



Biodiversity offsetting as a commodification process: A French case study as a concrete example



Benoît Dauguet

Centre Alexandre Koyré, UMR 8560 CNRS-EHESS-MNHN, 27, rue Damesme, 75013 Paris, France

ARTICLE INFO

Article history:

Received 5 March 2015

Received in revised form 18 June 2015

Accepted 7 August 2015

Available online 2 September 2015

Keywords:

Biodiversity offsetting

Commodification

Environmental assessment

Ecological equivalence

Equity method

Functionality

Currency

ABSTRACT

Biodiversity offsetting is now a widespread tool in industrialised states, especially in North America and the European Union where it forms a regulatory requirement. In principle, environmental assessment and the implementation of offsets mainly require ecological knowledge. However, in practice, by relying upon the equity and exchangeability of the habitats concerned, biodiversity offsetting creates some difficulties and contradictions that planners have to overcome. I make the assumption that, because of its exchangeability principle, this process also requires accounting and, more specifically, market exchange accounting. By analysing a French biodiversity offset management plan (BOMP), together with guidelines and regulations, I show that the assessment – reducing habitats to what they have in common – and equity – reducing habitats to an exchange value – proceed from market accounting and ontologically transform habitats into commodities. This viewpoint suggests that biodiversity offsetting should be endorsed very cautiously by conservation biology as it produces strong normative outlines compatible with a commodification process.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

As a widespread tool in industrialised states (Ecosystem Marketplace, 2011), biodiversity offsetting has already been frequently discussed by scientists through, for example, the lens of economy (Spash, 2015-in this issue), ethics (Moreno-Mateos et al., 2015-in this issue), ecology (Maron et al., 2015-in this issue) and land use planning (Kujala et al., 2015-in this issue). Some have decided to focus their studies on the market-based nature of this tool and have analysed its particular features under this assumption (Robertson, 2000, 2004, 2006, 2012; Lave et al., 2010; Pawliczek and Sullivan, 2011). The commodification of habitats that results from the context of biodiversity offsetting is therefore not an innovation in science and technology studies but is rather an evidence shared among these authors. However, most of these studies have been carried out in the USA in which habitat mitigation banking is the main offsetting form and all of them treat the commodification as a consequence of the market-oriented nature of this environmental tool and not as its core process. Therefore, they start from the assumption that natural habitats or ecological functions are commodities, traded as “ecosystem services” or species/habitats credits by mitigation bank owners, and very interestingly study how these commodities became so. They quite precisely analyse the quantification of the equivalence and the making of the credits, but are most often a little elusive concerning the definition and the qualification of the *substance* of the credits. Starting from the general issues and the

condition assessment, I analyse the definition of *what* is offset and its great significance in the offsetting process.

On the contrary, Boisvert (2015) rejects an *a priori* characterization of biodiversity offsetting as a market-based instrument on the basis of projected qualities and expectations, such a characterization would have to be drawn from the analysis of their objective attributes. While I fully agree with this approach, I disapprove the main conclusion she formulates about commodification. According to Valérie Boisvert, “the conservation banking can hardly be termed ‘biodiversity market’” since “the participation is so tightly regulated and framed by law that it does reveal the domination of an entrepreneurial form of nature management typical of neoliberal governmentality, rather than an actual commodification of nature, even incomplete” (Boisvert, 2015).

In this article, I start from the general principles and problems of biodiversity offsetting (that developers and offset planners have to deal with) and make the assumption that biodiversity offsetting rather constitutes a *commodification process by itself*, regardless of the institutional arrangements and even without a banking system, credit trading and monetary exchange – formally, *even without a market*. The issue of the qualification of the biodiversity offsetting as a commodification process is not anecdotal and does not only take place under an academic debate on semantic but, as we will see in conclusion, raises the major question of substitutability in conservation.

To illustrate this, I provide a critical reading of a concrete French biodiversity offset management plan (BOMP), together with guidelines and regulations, in order to analyse the issues, concepts, and contradictions of biodiversity offset design. This analysis is therefore applied

E-mail address: benoit.dauguet@ehess.fr.

regardless of the offsetting form, whether it be mitigation banking (i.e., explicitly according to a market-based instrument) or offset implementation. Moreover, the commodification process I mention here does not refer to biodiversity credits that bankers could sell or, more broadly, to the biodiversity offsetting market but to the offsetting process itself. The aim of this ontological study is to characterise biodiversity offsetting by analysing offset design and sizing (i.e., the process by which it can be materially implemented) and to try to elucidate the possibility of transforming a given object of interest into a substitute for another one in an environmental context. I therefore emphasise the key obstacles concerning value and equivalence that biodiversity offsetting encounters and how these constitute fundamental contradictions for conservation projects. I then describe these obstacles, and the way planners try to overcome them, in a concrete case study, from the very first inventories to the calculation of the amount of offset credits required for this project. Among the aims of this study, it is to point out which operations are matters of commodification and which are not. In the conclusion, I discuss the consequences for conservation.

2. Principles and problems of any offsetting project

Formally, as defined by the BBOP, “Biodiversity offsets are measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development after appropriate prevention and mitigation measures have been taken. The goal of biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity on the ground [...]” (BBOP, 2012a). According to the BBOP, the objective of no net loss “in essence, refers to the point where biodiversity gains from targeted conservation activities match the losses of biodiversity due to the impacts of a specific development project”. Biodiversity offsetting and the attached concept of no net loss are usually depicted graphically within the mitigation hierarchy as shown in Fig. 1.

