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# **Nets and frames, losses and gains: value struggles in engagements with biodiversity offsetting policy in England**

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## **Abstract**

Biodiversity offsetting (BDO) is presented as capable of mitigating development-related harm to populations of species while simultaneously enhancing economic development. The technique involves constructing such harm as a result of market failures, which can be resolved through market solutions. BDO is contentious, attracting outspoken proponents and opponents in equal measure. We examine competing perspectives of interested non-governmental actors through a structured discourse analysis, using qualitative data coding, of 24 written evidence submissions to the UK Parliament's Environmental Audit Committee's 2013 Inquiry into Biodiversity Offsetting in England. Nuanced positions and areas of agreement notwithstanding, we find that there is a discernible oppositional pattern producing core polarities between organisations favouring and resisting BDO. In interpreting these oppositional dynamics we observe that it is unlikely that this *impasse* can be resolved since although the debate is framed in terms of differences of view regarding the effectiveness or desirability of specific technical aspects of BDO policy, these differences arise from fundamentally divergent value framings. Struggles over offsetting involve irresolvable value struggles, and negotiations over the assumed (ir)rationality of biodiversity offsetting are thus located firmly within political and ideological arenas.

## **Keywords**

Biodiversity offsetting, No Net Loss, discourse analysis, value struggles, framing

## **Highlights**

Discourse analysis of consultation responses on biodiversity offsetting policy in England.  
Analysis reveals strongly polarised views on market-based conservation technologies.  
Differences may be irreconcilable, due to divergent and competing value frames.

Nature will not suffer herself to be taken by Nets spun out of the Brain. (James Keill, 1738)

### 1.1 Introducing Biodiversity Offsetting<sup>1</sup>

Biodiversity offsetting (BDO<sup>2</sup>) is proposed as a mitigation technique for managing development-related harm to habitats and associated populations. It requires investment in conservation in one or more locations, distinct from the development site, in such a way as to measurably produce ‘no net loss’, or even a net gain, of biodiversity in a wider area, and over a specified period of time stretching into the future (BBOP 2009: 3; also see ten Kate 2003; ten Kate et al. 2004, 9-10; BBOP 2012).

BDO involves (1) the use of standardised calculative frameworks for quantifying harm to populations of species caused by changes in infrastructure and industrial developments, and (2) the exchanging or trading of this calculated harm through payment for an equivalent or higher calculated increase in biodiversity value (an ‘offset’) in a different location and over a specified time period. This strategy is claimed to facilitate multiple-win environment and development scenarios. ‘Biodiversity’ is seen to be vested with new economic values that both honour its increasing scarcity due to human impacts and valorise sites of its conservation and flourishing, making it more likely that such sites will be sustained and enhanced. Economic development is boosted both by creating a new technique whereby development-related harm can be more easily compensated for, and by constructing biodiversity conservation itself as a commodity that might be traded in entrepreneurial markets. ‘Offsets,’ including biodiversity offsets, are presented as an extension of the mitigation hierarchy deployed for some decades in Environmental Impact Assessment (cf. Carroll and Turpin 2009). They are increasingly significant as a ‘last resort’ mitigation tool due to their apparent ability to compensate for residual biodiversity losses arising from developments considered as ‘unavoidable’.

International collaboration favouring BDO solutions to biodiversity loss has been fostered by the Business and Biodiversity Offsets Programme (BBOP) of the market-oriented Forest Trends group, a consortium of representatives from companies, financial institutions, governments and non-governmental organizations (NGOs)<sup>3</sup>. Under the directorship of lawyer and consultant Kerry ten Kate, BBOP has developed global principles and standards for biodiversity offsets, supported by an array of technical papers and guidelines.<sup>4</sup> By calculating apparent commensurability and substitutability between units of species, sites and habitats under inalienable property designations, such technical guidelines create and support the possibility of trade in these units between locations chosen for ‘unavoidable’ harm due to development, and locations chosen for investment in conservation.

A growing number of states are drawing up national policies for the enabling and regulation of BDO, accompanied by nascent regional policy such as the European Union’s No Net Loss initiative<sup>5</sup>. This combination of emergent national and regional policy frameworks with the participation, via BBOP, of multinational corporate and financial institutions in BDO guidelines and design, is placing BDO centre stage as a conservation technology with the potential to stimulate ‘green growth’ on a global

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<sup>1</sup> An earlier version of this paper was presented by Sian Sullivan as ‘Value struggles in the construction of biodiversity offsetting in England’ at a December 2013 Leverhulme Centre for the Study of Value research workshop, University of Manchester ([www.studyofvalue.org](http://www.studyofvalue.org)).

<sup>2</sup> Abbreviations used in the text: AONB – Area of Outstanding Natural Beauty; BDO – Biodiversity Offsetting; CBD – Convention on Biological Diversity; DCLG – Department for Communities and Local Government; DEFRA – UK’s Department for Environment, Food and Rural Affairs; EAC – UK Parliamentary Environmental Audit Committee; EMTF – Ecosystem Markets Task Force; IUCN – International Union for the Conservation of Nature; LPAs – Local Planning Authorities; MBIs – Market-Based Instruments; NNL – No Net Loss; NPPF – National Planning Policy Framework; SSSIs – Sites of Special Scientific Interest; UK BAP – United Kingdom Biodiversity Action Plan; UN CBD – United Nations Convention on Biodiversity. Table 1 lists the abbreviations used for organisations on whose written evidence submissions to the EAC our analysis is based.

<sup>3</sup> <http://bbop.forest-trends.org/>

<sup>4</sup> For the full range of BBOP resources see: <http://bbop.forest-trends.org/pages/guidelines>

<sup>5</sup> See [http://ec.europa.eu/environment/nature/biodiversity/nnl/index\\_en.htm](http://ec.europa.eu/environment/nature/biodiversity/nnl/index_en.htm)

scale.

## 1.2 BDO Policy in England

Together with the United States, Australia, South Africa and Germany, England is considered to be at the forefront of developing BDO as a market-based ecological compensation policy (cf. Koh et al., 2014).<sup>6</sup> In the UK, biodiversity offsetting has been unambiguously endorsed at Ministerial level:

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. [...] Fortunately, as the Ecosystems Market Task Force and Natural Capital Committee have set out, there is a way we can make our planning system even better for the environment and developers: biodiversity offsetting. (Ministerial Foreword, DEFRA *Biodiversity Offsetting in England Green Paper*, 2013)

Several key policy documents and reports paved the way for this 2013 DEFRA Green Paper. The 2010 Lawton Report *Making Space for Nature* suggested that BDO might become a source of new private sector funding for a much-needed consolidation and extension of currently under-funded conservation estate (Lawton, 2010: 86). Building on these recommendations, DEFRA's 2011 Natural Environment White Paper affirmed (at para 2.40) that 'biodiversity offsetting should be pursued in line with guiding principles, based on those set out in *Making Space for Nature*', and signalled the government's intention to set up pilot schemes as a first step towards a national policy. The 2012 National Planning Policy Framework (NPPF), while acknowledging that compensation remained a last resort under the mitigation hierarchy, nonetheless included new wording giving a clear signal to local authority planners that offsite compensation could potentially be used to legitimise development whose biodiversity impacts would otherwise have rendered it impermissible:

if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused. (DCLG 2012 para. 118)

DEFRA duly set up pilot schemes, involving six local planning authorities and various private sector actors and running for two years from April 2012 to April 2014 (DEFRA 2012a; for discussion see e.g. Carver in press). At the time of writing the results are being assessed by a consultancy (Collingwood Environmental Planning), whose report will inform subsequent legislative moves towards a national policy. This policy is being developed alongside, and at times in tension with, a range of existing statutory guidelines, frameworks and policies for the multiscale protection of species, habitats and landscapes. These include listings of scarce and protected species, from IUCN's Red Lists of Threatened Species<sup>7</sup> to Natural England's Biodiversity Action Plan<sup>8</sup> and its local counterparts; obligations to conserve and enhance the natural beauty of the landscape (as set out in s.85 of the Countryside and Rights of Way Act 2000, and assisted by the IUCN's inclusion of AONBs as Category V Protected Landscapes); the UK's Post-2010 Biodiversity Framework as required by the United Nations Convention on Biological Diversity; the business-led Ecosystem Markets Task Force (EMTF) (Duke et al. 2012) report commissioned by government, which promotes BDO as a major economic opportunity; the Environmental Protection Act (EPA) 1990, which gives a legal definition of 'significant harm'<sup>9</sup>; and the 1992 European Commission Habitats Directive<sup>10</sup>, which sets out requirements for provision of compensatory habitat.

