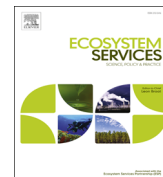




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Biodiversity offsets as market-based instruments for ecosystem services? From discourses to practices

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ABSTRACT

Building on the analytical frameworks of policy arrangements and new institutional economics, this article introduces the special issue on biodiversity offsets as market-based instruments (MBIs) for ecosystem services, deconstructing discourses and exploring practices on the ground. The idea of compensating environmental damages from development emerged in the 1970s in the USA and Europe. From the beginning of the century, as the international community became increasingly interested in MBIs as allegedly efficient mechanisms for environmental management, MBIs have rapidly gained traction within the biodiversity compensation policy arena. Terms of compensatory mitigation, biodiversity offsets, mitigation banking, habitat banking, species banking, wetlands mitigation, etc., have therefore widely spread as policy tools around the globe. In this context, academics, practitioners and decision-makers have most often characterized those schemes theoretically as an MBI and frequently grouped them all under the umbrella term of 'biodiversity offsets'. Building on contributions from the special issue, this article contends that biodiversity offset programs are on the contrary mainly characterized as a variety of different heterogeneous policy and institutional arrangements with limited features of market governance. Furthermore, hybrid structures, through long-term bilateral agreements with specific assets and between parties whose identity is crucial, are the rule rather than the exception.

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1. Introduction

1.1. Context

The idea of compensation for environmental damages was part of a number of different measures that emerged in the 1970s both nationally, in the USA and Europe, and more globally within the framework of the Ramsar Convention (1972). But as instruments for environmental management, these primarily legal measures found little acceptance and were rarely applied. Moving forward to the 1990s the international environmental community became increasingly interested in market-based instruments (MBIs) as mechanisms for environmental progress. For their proponents indeed, direct regulation through the market, or some form of management relying on market mechanisms, is commonly put forward as the most effective way to conserve nature (Daily, 1997; Heal, 2000; Pagiola et al., 2002; Landell-Mills and Porras, 2002;

Nicholls, 2004). While some authors contest this, fearing a trend towards the commodification of nature which they critique (Robertson, 2004; Kosoy and Corbera, 2010; McAfee, 1999, 2012; Gómez-Baggethun et al., 2010; Norgaard, 2010; Peluso, 2012), since the Kyoto negotiations (1997) MBIs have established themselves as preferred environmental policy tools in order to tackle issues surrounding energy, transportation, water, and climate.

By contrast, the development of MBIs in the biodiversity sector didn't gain real traction until the 2005 Millennium Ecosystem Assessment (MA) advanced the concept of ecosystem services (ES), which placed a spotlight on the economic value of biodiversity. In turn this helped legitimize the MBI model within the biodiversity and ecosystem services¹ policy arena (Farley and Costanza, 2010; Gómez-Baggethun et al., 2010; Boisvert et al., 2013); this was illustrated in various publications from the Economics of Ecosystems and

¹ Biodiversity is the variability among living organisms within a given ecosystem. It can include not only living organisms and their complex interactions, but also interactions with the non-living aspects of their environment. Biodiversity is at the basis of the integrity and the effective working of ecosystems and the services they provide, and therefore can be used as a measure of their status and health.

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Biodiversity (TEEB (The Economics of Ecosystems and Biodiversity), 2008, 2010), the OECD (Organisation for Economic Cooperation and Development) (2003, 2004, 2010), the Conference of Parties (COP) to the Convention of Biological Diversity (CBD), as well as in discourses about the Green Economy as unfolded in the run-up to the Rio+20 UN Conference on Sustainable Development (UNCSD (United Nations Conference on Sustainable Development), 2012). This is the context, largely economic in nature, in which the dialogue and perspective on compensation has evolved at the international and national scales, as well as the related mechanisms or institutional arrangements.

Initially, the aspect of compensation was only considered as the final step in a process to manage environmental damage. The first steps were to prevent the damage or, when unavoidable, limit the damage from the impact of human intervention, such as avoiding or limiting the impact of infrastructure on sensitive ecosystems. Compensation as a final step was generally integrated into regulations requiring permits for development that impacted the environment. However, these regulatory devices were non-binding and seldom applied. The view of compensation has nevertheless evolved since the turn of the century, and programs of voluntary action for biodiversity compensation have developed through a mechanism called 'biodiversity offsets'. As a result, the Business and Biodiversity Offsets Programme (BBOP)² now defines biodiversity offsets as "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" (BBOP (Business and Biodiversity Offsets Programme), 2009). In this sense, biodiversity offsets are intended to be carried out during the final step of the environmental impact mitigation hierarchy—avoid, minimize, and mitigate (restore and offset); but on the ground, discussions are mainly focused on the last step 'compensate'. International organizations and conventions, think tanks, non-governmental organizations (NGO), and even private enterprises have incorporated the concept and promoted offset based instruments on a supranational scale. In national territories (particularly but not exclusively in the countries of the OECD) governments have also readily increased their focus on initiatives favouring compensation.