According to this graphical representation, project impacts are first supposed to be avoided then reduced and then offsets must produce a gain that at least equals the losses of the residual impacts with the objective of no net loss of biodiversity.

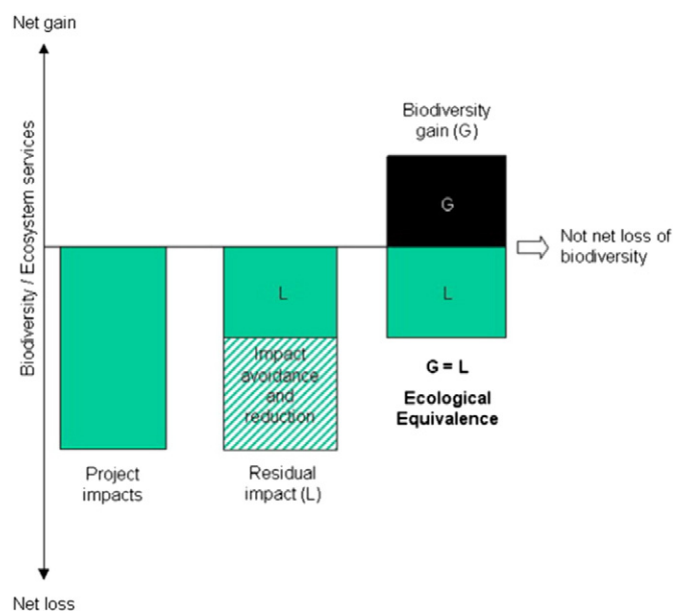


Fig. 1. The mitigation hierarchy and the principle of no net loss in biodiversity offsetting (Quétiér and Lavorel, 2011).

Thus, gains have to balance – formally, be equivalent to – losses and developers have to deal with two linked main issues corresponding to the following analysis: what is lost/gained and how much is lost/gained. According to the BBOP, “the assessment of biodiversity losses and gains between impact [development] and offset sites is the cornerstone of the offset design process” (BBOP, 2012b). However, this assessment encounters two major difficulties.

First, as the BBOP notes, biodiversity is “a broad unifying concept” with compositional, structural and functional elements (BBOP, 2012b) so “it is impossible to measure and account for all aspects of biodiversity when designing an offset” (BBOP, 2012b). Therefore, the assessment of biodiversity losses and gains can only rely upon a small subset of components and on “surrogates or proxies intended to represent biodiversity more generally”. Second, neither biodiversity components nor surrogates are, in essence, measurable and quantifiable. Planners therefore have to both define these proxies in a specific way to make them measurable and quantifiable and develop a set of metrics to measure and quantify them. These two operations – definition and quantification – are not formally separated but carried out together.

At this stage, two difficulties and one contradiction already emerge. First, as Aristotle, quoted by Marx, noted, “There can be no exchange without equality, and no equality without commensurability”. Commensurability, however, is precisely not a natural relationship between things. It is rather a conceptual space created by a set of operations in which science (here ecology) plays a key role (along with rhetoric) to establish rational and legitimate relationships between natural objects. Moreover, the magnitudes of different things only become comparable in quantitative terms when they have been reduced to the same unit. The difficulty arises from the fact that neither biodiversity (or its “proxies”) nor the ecological quality of a habitat are physical parameters. They cannot be defined within the international system of units. As Robertson notes, the assumption that these abstract categories can be exchanged is a typical tour-de-force allowed by biodiversity offsetting: “This is a fundamental but underappreciated change: the early markets in environmental goods and services were quantified in terms of tons of carbon dioxide or the concentration of a particular pollutant in water or air, which is easily measured in both cases. However, markets in wetland credits are quantified using complex algorithms that measure habitat value, contribution towards water quality, biodiversity, and a number of other difficult-to-quantify functions” (Robertson, 2006).

Moreover, in most major development cases, losses and gains are quantified in “offset units”, which are simply arbitrary units, ignoring what is measured. This is a major problem as, in an exchange process, the question of substance (i.e., the what) is a prerequisite to any proportional relationship (how much). As Cornelius Castoriadis notes in a reading of Marx and Aristotle about Value, “How could there be exchange of objects in determinate and stable proportions; how could one write $aX = bY$, if there was not between the two exchanged objects, X and Y, something common and if this thing had not been present, contained in the same quantum? [...] There must be one common Substance/Essence, the same here and there – and, of course, essentially quantifiable – so that one could exchange [...], so that the expression $[aX = bY]$ makes sense” (Castoriadis and Arato, 1978).

In other words, during the assessment of losses and gains, offset planners must not only develop a set of metrics and algorithms assuming that something such as “biodiversity” is indeed quantifiable, but also reduce losses and gains to a common Substance, which allows them to quantify these in the same way and with the same unit. In practice, these two stages are rarely discussed although they constitute a fundamental problem, which often leads to arbitrary choices.

In addition to these difficulties, offsetting encounters a contradiction that is actually an internal contradiction of any commodification process. As Harvey (2001) formulates it: to be tradeable, an object has to own “special qualities” that cannot be found in other objects and that create its rarity; we could say its value. Therefore, to be assessed as a loss or a gain, an item has to own a determined quality. Nevertheless,

Download English Version:

<https://daneshyari.com/en/article/6298671>

Download Persian Version:

<https://daneshyari.com/article/6298671>

[Daneshyari.com](https://daneshyari.com)