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<sup>6</sup> See <https://www.gov.uk/biodiversity-offsetting>. Biodiversity conservation policy in Scotland, Wales and Northern Ireland is handled by the devolved administrations. Voluntary biodiversity offsetting is also increasing internationally, particularly by extractive industries (see review by Benabou, 2014).

<sup>7</sup> <http://www.iucnredlist.org/>

<sup>8</sup> <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/prioritylist.aspx>

<sup>9</sup> <http://www.legislation.gov.uk/ukpga/1990/43/contents>

<sup>10</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992L0043:EN:HTML>

### 1.3 A potent moment

BDO in England is attracting outspoken proponents and opponents in equal measure, from a wide spectrum of interest groups. Several recent events illustrate the liveliness of the debate. Between September and November 2013 DEFRA held a public consultation on its proposed policy, structured around 38 specific questions relating to its BDO Green Paper (DEFRA, 2013). Workshops were held in various locations as part of this consultation (we participated in one held in London on 27<sup>th</sup> October 2013), and on 22<sup>nd</sup> October the Royal Society hosted a policy discussion entitled ‘Biodiversity Offsetting: can it work in England?’ (which we also attended). Simultaneously, the UK Parliament’s Environmental Audit Committee (EAC) conducted its own Inquiry into Biodiversity Offsetting in England<sup>11</sup>, following extensive questioning of the Head of the UK’s Natural Capital Committee, Prof. Dieter Helm, on BDO in the context of an earlier Inquiry into Well-being<sup>12</sup>. We contributed submissions to both the DEFRA and EAC consultations, as academics with a research interest in BDO.

Alongside these interventions, October 2013 also saw publication of a strongly worded statement asserting ‘No to Biodiversity Offsetting’<sup>13</sup>, issued by a range of European social movements and grass-roots organisations. This followed a workshop in Brussels (in which we participated) on ‘Ecosystems Offsetting and Trading’, and argued that BDO is ‘a false solution’ to environmental damage, which will in reality weaken environmental protection and facilitate greater global degradation of ecosystems and communities that are already under threat. The debate continued into 2014 with the global conference ‘To No Net Loss of Biodiversity and Beyond’, organised in London by BBOP for BDO practitioners and policy-makers, tickets for which sold out within two weeks.<sup>14</sup> This June event was accompanied by a counter-forum of academics and activists contesting the legitimacy of offsetting on both ecological and social grounds.<sup>15</sup> We both attended the latter event, and one of us (Sullivan) attended the No Net Loss conference.

This, then, is a potent moment in the emergence of formal BDO policy both internationally and in the UK. England is being watched closely by varied interest groups in Europe and beyond, due to its well-advanced formulation of BDO policy as well as DEFRA’s development of a standardised BDO metric as a key, if controversial, calculative device (cf. Callon and Muneisa, 2005) on which BDO exchanges might be based (DEFRA 2012b; see discussion in Hannis and Sullivan 2012; Knights et al. 2013; Sullivan 2013).

Textual material in the public domain, in the form of responses to the public consultations detailed above, provides an important source of qualitative data that can be analysed systematically in order to identify key value statements and assumptions animating debate. ‘Value statements’ here refers to utterances expressing clear positive or negative attitudes towards elements of BDO proposals, and/or towards views and actions of other actors and organisations. In this paper we seek to identify the different and competing value frames (cf. Lakoff 2010) underlying the value statements mobilised by non-governmental actors engaging with BDO policy-making. We do this through a structured discourse analysis (cf. Johnstone 2008) of 24 written submissions to the EAC Inquiry.

We proceed by describing our methodological approach (section 2), followed by a summary of the key discursive patterns identified for the texts thus analysed, focusing on apparent areas of agreement and disagreement in these texts (section 3). Our discussion notes the intractable nature of several clear polarities in the views expressed. We suggest that deliberative processes such as the EAC Inquiry and the DEFRA consultation into BDO, whilst promising in terms of enhancing debate, dialogue and

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<sup>11</sup> See launch notice at <http://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/news/biodiversity-offsetting-launch/>

<sup>12</sup> <http://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/inquiries/parliament-2010/well-being/>

<sup>13</sup> <http://no-biodiversity-offsets.makenoise.org/>

<sup>14</sup> <http://bbop.forest-trends.org/events/no-net-loss/>

<sup>15</sup> <http://naturenotforsale.org/>

deliberation in service to the emergence of new modes of environmental governance (cf. Bäckstrand et al., 2010), may also leave irresolvable *impasses* in their wake. Such antagonisms arise from divergent values and ontologies (cf. Descola, 2013; Sullivan 2013): proposed by Boltanski and Thévenot (2006) as orders or economies of worth that give rise to incommensurable principles of collective agreement and create discord when one set of principles or ‘rules of law’ is insisted to be universal<sup>16</sup>. Divergent values, ontologies and orders of worth mean that ‘difference makes a difference’ (paraphrased from Bateson 1972, also Chakrabarty 2007: xii; Kohn 2013). This may be particularly so when recognition of divergences is precluded by the terms and frames within which deliberation is set (Martin et al., 2013), when people do not share the same principles that determine equivalence of worth (Boltanski and Thévenot, 2006: 33), and when technical proposals and procedures are incorrectly assumed to be devoid of normative principles (ibid.: 29). All of these are, of course, also associated with the vested economic interests of actors operating within an unequally accessed capitalist market economy. This means that BDO is also struggled over as a market-based instrument with the potential to add economic value to owned land, to create new economic values of units of nature for those able to assert ownership over these units, and to speed up development decisions.

Thus, although a deliberative process such as the EAC Inquiry may focus on differences of view regarding the effectiveness or desirability of specific proposed policies and techniques, polarities also arise from, and reveal, underlying ideological differences in the value frames or orders of worth held by participants in the debate (cf. Lakoff 2010).<sup>17</sup> Following de Angelis (2007), then, we suggest that struggles over BDO can be seen, at least in part, as irresolvable value struggles: arising from value incommensurabilities (cf. O’Neill, 1997) associated with different views of what behaviours constitute desirable human relationships with nonhuman nature and, in particular, over whether or not it is sensible to assume that conservation outcomes will arise from entraining nonhuman nature even more systemically with the ‘law of value’ of capital (de Angelis, 2007; Büscher et al., 2012). These views are in turn underscored by different normative conceptions of rationality; as well as by contested ontological assumptions regarding the nature of nature, and thus the nature of best practice for nature conservation.

## 2. Material and methods

Our focus is a qualitative textual and discourse analysis of 24 publicly available<sup>18</sup> written submissions to the UK Parliament Environmental Audit Committee’s 2013 Inquiry into Biodiversity Offsetting in England. The Inquiry was launched on 1<sup>st</sup> October 2013, and open for submissions until 15<sup>th</sup> October, overlapping with DEFRA’s Green Paper consultation discussed above. Many submissions are clearly influenced by the content of this latter parallel consultation (for example, the Country Land and Business Association uses the exact DEFRA consultation questions to structure their written evidence), but EAC respondents were not required to address their submissions directly to the Green Paper proposals.

