sections are intended to inform and provoke thinking about the issues related to offsetting. Discussion could focus on the following questions:

- Do you think that there needs to be a formal mechanism to address the impact of development on biodiversity?
- If so, is offsetting, a practical way to achieve this?
- If so, what are the key features of an offsetting system you would like to see?
- If not, which elements concern you?
- Are these fundamental to the concept or can they be addressed in the design of the offsetting system?
- Can you think of other ways to address the impact of development on biodiversity?

ANNEX 1: How biodiversity offsetting relates to sustainable development and other concepts.

This annex seeks to add clarification about how biodiversity offsetting relates to other concepts. Usefully, we can start by considering sustainable development. One of the five principles from the UK joint framework is *Achieving a sustainable economy - building a strong, stable and sustainable economy which provides prosperity for all, and in which environmental and social costs fall on those who impose them (polluter pays), and efficient resource use is incentivised*. It can be said that biodiversity offsetting seeks to address the polluter pays principle by ensuring that developers pay for the costs of mitigating their biodiversity impact. Adhering to two of the other sustainable development principles, *Using sound science* including the precautionary principle and *Good governance* are relevant to the design of any offsetting system.

Other economic concepts have emerged in recent years designed to deal with a failing of our economic model to adequately capture the importance of nature. These definitions offer some guidance and show how they can be distinguished from biodiversity offsetting:

- **Natural capital:** the concept of natural capital recognises that natural resources and their health are vital inputs to our economic system. Its main application is in Natural Capital Accounting whereby businesses and other institutions monitor their impact on the natural environment and consider this in terms of supply chains and risk.
- **Ecosystem Services:** the concept of ecosystem services views nature in terms of all the benefits it provides to humans. It is useful in highlighting the link between ecosystems and humans and their wellbeing.
- **Circular Economy:** the under-pricing of many natural resources has contributed to our current economic model of high rates of consumption and waste. A circular economy focuses on the re-use of materials within the economy, with the potential to reduce quantities of raw materials used and waste.

There are examples of interplay between the above areas. For example, biodiversity offsetting involves quantification of habitats, their associated biodiversity and other benefits. The concept of ecosystem services can be useful here as it articulates the link between ecosystems and the benefits they provide to people and helps ensure that social and cultural benefits of natural areas are taken into account when considering whether an offset is appropriate and what it needs to deliver. Another synergy is between NC accounting and the circular economy – NC accounting by businesses and institutions would help steer us towards a circular economy.