

## **Title**

Offsetting biodiversity: relocating nature to “save it”

## **Summary**

In this paper, we analyze the way that biodiversity offsetting remakes nature by focusing on the spatial and temporal relocation of environmental harms and goods. We draw on literature on the political economy of place construction and nature production under capitalism and we use primary empirical data obtained through interviews in selected case studies around England. Offsetting involves technical definitions and calculations to construct equivalences between ecosystems, places and conservation credits treating environmental harms and goods as something that can be relocated via a market to facilitate efficient development. Biodiversity offsetting, like carbon offsetting, is not designed to halt or avoid biodiversity loss but rather to move biodiversity losses and gains from one place to another in order to achieve an “efficient” overall balance between preserved nature and permitted development. In this process, offsets bring unevenness and spatio-temporal injustices deepening the conceptual and material separation between society and nature.

## **Extended abstract**

The concepts of biodiversity offsetting and No Net Loss are becoming increasingly important in biodiversity conservation strategies. The idea is that losses to biodiversity in one place (and at one time) can be compensated by creating equivalent biodiversity gains elsewhere (Apostolopoulou and Adams, 2014).

In this paper, we aim to analyze the way that offsetting policies remake nature by paying particular attention on how the relocation of environmental harms and goods is achieved and its implications for the relationship between society and nature. Our case study is the UK, a country where offsetting is emerging as a prominent policy for resolving the contradiction between development and conservation. We primarily draw on literature on the political economy of place construction and nature production under capitalism (e.g. Harvey, 1996, 2014; Katz, 1998; Lefebvre, 1991; Smith, 2006, 2010) and we use primary empirical data obtained through interviews in selected case studies around England as well as analysis of legal and policy documents.

We argue that offsetting involves the conceptual and practical placing of nature within specific spatial bounds, remaking places and spaces (Hughes, 2005) in both the development and the offset sites. The latter represent either new or already existent conservation territories that are supposed to be restored or more efficiently managed to mitigate the environmental harm that has occurred in the development site. The relocation of environmental harms and goods between development and offset sites is being achieved in all our case studies through two interrelated steps. First, ecological losses and gains are quantified through the use of measured biodiversity units (Defra, 2013) to establish ecological equivalence between offset and development sites. Second, through the use of biodiversity units, nature lost or recreated is represented through numerical scores that form the basis for the creation of conservation credits (see also Sullivan, 2013) whose exchange and trading allows the spatial redistribution of environmental harms and goods across space and time contributing to the introduction of conservation banking and biodiversity markets (Madsen et al., 2011). In the language of offsetting, pre-existing conservation sites in

the UK are reframed as service territories and conservation activities as compensation markets for residual damage to nature, the price of which is determined by offset providers. Consequently, owners of land also become sellers of its conservation value.

The core goal of the whole process is to enable the conversion of undeveloped land in attractive locations, in exchange for land managed for conservation elsewhere. Thus, as our results indicate, in England offsetting has been so far highly attractive to the housing industry which has used it as a way to locate sites of nature value in areas that do not interest developers. It is indicative that it has been estimated that a conservation banking market might generate more than GBP 50-300 million per annum in credits only for the UK housing industry (Duke et al., 2012).

Biodiversity offsetting, like carbon offsetting, is not designed to halt or avoid biodiversity loss but rather to move biodiversity losses and gains from one place to another in order to achieve an “efficient” overall balance between preserved nature and permitted development. Offsetting displaces and redistributes environmental harms and goods without actually stopping development and hence without dealing with the drivers of ecosystem degradation: the net effect of offsetting on halting biodiversity loss in the UK is at best zero, because what is supposedly “saved” in one place allows the loss of biodiversity elsewhere. As Smith (2006, p. 23) argued if one takes a wider geographical perspective on such policies “it is tempting to paraphrase Engels’s assessment of ‘the housing question’: the bourgeoisie has no solution to the environmental problem, they simply move it around”.

The idea of a constructed balance between degraded nature and environmental harm on the one hand and restored, or newly created or better managed and conserved nature on the other, implies an image of the Earth “as a virtual ledger”, on which it is feasible and even simple and quick to carry out a quantitative balancing of

environmental goods and bads (see also Igoe et al., 2010). In this process, ecosystems across the UK are represented as abstracted biodiversity “units” and/or “credits” ignoring the social impacts of development and land use change as well as the cultural importance of place and the social ties between communities and particular habitats and ecosystems. In this way, offsetting deliberately disregards local traditions, meanings, and commitments bearing in mind Castell’s (1977) vision of a placeless planet where, in an era of globalization, geographical sameness is replacing geographical difference (Castree, 2003). Offsetting aims to create homologous and thus interchangeable places: places that can be exchanged, bought and sold, with the only differences between them being those assessable in money -i.e. quantifiable- terms (Lefebvre, 1991). In this process, local ecologies of life are being overturned and displaced, social relations are being transformed and new geographies are being produced.