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<sup>16</sup> Boltanski and Thévenot (2006) propose a series of orders of worth via which people tend to justify their positions and logics in varied situations, whilst Latour (2013) proposes a detailed consideration of the different rules of verification deployed and justifying different ‘modes of existence’ in modern institutional domains. Both are reminiscent of the concept of ‘regimes of truth’ asserted by Foucault (1991[1975]) as the self-reinforcing assemblage of knowledges, techniques and discourses that are inseparable from practices of power as these arise in modern institutions. There are traces of all these approaches in our analysis of the justificatory rhetorics and logics infusing what we are describing as the ‘value statements’ identified in our analysis. A systematic reanalysis deploying the categories proposed by the above authors could be a fruitful avenue for further research, but is beyond the scope of the present paper.

<sup>17</sup> Also see Read and Scott Cato (2014), who in a recently published paper arrive at a similar conclusion for debates regarding the construction of nature as ‘natural capital’.

<sup>18</sup> At <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmenvaud/750/75012.htm> We have excluded our own submission to the EAC from this analysis. It is available for viewing here: <http://data.parliament.uk/writtenevidence/WrittenEvidence.svc/EvidencePdf/2911>

The EAC submissions provide a self-selected sample of non-governmental interests and concerns relating to BDO policy. They range from responses that strenuously oppose BDO to those celebrating it, and as such it is likely that the transcripts are indicative of the spectrum of views present amongst organisations and actors in England with interests in this policy. The type of organisation (NGO, Union, commercial company, etc.) and stated focus of its work (conservation, trade, commercial development, etc.) was used as an initial descriptor to categorise the transcripts (see Table 1), based on self-descriptions in the Inquiry transcripts combined with review of organisation websites. This is simply to show the range and number of organisations and individuals that submitted transcripts, without making any prior judgements as to the type or homogeneity (or otherwise) of views regarding BDO held by organisations listed under the same descriptor. Our intention is for these views to emerge from the analysis of the transcripts (see Sections 3.1, 3.2 and 3.3), such that our reflections and interpretations are led by the data rather than overly prescribed in advance. The EAC have published their own summary of the written evidence submissions.<sup>19</sup>

We deployed the online software coding programme Dedoose (2013) so as to offer a structured analysis of these qualitative data through uploading the written evidence texts as transcripts and subjecting them to a systematic comparative coding process carried out by one of us (Sullivan). As with other qualitative data analysis software such as NVIVO or MAXQDA, the coding of transcript excerpts through Dedoose encourages very close reading and categorisation of texts, whilst permitting comparative analysis and the assessment of patterns through the software's options for exporting coded excerpts, creating charts and other data summaries. Codes were applied primarily to excerpts that asserted positive or negative opinions or 'value statements' regarding aspects of BDO. A total of 823 excerpts were thus created and coded. For the first part of our analysis (section 3.2) we focus on 34 codes that were linked to excerpts from at least five transcripts. These then illustrate areas of agreement in the transcripts<sup>20</sup> and thus highlight overlaps and patterns in the dataset. In section 3.3 we identify a range of polarised views that were clearly presented in the transcripts, as illustrated by specific statements that demonstrate the oppositional dynamics also present in the dataset. Coded excerpts referred to below are identified using the name (or abbreviated name, see Table 1) of the organisation to which the transcript is attributed, combined with the excerpt number generated by Dedoose (e.g. FoE [i.e. Friends of the Earth] #5).

Although requiring reader selectivity and interpretation at every step of the coding process, an advantage of submitting texts to such structured and systematic reading is that this permits a relatively distanced assessment of key patterns and discursive structuring, as indicated by the numerical prevalence of codes used to describe views stated by the authors of the texts (cf. Svarstad et al. 2008). Coded transcripts are available for viewing by request to the authors. Our analysis is also informed by observant participation in relevant meetings and events, as detailed above.

### 3. Results

As can be seen from Table 1, the largest group of organisations to submit written evidence were 'conservation charities', i.e. non-governmental and non-profit organisations whose stated aim is some specified aspect of 'nature conservation' and/or environmental education, although their ways of working towards this, including their embrace or otherwise of MBIs, may be divergent. Only one commercial company submitted evidence (the building materials and construction company Lafarge Tarmac), although the views of commercial developers and other landowners are also represented by a cluster of trade, industry and landowners associations. The professional bodies CIWEM and IEMA and the private sector offsets broker The Environment Bank all have professional and business interest

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<sup>19</sup> Available at <http://data.parliament.uk/writtenevidence/WrittenEvidence.svc/EvidencePdf/2911> On the basis of the EAC's post-Inquiry recommendations, the government withdrew a prior proposal to draw up a national policy prior to the completion of the pilot study.

<sup>20</sup> Note that by 'areas of agreement' we are referring to overlapping views in the transcripts, some of which may be in disagreement with proposed BDO policy, rather than areas of agreement with BDO policy.



in BDO. NERC and environmental law professor Colin Reid can be considered to represent views that are relatively independent of direct participation in any emergent BDO markets.

**Table 1. Written evidence submissions to the UK Parliament’s Environmental Audit Committee Inquiry, October 2013, by descriptor for organisation.**

Description of organisation	Name of organisation	Abbreviated name	Number of excerpts coded	Length (characters)
<b>Developer / commercial company</b>	Lafarge Tarmac	LT	23	7,111
<b>Trade associations / alliances / unions</b>	Aldersgate Group	AG	22	6,905
	Country Land and Business Association	CLBA	45	31,908
	Home Builders Federation	HBA	17	7,546
	Mineral Products Association	MPA	25	17,316
	National Farmers Union	NFU	22	15,762
	RenewableUK	RUK	17	10,735
<b>Conservation / environmental charities and volunteer groups</b>	The Amphibian and Reptile Conservation Trust	ARCT	56	29,006
	Bexley Natural Environment Forum	BNEF	42	22,011
	Buglife	BL	38	9,416
	Field Studies Council	FSC	11	9,491
	National Trust	NT	47	17,923
	Royal Society for the Protection of Birds	RSPB	76	38,373
	The Wildlife Trusts	TWT	81	39,985
	Woodland Trust	WT	21	9,644
	Yorkshire and Humber Ecological Data Trust	YHEDT	8	15,480
<b>Independent government organisation</b>	North Wessex Downs Area of Outstanding Natural Beauty Partnership	NWDA	26	11,732
<b>Environmental advocacy NGO</b>	Friends of the Earth	FoE	86	36,107
<b>Professional bodies</b>	Chartered Institute of Water and Environmental Management	CIWEM	12	5,698
	Institute of Environmental Management and	IEMA	37	15,558
<b>Private sector offsets Broker</b>	The Environment Bank	EB	75	23,007
<b>Think tank</b>	Policy Exchange	PE	26	13,941
<b>Government research council</b>	Natural Environment Research Council	NERC	7	4,350
<b>Independent academic</b>	Prof. Colin T. Reid	CR	3	4,229
	Mike Hannis and Sian Sullivan	Not included in analysis		

### 3.1 Key areas of agreement

Thirty-four codes were each linked to five or more EAC submissions, and we use these to illustrate areas of agreement in views expressed in the transcripts. Table 2 lists key codes for both positive views and expressions of concern regarding BDO. Expressions of concern outnumber positive views of BDO, although a large number of submissions express a view that BDO could have a part to play in biodiversity conservation in England. A range of organisations state that BDO could engender triple-win outcomes through benefitting biodiversity, economic efficiency and streamlining land-use planning. Thus for the private sector offsets brokerage firm the Environment Bank Ltd., BDO will serve the ‘triple bottom line’<sup>21</sup> interests of people, planet and profit (framed alternatively in economic language as human, natural and financial ‘capital’), by delivering an ‘improved planning system, improved biodiversity conservation, [and] avoiding additional costs’ to developers (EB #13,39: also HBF #9). Concerns regarding BDO are strongly associated with organisations specifically focussed on conservation and environmental management. They emphasise possible losses of biodiversity that may arise through BDO, the devaluing of local community relationships with local natures that may occur due to ‘moving nature elsewhere’, the possibility for creating a mechanism for the ‘tradeable destruction of nature’, and concerns regarding inherent uncertainties associated with restoring and (re)creating habitats. None of the private sector development organisations in the dataset are linked with these latter codes.