As a result, compensation programmes, whatever the way they are implemented and instruments used, are increasingly put in place around the globe. From Conservation (Species) Banking and Wetland and Stream mitigation in the United States, Fish Habitat ('HADD')³ Compensation in Canada, the Forest Code Offsets or Developer Offsets in Brazil, the national biodiversity offsets Policy in South Africa or BBOP projects in Madagascar, through Impact Mitigation Regulations (Eingriffsregelung) in Germany and the CDC biodiversity bank in France in Europe, the Saipan's Upland Mitigation Bank or the Voluntary Malua BioBank (Malaysia) in Asia, to The New South Wales BioBanking state program or the Queensland's Koala Offsets program in Australia, among others, regulatory and voluntary compensation projects include the existence in 23 countries (plus at the EU and south east Asian level) of 39 existing programs around the world, and another 25 in various stages of development or investigation (Madsen et al., 2010, 2011). This enthusiasm has further been accompanied by a similar increase in scientific publications and grey literature on the theme of biodiversity offsets.

1.2. Biodiversity offsets in discourses: A unified category of MBI

In this context of rapid development, the abundant literature on compensation has most often characterized these various schemes above theoretically as an MBI and frequently grouped them under the umbrella term of 'biodiversity offsets'. We analyse both these discourses below.

First, the recent literature largely asserts that compensation operates through market-based instruments (Boisvert et al., 2013). Though there are no agreed definitions of these instruments and no established list of their constituent elements, proponents of MBIs assume that environmental problems are best conceptualized as externalities. Natural resources and ecosystem services, they believe, are indeed poorly managed because they are external to the market; thus their management could be improved by incorporating them into the market. At the opposite, other instruments, with no market link, e.g. regulations, monitoring and penalties, traditional tools and the command-and-control approach, are in effect classed as non market-based instruments. In this context, the UK Houses of Parliament considers for example that "biodiversity offsetting is a market-based conservation tool" (Houses of Parliament, 2011, p. 1). More broadly in the discourse, compensation mechanisms have been qualified and portrayed by a vocabulary infused with references to the market (credits, banks, markets, payments) without really questioning their relationship with market economics. Both the promoters of compensation through banks with their exchange of credits (Hartig and Drechsler, 2009; Jenkins et al., 2004; Whitten et al., 2003) or through other instruments as Payments for Environmental Services (Panayotou, 1994; Chomitz et al., 1998), and their detractors who see them as a commodification of nature (Maris et al., 2010; Robertson and Hayden, 2008; Robertson and Mikota, 2007; Robertson, 2004; Walker et al., 2009) consider them to fall under the term of market instruments.

Second, biodiversity compensation has often been defined as a unified umbrella category of market-based instrument under which different mechanisms variously named by scholars, decision-makers and practitioners, e.g. compensatory mitigation, biodiversity offsets, mitigation banking, habitat banking, species banking, wetlands mitigation, etc., would fall.

One of the first study to look at MBIs and offsets for the European Commission, Bräuer et al. (2006) for instance defined all 'compensation schemes' as the last of six market-based instruments. Similarly, in 2008, the International Union of Conservation of Nature (IUCN) classifies 'biodiversity offsets and mitigation and conservation banking' as one of the four market-based mechanisms, besides Markets for carbon sequestration, Markets for watershed services, and Markets for recreation, and besides five non market-based mechanism⁴ (International Union of the Conservation of Nature (IUCN), 2008). More recently, the OECD (Organisation for Economic Cooperation and Development) (2013) proposed 'biodiversity offsets' as one of the six so-called 'innovative financial mechanisms', as classified by the Convention on Biological Diversity (CBD). Others are environmental fiscal reform; payments for ecosystem services; markets for green products; biodiversity in climate change funding; and biodiversity in international development finance.

In total, even though they have emerged from different contexts, been promoted by different actors, concern different subjects (biodiversity, species, habitat, wetland, fishes, etc.) and operate on different scales and with a variety of forms (regulatory, voluntary, etc.), in discourses all schemes related to biodiversity

² BBOP is an international NGO which collaborates with NGOs, companies, financial institutions, and government agencies to develop efforts in favor of biodiversity offsets. It represents the only biodiversity compensation international standards, as such a strong normative power.

³ HADD stands for 'harmful alteration, disruption, or destruction'.

⁴ These are: global environment facility; debt-for-nature swaps; conservation trust funds or environmental funds; Taxes; compensation to communities for opportunity cost and damages.

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