Crucially, the dissonant geographical practices (Katz, 1998) of offsetting in the UK produce nature quite differently at different scales bringing capitalist contradictions to light. Thus, the power dynamics of land use change become obvious in the way that rentiers and investors govern the uses of (either urban or rural) space (Smith, 2010) whereas local communities across the UK are being displaced from green spaces to give space to housing or infrastructure projects. Through this process capital creates its own distinctive ecosystem and a new rentier class of offsetting property rights is formed having control over so-called “natural” assets and resources and thus being able to create and manipulate scarcities and to speculate on the value of these assets (Harvey, 2014). Thus, any choice over what kinds of environments and landscapes are to be produced, and for what purposes, increasingly passes from any

semblance of broad social discussion into narrow class control orchestrated through the market (Smith, 2010).

We conclude that offsetting conceptualizes ecosystems as ahistorical non-places to legitimize the distribution of environmental harms and goods in a way that serves development interests. However, under the surface of constructing equivalence, offsetting in reality brings unevenness and spatio-temporal injustices by producing substitutes for ecosystems and places that can be seen as equivalent to the nature being lost only in the very narrow technical vocabulary and calculations of offsetting. In this process, nature is treated as something that can be relocated via a market to facilitate efficient development, effectively creating separate areas for development and conservation, deepening uneven development (see also Robertson, 2000; Smith, 2010) and the conceptual and material separation between society and nature. Nevertheless, as our case studies across the UK show, offsetting is a contested process which also generates new forms of political resistance (Martin, 2005): places can prove a significant obstacle to the remaking of non-human nature by being spaces of resistance against the leveling of place and the temporal and spatial injustices that offsetting is producing.

## **References**

- Apostolopoulou E, Adams W M (2014) Neoliberal Capitalism and Conservation in the Post-crisis Era: The Dialectics of “Green” and “Un-green” Grabbing in Greece and the UK. *Antipode*, doi: 10.1111/anti.12102.
- Castells M (1977) *The urban question*. MIT Press, Cambridge.
- Castree N (2003) Commodifying what nature? *Progress in Human Geography* 27: 273-297.

- Department for Environment, Food and Rural Affairs (2013). Biodiversity Offsetting in England Green Paper. Available at: [https://consult.defra.gov.uk/biodiversity/biodiversity\\_offsetting/supporting\\_documents/20130903Biodiversity%20offsetting%20green%20paper.pdf](https://consult.defra.gov.uk/biodiversity/biodiversity_offsetting/supporting_documents/20130903Biodiversity%20offsetting%20green%20paper.pdf).
- Duke G, Dickie I, Juniper T, ten Kate K, Pieterse M, et al. (2012) Opportunities for UK Business that Value and/or Protect Nature's Services". Ecosystem Markets Task Force and Valuing Nature Network, GHK, London.
- Harvey D (1996) Justice, Nature and the Geography of Difference. Wiley-Blackwell, UK
- Harvey D (2014) Seventeen Contradictions and the End of Capitalism. Profile Books, UK.
- Hughes D M (2005) Third nature: making space and time in the Great Limpopo Conservation Area. *Cultural Anthropology* 20: 157–84.
- Igoe J, Neves K, Brockington D (2010) A spectacular eco-tour around the historic bloc: Theorising the convergence of biodiversity conservation and capitalist expansion. *Antipode* 42: 486–512.
- Katz C (1998) Whose nature, whose culture?: private productions of space and the “preservation” of nature. In B Braun and N Castree (eds): *Remaking reality. Nature at the millennium*. Routledge, London and New York.
- Lefebvre H (1970) *Survival of capitalism. La revolution urbaine*. Gallimard, Paris.
- Lefebvre H (1991) *The production of space*. Blackwell, Oxford.
- Madsen B, Carroll N, Kandy D, Bennett G (2011) *State of Biodiversity Markets Report: Offset and Compensation Programs Worldwide*. Forest Trends,

Washington, DC. Available at: [http://www.ecosystemmarketplace.com/reports/2011\\_update\\_sbdm](http://www.ecosystemmarketplace.com/reports/2011_update_sbdm).

Martin P (2005) Comparative topographies of neoliberalism in Mexico. *Environment and planning A* 37: 203-220.

Robertson M (2000) No net loss: wetland restoration and the incomplete capitalization of nature. *Antipode* 32: 463-493.

Smith N (2006) Nature as accumulation strategy. In L Panitch and C Leys (eds) *Socialist Register 2007: Coming to Terms with Nature* (pp 16–36). Merlin, London.

Smith N (2010) *Uneven Development* (3rd edn). Verso, New York.

Sullivan S (2013) After the green rush? Biodiversity offsets, uranium power, and the “calculus of casualties” in greening growth. *Human Geography* 6: 80–101.