**Table 2. Positive views and key expressions of concern regarding BDO.**

Code and number of associated organisations (≥5)	Linked organisations (n=24) <sup>1</sup> Please refer to Table 1 for transcript descriptor
<b>Positive views of BDO:</b>	
Could have a part to play in biodiversity conservation, if well-designed and regulated (12)	AG; CLBA; BNEF; NT; RSBP; TWT; WT; NWDA; CIWEM; IEMA; PE; NERC
Will contribute win-win outcomes, i.e. improving triple bottom-line of value for nature, saving money for business and increasing speed in planning process (6)	AG; HBF; NT; RSPB; PE; EB
Clarifies imperative to assess and quantify development impacts (5)	ARCT; NT; RSPB; IEMA; PE
<b>Concerns regarding BDO:</b>	
BDO will cause biodiversity loss through losses <i>in situ</i> that may never be retrieved (9)	BL; BNEF; NT; NWDA; RSPB; WT; FoE; CIWEM; IEMA
Local wildlife sites will not be properly valued due to pressure for development (9)	CLBA; ARCT; BNEF; FSC; NT; NWDA; RSPB; FoE; IEMA
Loss of local value (place) will occur through shifting nature to different places (8)	ARCT; BNEF; FSC; NT; NWDA; FoE; CIWEM; IEMA;
Will generate reduced access to nature / green spaces by local communities (8)	CLBA; ARCT; BNEF; FSC; NT; NWDA; RSPB; FoE;
Will increase separations between nature and people and reduce well-being, particularly in urban areas (8)	BNEF; FSC; NT; NWDA; RSPB; WT; FoE; CIWEM
Biodiversity gain will not be delivered (6)	ARCT; BNEF; NT; NWDA; FoE; CIWEM
Incomparability between harm and offset sites will cause additional biodiversity decline due to development (5)	ARCT; BL; NWDA; TWT; NT
Will cause tradeable destruction of habitat (5)	ARCT; BNEF; NWDA; FoE; CIWEM
Habitats difficult to restore = uncertainty (5)	RSPB; NWDA; TWT; FoE; CIWEM

<sup>1</sup> For ease of reference these are listed in the order they appear on Table 1.

Notwithstanding these different expressions of the positive and possibly problematic aspects of proposed BDO policy, observations that the current planning system needs to be improved were shared across the spectrum of respondents. As Table 3 indicates, these concerns coalesce around observations of the current lack of ecological, monitoring and enforcement capacity in LPAs, whilst

<sup>21</sup> As proposed in 1994 by John Elkington, founder of the consultancy SustainAbility <http://www.sustainability.com/history>

affirming the significant role that the planning system has to play in the mitigation of harms to biodiversity.

**Table 3. Expressions of concern regarding the current planning system in England.**

Code and number of associated organisations (≥5)	Linked organisations (n=24) Please refer to Table 1 for transcript descriptor
Lack of capacity, data and expertise in LPAs (8)	HBF; MPA; ARCT; BNEF; FSC; NWDA; IEMA; PE
Planning system is not working for nature conservation (7)	MPA; BNEF; NWDA; TWT; IEMA; EB; PE
Lack of monitoring of existing mitigation and compensation measures (7)	MPA; ARCT; BNEF; NWDA; FoE; IEMA; PE
Few ecologists in planning system = deficit of skills for assessment and verification (7)	CLBA; MPA; BNEF; FSC; RSPB; TWT; PE
Case for change to existing system is clear and evidenced (6)	CLBA; TWT; FoE; IEMA; EB; PE
The planning process has a significant role to play in mitigating harm to biodiversity (6)	AG; CLBA; HBF; ARCT; NWDA; IEMA
Planning system needs to be more robust (6)	HBF; ARCT; BNEF; NWDA; IEMA
When mitigation or compensation is currently requested it is rarely delivered effectively (5)	MPA; RSPB; FoE; IEMA; EB
Slow pace of processing planning applications (5)	CLBA; HBF; MPA; RSPB; EB
Lack of enforcement (5)	MPA; ARCT; NWDA; IEMA; PE

Areas of agreement are also noticeable with regard to proposed ‘ground-rules’ for designing and applying a BDO policy, should the government move in this direction (see Table 4). Forceful assertions were made in most submissions that the mitigation hierarchy should be adhered to with BDOs only being approved as a very last resort. Many transcripts also emphasise the need for strong regulation, centralised and standardised processes of registration and accreditation, and rigorous monitoring and review of granted offsets. Mirroring the observations in Table 3 above, a recurrent theme was that this need should be met by LPA expertise and activity, and that despite austerity measures LPAs need to be strengthened and better resourced by government so as to deliver the ecological and enforcement capacity required for permitting and monitoring offsets such that they properly satisfy conservation requirements.

**Table 4. BDO policy design ‘ground-rules’**

Code and number of associated organisations (≥5)	Linked organisations (n=24) Please refer to Table 1 for transcript descriptor
<b>Ecological aspects:</b>	
Ecological network / green infrastructure connectivity and consolidation should be maximised strategically (10)	AG; CLBA; BL; BNEF; NWDA; RSPB; TWT; YHEDT; IEMA; PE
BDO must be designed to deliver net gains / additionality for wildlife/biodiversity (6)	AG; MPA; NT; RSPB; TWT; IEMA
Ecological baselines at sites need to be established as soon as possible for monitoring purposes (6)	RSPB; TWT; WT
Offset habitat must be distance-near (6)	CLBA; BL; NWDA; TWT; WT; CR
Mature irreplaceable habitats, sites of national importance and SSSIs should not be replaced with low quality ‘simplified’ habitat (5)	NT; RSPB; TWT; WT; CIWEM
Offset location should be plan-led, i.e. based on appropriate spatial plans (5)	MPA; NWDA; TWT; IEMA
<b>Socio-ecological aspects:</b>	
Local interactions between people and wildlife need to be sustained, e.g. through distance-near offsets (6)	FSC; NWDA; TWT; WT; CIWEM; CR
Lost access to wildlife by local communities must also be compensated for (5)	NT; NWDA; TWT; CIWEM; CR
<b>Institutional structures:</b>	
LPAs need to be supported by government, particularly in ecological	HBF; MPA; BNEF; FSC; NWDA; RSPB;

and enforcement capacities (10)	TWT; WT; YHEDT; PE
Outcomes need to be independently monitored, mapped and assessed for duration of the offset agreement / over the long-term (9)	AG; ARCT; BNEF; NWDA; RSPB; WT; YHEDT; IEMA; PE
Government must produce clear guidelines and standards on how to adhere to every stage of the mitigation hierarchy (8)	HBF; MPA; FSC; NWDA; RSPB; TWT; IEMA; PE;
There needs to be a formal, independent accreditation system / regulator for offset providers, i.e. a central registration database to prevent double-selling (7)	AG; BNEF; NT; NWDA; RSPB; WT; PE
Needs to be controlled by a strict national regulatory framework (7)	AG; CLBA; HBA; MPA; NT; RSPB; WT
Offset accreditation should be supported by a rigorous, independent biodiversity/ecological evidence database based on nationally agreed standards (6)	FSC; NWDA; RSPB; TWT; WT; YHEDT; IEMA
Legal and financial framework needs to be rigorous, transparent and consistent (6)	AG; HBF; MPA; NT; RSPB; TWT;
A transparent, robust approach is need to ensure net gain / additionality (6)	AG; CBLA; BNEF; NWDA; IEMA; PE;
Regular, standardised monitoring reports for offsets should provide evidence for review by LPAs (5)	AG; BNEF; NWDA; RSPB; TWT
<b>Policy design:</b>	
The mitigation hierarchy must be followed and adhered to (17)	AG; CLBA; HBF; RUK; ARCT; BL; BNEF; NT; NWDA; RSPB; TWT; WT; CIWEM; IEMA; EB; PE; NERC;
Must always be a last resort, i.e. only for unavoidable projects with residual loss elements – must not prejudice decision-making (10)	BL; BNEF; NT; NWDA; RSPB; TWT; WT; CIWEM; IEMA; NERC
Compensation must be sufficiently long lasting (i.e. on ecological time-frames) – ‘in perpetuity’ should be an aim (9)	ARCT; NWDA; RSPB; TWT; WT; CIWEM; CR
Adequate long-term funding for offset sites and restoration needs to be assured (6)	MPA; ARCT; NT; RSPB; TWT; CIWEM
Funding should meet full-cost recovery needs of offset providers at outset of development (5)	MPA; NFU; ARCT; NT; TWT
<b>General</b>	
BDO must not become a green-card or short-cut for development (6)	BL; NT; NWDA; RSPB; WT; CIWEM

DEFRA’s proposed metric, as the key technical and metrological device for calculating harms and constructing equivalence with offsets, elicits concerns regarding potential losses that may arise due to its perceived shortcomings. These are expressed primarily by conservation and environmental organisations, and can be distilled into the two points noted in Table 5.

**Table 5. Key concerns regarding the proposed DEFRA metric for calculating harm and offset values.**

Code and number of associated organisations (≥5)	Linked organisations (n=24) Please refer to Table 1 for transcript descriptor
Cannot reflect complexity of nature/biodiversity/species (10)	ARCT; BL; BNEF; NT; NWDA; RSPB; TWT; FoE; IEMA; NERC
No means of valuing social, cultural and historic values in the metric (6)	FSC; NWDA; WT; FoE; CR; NERC

Having identified some broad areas of agreement shared between different submissions, we move now to highlight polarities in the dataset, which we argue are illustrative of intractable value struggles regarding appropriate ways to frame and address contemporary harms to biodiversity.

### 3.2 Polarities and value frames

Notwithstanding the broad areas of agreement noted in 3.1 above, strong polarities and oppositional dynamics are also noticeable in the submissions. We identify nine of these below, using key excerpts from the Inquiry transcripts to illustrate underlying oppositional value frames, which we draw out by presenting these oppositions in the form of polar either/or statements.

*1) Market-based valuation is*

*(i) essential for*

**or**

*(ii) anathema to, biodiversity conservation.*

A large number of submissions (11) make explicit reference to BDO as a market-based instrument (MBI), but normative views regarding whether this would be desirable pull in very different directions. The CLBA (#7) ‘see offsetting as being primarily a commercial matter with the landowner deciding that he wishes to dedicate his land for conservation purposes so long as the price is right’. Thus, as ‘a market based approach to addressing biodiversity loss’ it ‘should better value biodiversity loss’, so as to pay providers more than simply ‘income foregone’ (NFU #10), i.e. offset providers should profit financially from their participation in the market (ARCT #47). The Home Builders Federation (#12) celebrates technical support for the emergence of market liquidity in BDO offset products, while the Mineral Products Association (#23) asserts that offset providers will require sufficient demand from developers in order to make their participation as an offset-supplier in this new market an attractive business proposition.

For others, these same aspects of BDO trigger concern over coupling ‘biodiversity enhancement’ (MPA #10) with market demand. Approaching biodiversity conservation by creating a market in conservation units that can be traded for profit is seen as an irrational response to current limitations of the planning system (FoE #29-35). Those concerned that it is precisely this way of conceiving and attributing value that has resulted in biodiversity decline, argue that this strategy will simply add new layers in the ‘race to the cheapest’ through which nature currently is devalued. Thus the National Trust (#40,45) is concerned that BDO will ‘draw in new commercial players, who lack the expertise or long-term commitment, but will offer cheap solutions to developers’, and that it will be important that ‘it is not necessarily the cheapest option that is pursued, but the most appropriate offset for the environment and people’. The BNEF (#29) state that BDO is ‘creating a financial “pull” for destroying sites as well as a “push” from development proposals’, and the Amphibian and Reptile Trust (#27) are concerned that ‘[m]anaging “supply and demand” against both uncertainties of development and of being able to match an ecological need in the right area could start driving perverse incentives’, including ‘loss of characteristic species/habitats to be replaced by more easily created habitat types’ (also ARCT #33; NWDA#6; TWT #52).

*2) The DEFRA metric will*

*(i) rationalise, simplify and improve assessments of relationships between development and conservation*

**or**

*(ii) cause further biodiversity decline through exacerbating relational distance between humans and nature, facilitating the further commodification of nature, and over-simplifying ecological complexity.*

The metric tends to be valorised by developers and landowners on the grounds that its application will simplify existing processes (e.g. AG #11; CBLA #12; HBF #13), reduce planning costs, assist with the process of finding appropriate sites for future development, enhance transparency, and facilitate the emergence of market liquidity in a new BDO market (e.g. HBF #3,4,12,13,15; IEMA #24; EB #45). For the Environment Bank, ease of use conferred through enabling devices such as the metric is of particular importance, especially for farmers and landowners (#60,76). This is a principle they are independently working to foster through development of online tools such as their ‘biodiversity calculator’<sup>22</sup>, which permits an easy indicative calculation of biodiversity units by hectare of predefined habitat types, based on the DEFRA metric values for habitat condition and distinctiveness.

Simplification is also the focus of reasons given by environmental and conservation organisations for contesting the metric. They argue that the aspiration towards simplicity pulls in the opposite direction to the realities of ecological and biodiversity complexity, including the dynamic requirements of species, the integrity of which BDO policy is framed as being designed to protect (BL #2; NT #48;

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<sup>22</sup> See <http://www.environmentbank.com/impact-calculator.php>

NWDA #12,27; #FoE #55; NERC #5). As such, the equivalences that the metric is designed to construct are deemed questionable on both ethical and scientific grounds (CR #1). Alarm is expressed in particular over the apparent claim in the Green Paper (at para. 25) that the metric could be satisfactorily applied to ascertain habitat ‘value’ in only 20 minutes, with adjectives such as ‘cavalier’ and ‘ignorant’ used to describe this intention (BNEF #18). Regarding conservation outcomes, many submissions claim that the foundational, even ontological, inability of the metric to incorporate ecological and cultural complexity will of necessity lead to a further retrenching of biodiversity (BNEF #20). NERC (#5) summarises the tension thus:

Transferability [of habitat characteristics] will increase as the metric gets more general, but will lose ecosystem specificity and potentially value (and accuracy) of the offset. A metric that captures community structure and composition makes it less likely [to be able to be applied].

### **3) Developers are**

*(i) only interested in profit, and not genuinely interested in nature*

**or**

*(ii) effective conservationists of biodiversity.*

A number of submissions suggest suspicion regarding the linkage between development and biodiversity conservation, which translates into suspicion regarding developers’ interest in BDO. The observation in 3.1 above that few developers or trade associations are linked in the transcripts with concerns listed in Table 2 perhaps supports the perception that developer interest in BDO here is less to do with biodiversity than it is to do with potential economic gains. On the other hand, developers are keen to affirm their roles as conservationists (LT #11,12). The Mineral Products Association (MPA #9), representing a membership of 465 companies, thus describes its restored sites as ‘our National Nature Park’, stating that:

The minerals industry has an enviable and unrivalled track record of delivering net gain in biodiversity through innovative and imaginative site management and restoration. A recent survey of a selection of our members identified that to date it has delivered over 5,000 hectares of priority habitat creation on its sites to date, with a further 5,000 hectares yet to be delivered but in approved restoration plans.

### **4) BDO is intended to benefit**

*(i) developers*

**or**

*(ii) biodiversity.*

Several submissions express concern that the biodiversity protection requirements of the current planning system are not working for development. The Environment Bank, for example, talks of the ‘angst amongst planners and developers’ caused by ‘highly protected species’ (EB #65,66). Developers are thus ‘constantly frustrated by delays to their planning permission driven by species-based conservation issues, with millions of pounds lost through extending programme times and reduced net developable areas’, ‘[t]he only beneficiaries of [which]... are the environmental consultants who service this industry, and the manufacturers of equipment (e.g. newt fencing) to do the same’ (EB #23,27,69). They argue that by streamlining the planning process a significant amount of developable land could be freed up quickly and cheaply, bringing business opportunities for support sectors such as brokers and impact assessors (EB #27,35,76).

Indeed, for Lafarge Tarmac largescale development is actively required for BDOs: ‘for offsetting to be a viable option the developments associated with it are largely to be of a larger scale’ (LT #10). Of interest here, however, is the company’s stated interest, as ‘one of largest landowners in the country’, in becoming an ‘offset provider’ given a situation where BDO may make offset provision into a profitable enterprise for landowners (LT #3; also MPA #2). Making offset provision into a profitable enterprise means that commercial companies and entrepreneurs, including those enacting developments whose harms requires offsets, are increasingly likely to offer conservation by providing these offsets, as long as the price is right. Large-scale business interests are thereby constructed as

meeting both the development and the conservation needs of society, with both boosting profit (see especially LT and MPA submissions).<sup>23</sup>

Such assertions of the development benefits from BDO generate objections in other submissions, clustering around a concern that BDO policy is being designed in ways that support the businesses that cause harm to biodiversity, rather than supporting the biodiversity that is thereby harmed. The RSPB (#38), for example, states that:

[w]e welcome the statements in the Green Paper that the mitigation hierarchy is adhered to, but this assertion is undermined and contradicted by the explicit desire for offsetting to free up more land on site for development (because mitigation will no longer be necessary).

The BNEF (#16) similarly express concerns that BDO will extend a situation where the planning system is ‘already heavily biased towards the concrete and tarmac merchants’, whilst the National Trust (NT #3) and Buglife (BL #17) respectively worry that BDO may provide a development ‘short cut’ or ‘green card’. From a biodiversity and species perspective, as these respondents see it, blocking or delaying ecologically damaging development is precisely what the planning system *should* be doing, so to the extent that this is indeed happening the current system can be seen to be working.

## 5) BDO should

(i) speed up the planning process for developers

or

(ii) increase the strength and rigour of LPA monitoring, regulation and enforcement.

As noted in Table 3, there is wide agreement regarding the need for change in the planning system. At the same time, there is tension between views that strongly promote a reduction in the bureaucratic burden on industry, with a concomitant shift of conservation to the private sector from ‘its current charitable and public sector niche’ (EB #57,58), and views that seek a strengthened planning and enforcement system, combined with strong national guidelines and accreditation structures.

Unsurprisingly, developers and associated trade organisations wish to add as little friction to their activities as possible. Recommendations include taking care that conservation covenants associated with offsets do not ‘sterilise’<sup>24</sup> large areas of land and thereby prevent future beneficial developments (such as wind farms) (RUK #3,10), that BDO requirements should not be backdated as this ‘would have a negative impact on the financial viability of projects which are already in the system’ (RUK #13), and that there should be no central recording of offsets (CLBA #31). The latter view is contradicted directly by arguments in several other submissions favouring the creation of a central accreditation database managed by government (for example by Natural England), without a parallel corporate system, particularly to avoid double-counting and double-selling of offset credits (RSPB #79)<sup>25</sup>.

The desire to reduce planning friction is also present in some representations regarding provisions for habitat banking to provide future income streams to landowners. The CLBA (#38-40), for example, favour a situation whereby landowners might sell habitat *ex post* as an offset, i.e. that *ex ante* demonstration of intent to create an offset is not necessary. They also support the use of offset

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<sup>23</sup> Thus at the First World Forum on Natural Capital held in Edinburgh 21-22 November 2013, the Biodiversity Director for the major French public financing organisation CDC (Group Caisse des Dépôts) described how CDC is receiving lucrative returns from the sale of BDO credits from a conservation bank it has invested in, while also requiring that its own conventional development offset their biodiversity impacts – including through the purchase of offsets provided by the same investment company (Sullivan pers. obs. and field notes). As such, profit is generated simultaneously from economic activity causing environmental harm, and from the conservation compensations required by the same company to apparently offset this harm.

<sup>24</sup> The paradoxical use of the word ‘sterilise’ here is perhaps indicative of a broader value framing. Although such ‘sterilised’ lands would be those managed to support living biodiversity and ecosystems, the term is used to denote land that is thereby denied the potential of the *economic* ‘fecundity’ brought by development.

<sup>25</sup> On which point it is interesting to observe that the No Net Loss conference held by BBOP in London in June 2014 was structured precisely into separate parallel sessions for government and corporate strategies on offsetting (see agenda at <http://bbop-forest-trends.org/events/no-net-loss/documents/agenda.pdf>).

designations to sustain environmental gain that might otherwise be lost, or in cases where biodiversity gain arises through other land management agendas. For others these would contravene additionality requirements, because there is no way of knowing these ‘improvements’ would not have existed without the offset.

Contrary to such friction-free models of a ‘free market’ in BDO, other submissions assert the need for a strict and strong regulatory framework, with clear national guidelines and a system of national offsets accreditation and registration, accompanied by robust ecological databases and regular independent monitoring and review (see Table 3). Such recommendations are accompanied by pleas for increased government support and resourcing for local government, especially in relation to ecological expertise, assessment and capacity, and enforcement.

**6) The evidence-base for BDO is**

*(i) strong*

**or**

*(ii) weak.*

Views regarding the evidence-base for BDO are diametrically opposed. The Environment Bank state that ‘the case for biodiversity offsetting is well-evidenced through international and national experience’ (EB #29,39). Other respondents argue that there are ‘few empirical studies of the effectiveness of biodiversity offsets’, and that those that exist demonstrate lower species richness on offset sites than on the sites they are offsetting (FoE #42,58). For the RSPB (#34), the evidence globally suggests ‘that there are no systems in the world that have been able to demonstrate no net loss of biodiversity, [with] the wealth of studies showing (often considerable) net losses’.

A number of pragmatic recommendations regarding the design of BDO are notable in the texts, even in those that tend towards strong disagreement with BDO. Values expressed regarding key design elements are considered below.

**7) BDO should be**

*(i) mandatory*

**or**

*(ii) voluntary and fully permissive.*

A key issue is whether or not BDO should be mandatory or voluntary for developers. Developers and related trade associations would prefer a voluntary and fully permissive approach (CLBA #4,19; HBF #8; RUK #1,6), so as not to increase the regulatory burden to developers and thus ‘stifle future development projects’ (LT #9), or to limit possibilities for choosing the most efficient compensatory mechanism (HBF #10). Thus for the Home Builders Federation it is flexibility in the choice of compensatory mechanism that will set ‘the right market signals in place’ (HBF #11). As noted above, the desire here is ultimately to create a ‘free market’ in offset trading through making the system as simple and as friction-free as possible.

There is also a common view that BDO is likely to inspire investor and purchaser confidence only if it is mandatory (eg CLBA #19). This is a view that conservation charities and environmental organisations, whilst frequently resistant to BDO on principle, tend to endorse, arguing that if the policy *is* established then it will need to be mandatory in order to offer any conservation effectiveness (see Table 4). The Environment Bank is also vehement that BDO will only be effective if mandatory, asserting that ‘the Green Paper could have set out this case [for mandatory offsetting] more strongly and that, as a result of the failure to do so, much of the arguments against offsetting will be poorly based’ (EB #74). Related to this is an aspirational orientation that sees BDO working best as a market of willing sellers and buyers with growing demand secured by making offset requirements mandatory in planning requirements. Thus, ‘[v]ery few developers will ever choose to compensate where they are not required to do so. Lack of demand then fails to drive offset supply, the market stays small and expensive, and the system does not work’ (EB #45). It is difficult, however, to separate this recommendation from the Environment Bank’s own interests as a private sector broker of offset deals that will gain from such mandatory status.



### **8) Offset designations should**

*(i) remain valid in perpetuity to safeguard conservation outcomes*

**or**

*ii. not remain valid in perpetuity as this would entail wrongful ‘sterilisation’ of land-use possibilities.*

The length of time for which an offset designation should apply is the cause of strong oppositional framings in the transcripts. The Country Land and Business Association, representing the interests of large landowners, frames the ‘in perpetuity’ requirements of proposed conservation covenants as ‘fundamentally wrong’, saying that ‘we suspect that many landowners will see little that is attractive about dedicating land in perpetuity. They might as well sell it’ (CLBA #32; also NFU #5,6,8). Lafarge Tarmac assert similarly that:

asking landowners to commit to undertaking / being responsible for a management regime in perpetuity, when it is nearly impossible to calculate accurately what the costs will be of that regime in 10 years let alone 50, 80 or 99, is likely to cause them some concern and hesitancy towards the prospects being offered. Furthermore, such a commitment being made as a charge against the provider’s property could also affect the future value of that property thus adding another concern / reason for landowners not to progress as offset providers (LT #22).

Conversely, submissions talk of the need for any offset designations to be protected in perpetuity. Thus, ‘[i]f offsetting is to be meaningful and command public confidence, any replacement sites would need to be safeguarded in perpetuity. This raises extremely difficult questions, for example of mapping, monitoring, legal enforcement, resilience, and long-term management through changes of ownership’ (NWDA #8; also TWT #85).

### **9) Offsets should be located**

*(i) close to sites of development-related harm*

**or**

*(ii) strategically chosen at any distance to improve connectivity of valued ecosystems in keeping with spatial plans.*

IEMA (#8,31) state that views on the location of offsets projects relative to impact sites pull both ways, ‘with strong arguments for both local [i.e. distance-near] and strategic [i.e. increased connectivity and landscape level] approaches’. For a number of conservation charities, submissions emphasise design principles based on local ecological concerns. These include that offsets should be distance-near, rather than located far from development sites, based on an assumption that close distance will equate to ecological similarity between offset and development sites (e.g. BL #24), and that this will support local interactions between people and wildlife. The Woodland Trust recommends that ‘[a]ny metric should use localness as one of the key factors when determining offset scale, i.e. increased distance from original damage should incur a penalty’ so as to support ‘the Government’s policy of maintaining the interaction of people with nature’ (WT #15-16; also FSC #3).

From the perspective of generating market liquidity in commoditised offset products, however, others urge that as much flexibility as possible should be permitted for offset location, such that offsets may ‘be located outside the immediate area of the planning application’ (NBF #15). Some submissions thus advocate the use of BDO calculations to move developments to ‘low-value’ habitats (e.g. PE #12), thereby ‘trading up’ to ensure net gain (NT #21) rather than supporting only like-for-like local exchanges. Others express concern that this strategy will be used to devalue green space sites with high local use-values and which support species that ‘fall through the net’ of BDO metrics (e.g. BL #5,20). Additional concerns are that a ‘race-to-the-cheapest’ in terms of pricing will mean that good quality agricultural land may become available for development in part through scoring poorly on habitat metrics (FoE #76).

### **3.3 From loss to gain via ‘No Net Loss’?**

By now it should be clear that, whilst ‘no net loss’ (NNL) is widely supported as a minimum objective, there is no broad agreement that a BDO policy can in fact achieve this aim. The claim that no net loss overall, or even a ‘net gain’ can be produced from a policy structured to require losses of

populations and habitats is framed by critics as paradoxical at best (RSPB #32), guaranteeing only 'ecological loss for uncertain gains' (RSPB #32). Those most resistant to the idea that BDO can generate NNL frame this as an irrational and 'wantonly specious' claim (BNEF #5,43). Other submitters question NNL itself as the most appropriate objective towards which to be designing policy, noting instead that given the scale of contemporary biodiversity crisis the aim should be firmly stated as a 'net gain' of biodiversity (AG #20; TWT #9; PE #17). The Wildlife Trusts note that it is unclear from the DEFRA Green Paper what geographical scale the objective of 'no net loss' should apply to (TWT #40), while NERC (#5), amongst others, note that what elements of biodiversity are able to be caught by the metric will depend on how fine-scale its application is with regard to the detail included in habitat assessments. As we discuss further below, such comments illuminate underlying concerns regarding not only how wide the 'net' of the metric should be cast, or how coarse or fine its mesh should be, but also over whether or not the frame of 'netting nature' is indeed the most appropriate for a revaluing of 'nature' that redresses losses due to human activity.

#### 4. Discussion

As the above analysis indicates, a wide spectrum of views are expressed in the EAC submissions, from enthusiastic support for a BDO policy in England, to vigorous contestation and concern. The submissions encompass a range of almost diametrically opposed positions. Some see BDO as the way of the future, as a revolutionary and innovative means of pragmatically providing multiple-win solutions to both environmental and economic issues, and frame competing perceptions and concerns as reactionary and inconvenient. Thus, '[b]iodiversity offsetting is a new opportunity to make a difference to environmental conservation, and as such should not be designed with old fashioned and restrictive mindsets' (Environment Bank, point 22). Others are 'sceptical about the motivation behind the Green Paper proposals', and state that the proposals contained therein 'would need to be improved beyond recognition' (NWDA #1,4).

The debates highlight different ways of understanding both the value of nature, and the nature of value. Those seeing themselves as working pragmatically within the value framework of the market economy perceive the application of monetary values, which require numerical scoring systems, to be the most efficient means of achieving a logically beneficial re-allocation of value which shifts 'nature' out of its current state of value invisibility. Others contest the appropriateness both of monetary valuation and of markets, arguing that these cannot adequately reflect intrinsic values conferred by uniqueness, or the consequent unsubstitutability of species populations and habitats located in places. These diametrically opposed frames and positions are suggestive of a dispute that cannot be resolved satisfactorily for all parties through deliberative processes, since they are indicative of different underlying understandings and practices of 'value'. We thus find the notion of 'value struggle' (cf. de Angelis 2007) to be powerful in understanding the *impasse* that is arising between these positions, since this emphasises the significance of the ideological values and associated rationalities (and even ontologies) underlying the frames through which those engaging in this struggle articulate their views (cf. Lakoff 2010; Descola 2013).

##### 4.1 Value struggles

Broadly speaking, those in favour of BDO and other proposed MBIs as multiple-win solutions for resolving development-related environmental harms consider that BDO, through encouraging the creation of new habitat to offset calculated losses to individuals and populations at specific sites, will effect the net conservation of species, rather of specific populations (of species) in specific places. Through their embrace of marketised exchanges as the appropriate arena for distributing losses and gains of biodiversity, they also pragmatically and politically accept a 'law of value' (see discussion in de Angelis 2007) that enshrines capitalist market mechanisms as the most efficient means of allocating and managing what thereby becomes valued. In this value frame, 'nature' arguably becomes simply another arena for the abstraction, calculation and capture of capital 'value', and it is only in this way that nature can be 'valued' and thus appropriately managed.

Following de Angelis (2007: 13), however, ‘capital’ is a ‘social force that aspires to colonise life with its particular mode of doing and articulating social powers’ (see also Foucault (2008[1979])). This means that the depoliticised or seemingly non-ideological (cf. Žižek 2011: 426) and technical calculative ‘market rationality’ supporting capital accumulation requires understanding as ‘a value practice among many others and in conflict with others’ (de Angelis 2007: 24; also Graeber 2001). This is not to suggest that any of the texts analysed here explicitly share de Angelis’s perspective. Nonetheless a fundamental disagreement about the desirability of subsuming ‘nature’ within ‘capital’ is discernible within the submissions, and it is this cleavage that gives rise to the intractable value opposition between the claim that unmeasured and unpriced nature has zero or no value in a market economy – and thus should be both measured and priced – and the contrary position that nature is valuable precisely *because* it is, or should be, unpriceable, i.e. ‘priceless’ (O’Neill 1993, Reid 2013; Knights et al. 2013).

In broader debates, some of those opposing MBIs see these as underpinned by the ontological assumption of humans as self-interested, disembodied utility-maximising individuals, caught within a universalising but culturally and historically specific calculative rationality (Weber 2010(1930)) that privileges numerical value striations and rewards those skilled in associated quantification practices and mathematical modelling (see, for example, Sullivan 2009; Dempsey and Robertson 2012; Turnhout et al. 2013; Descola 2013). BDO is seen here as an inappropriate application of metrological and accounting frames and skills to phenomena whose value cannot be thereby conveyed. Monetised market values arising from such applications are viewed as spurious, albeit beneficial to those able to capture and thus gain from such values. MBIs are framed as problematic due to their advancement of a ‘technogarden’ scenario of environmental management (as framed in the Millenium Ecosystem Assessment, see discussion in Kareiva et al 2011) that furthers the modern disconnect between a rationally calculative culture and a pacified, objectified ‘net-able’ nature, a divide seen as the root of so many post-modern environmental and social ills, including biodiversity loss (cf. Çalışkan and Callon, 2010: 5-8; Descola 2013).

Of further concern is the assumption of market economics that competition is necessarily at the core of social relations. De Angelis (2007) observes that this pits livelihoods, and now also nonhuman natures and place-based assemblages, against one another so as to generate a race to the bottom to extract more commodity value for less labour from both humans and ‘nature’. By entraining nature conservation further within capital’s ‘law of value’, BDO could, as the Friends of the Earth (#16) submission notes, ‘simply facilitate greater destruction of nature in areas of high development pressure in return for a promise of habitat creation where land is cheaper’, as well as reducing incentives for developers to incorporate spaces for nature on-site when they can instead pay for biodiversity in another (cheaper) location. The salt in the wound for those contesting BDO from such perspectives is that this emergent policy seems likely to further enrich the corporate extractive and development interests whose economically productive activities are arguably at the heart of the ‘environmental debt’ BDO purports to address (cf. Motesharrei et al. 2014, Ostry et al. 2014). Development-related harm thus both boosts the value of and demand for conservation, through enhancing biodiversity scarcity (cf. discussion in Sullivan 2012), *and* becomes the solution to biodiversity loss, since it is development that both finances, and in many cases provides, offsets (as noted by Lafarge Tarmac – see 3.2 above). Invocations of the triple bottom-line notwithstanding, it is seen as not at all clear that ‘people’ or ‘planet’ would take precedence if ‘profits’ were reduced through their care.

As noted above, opponents of BDO also repeatedly assert and affirm the non-substitutable character of ‘nature’. Place-based affective values, and direct relationships with the actual individuals, populations, and assemblages making up ‘nature’, are seen to be denied by calculative (capitalist) value frames. Through the metrics and markets of offsetting, these are seen as emphasising abstraction, substitutability, exchangeability and fungibility between different species, places and temporal moments, so as to generate the calculated appearance of ‘no net loss’. But what is really ‘netted’ through these calculations? And what is thereby lost or gained through their application?

#### **4.2 The nature of nets**

The word *net*, as in ‘no net loss’, although intended as a neutral economic term meaning ‘balanced, final, conclusive; remaining after all necessary considerations have been taken into account’ (OED), is itself not without evaluative content. It comes from Middle French *net*, meaning clean or morally pure, which in turn derives from classical Latin *nitidus*, meaning bright, shining or glossy (from *nitēre* to shine). This etymology is shared with the English word *neat*, which connects notions of tidiness with notions of unadulterated purity, and tends to carry clear positive associations. The etymology of *net* as in ‘fishing net’ is less clear, but it seems to derive via Norse and Germanic variants from an Indo-European base meaning ‘to bind, twist together’ (OED).

If the etymological roots really are so different, then it seems an interesting coincidence that what might be called economic ‘netting’, the process of summing losses and gains to arrive at a final (neat) figure, seems here to overlap so closely with mechanical ‘netting’, as in capturing something desirable in a mesh, filtering away extraneous material or liquid. The mesh-like matrix of an offsetting metric seems to connect the two senses. When opponents of BDO speak of their concerns about species ‘falling through the net’, they invoke a metaphor of this mesh being too coarse. The holes are too big, allowing things (species, populations, individuals) that should have been caught (or valued) to slip through unnoticed and be lost. These losses lead to errors in the summing up or ‘netting’ process, and hence can only lead to a ‘net loss’. To invoke Boltanski and Thévenot (2006: 36) once more, BDO breaks down in the transition from the general to the particular, where the ‘clamour of particular details’ sublimated, and in this case extinguished, by other orders of worth, demands to be heard.

Sophisticated ecological arguments are also in play here, pointing to the inability of simple metrics to accurately represent unpredictable, nonlinear, stochastic living systems. From this perspective, it is not only impossible but meaningless to talk of adding and subtracting discrete pieces of nature to produce an overall net total. The calculative frame of ‘nature’ as ‘net-able’ through numerical assessment and accounting is thus also at odds with a frame that values ‘nature’ as complex, emergent and autopoetically dependent on ‘networked’ meshes between places and populations (cf. Jantsch, 1979; Margulis, 1998). Those countering BDO proposals frequently do so from a visceral sense that it is irrational to conceive that a ‘net gain’ of biodiversity can be generated through further breaking of these connections, as may be legitimised through BDO.

## 5. Conclusion

Analysis of discourses present in the series of texts the UK Parliament’s Environmental Audit Committee’s public consultation regarding emerging BDO policy reveals some agreement, but many points of fundamental disagreement between actors making submissions to the EAC Inquiry. Consideration of recurrent discursive patterns suggests that polarised disagreements indicate the presence of significantly divergent underlying value frames acting to shape respondents’ views on the desirability, rationality and effectiveness of BDO, and of market-based conservation instruments more generally. This suggests poor prospects for the resolution of such disagreements through deliberative negotiation and consultation focussed on the refinement of specific proposed biodiversity offsetting policies, since the key issues at stake are ethical, political and ideological, rather than technical. They involve questions about the desirability of further subsuming ‘nature’ within ‘capital’ value frames, and addressing such issues requires reflection and deliberation on how those concerned understand both the value of nature, and the nature of value.

Following Lakoff (2010), it seems clear that those seeking to oppose BDO will be assisted by focusing clearly on communicating their underlying values on such matters. Notwithstanding the need to respond to government consultations when these arise, there are limits to what can be achieved by arguing within terms of reference set by enthusiasts for market-based approaches to biodiversity conservation. Conversely, assuming a sincere desire on the part of government to build support for BDO among conservation professionals and the broader public, our findings here suggest that this might be better achieved by opening and facilitating a deeper discussion about the merits or otherwise of market valuation approaches, rather than by taking the value of MBIs as given and consulting only on technical issues of implementation.

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