# Biodiversity Offset Mechanisms: a Solution to Integrate Biodiversity Values in Development Projects?

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**Résumé**

**Abstract:**

In recent decades, biodiversity has known an alarming decline, that some compare with the "sixth extinction" on the geological time scale. One notes an increasing regression of the innumerable services given by the ecosystems, very expensive - if not impossible - to replace by technological solutions (MEA, 2005). The main cause of this evolution is linked to land use changes and intensive use of natural resources. In its biodiversity strategy to 2020, the European Union has set as its primary goal to halt the loss of biodiversity and the degradation of ecosystem services by 2020. In order to reach its target, it is essential that the European Union and its Member States explore innovative solutions, as conventional methods for the prevention and repair of environmental damage appear to be insufficient to stop de decline (EFTEC & IEEP, 2010, p. 16).

Against this background, the European Commission is developing a No Net Loss Initiative and is looking into biodiversity offsets mechanisms (EFTEC & IEEP, 2010 ; BIO IS & ICF GHK, 2013 ; IEEP, 2014). Based on the polluter-pays principle, biodiversity offsets are conservation actions designed to compensate for significant residual adverse impacts on biodiversity caused by a development project, in order to maintain biodiversity or the environment in an equivalent or better status than before the completion of the project ("no net loss" principle). According to the mitigation hierarchy, it only operates on residual impacts, after appropriate avoidance and minimization measures have been taken. The overall goal is to achieve a no net loss or preferably a net gain of biodiversity on the ground, which implies a real equivalency and additionality between the impacts and the compensatory measures, as well as the continuity of the impacted ecological functions, both in terms of location and timeframe. (TEN KATE et al., 2004, p 13 ; MORANDEAU et al., 2012, p 4, BBOP, 2012, p 11).

Although biodiversity offsets have existed since the 1970s, it has had an unpreceded uptake for the past several years, with 45 programs in place and 27 in development worldwide by 2011 (MADSEN, ET AL, 2011). For many governments, such mechanisms represent an mean to reconcile biodiversity conservation with sustainable development. By requiring developers to compensate for their impacts, competent authorities force them to take into account the price of restoration or replacement measures, internalizing hereby the negative

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impacts their projects have on biodiversity (BORN, ET AL, 2012, p 12). According to the economic and scientific literature, biodiversity offsets would be beneficial in many ways: it would respect the "no net loss" principle, increase financial resources for the conservation of biodiversity, give a sense of responsibility to economic actors, and better manage environmental risks (TEEB, 2009, p14; RUHL et al., 2007). However, significant technical difficulties such as the assessment of ecological equivalency, the difficulty of restoring some natural habitats and determining additional value make the implementation of biodiversity offset very complex and its results are mitigated (EFTEC & IEEP, 2010, p 76; GOFFART, 2010).

Whereas a growing number of European laws (Directives 85/337/EEC and 2001/42/EC Environmental Impact Assessment, Habitat Directive 92/43/EEC, Directive 2004/35/EC Environmental Liability) and Belgian laws (art. 14 du décret fl. du 21 oct. 1997 relatif à la conservation de la nature et du milieu naturel ; art. 46, § 1er, CWATUPE) encourage or impose to compensate for significant impacts to biodiversity, no comprehensive framework exist for the design and implementation of biodiversity offsets, whether at the European level or National level. As a result, most compensatory measures occur on a case by case basis, with little coherence, efficiency, and consistency. Given the difficulties and risks associated with offsets, the absence of a legal framework that sets clear guidelines and safeguards as regard to ecological equivalency, additionality, proportionality, long-term protection, and stakeholder participation opens the door to a "licence to trash" and "paper offsets".

In the United States, biodiversity offsets for wetlands (Wetland Mitigation Banking) have been in place for more than 20 years, following President George H. W. Bush no net loss policy of wetlands in 1989. Throughout the years, they have developed a comprehensive and sophisticated scheme in order to ensure the legitimacy and accountability of biodiversity offsets, from which the European countries could learn. Original in its design, the scheme allowed a market to emerge: landowners or specialized companies can generate credits with positive actions on biodiversity (creation, restoration, or enhancement of wetland), those credits being then sold to developers who need to compensate for their impacts (HOUGH, ROBERTSON, 2009). More recently, these types of offsets have been extended to the protection of endangered species (Conservation Banking).

Inspired by the United States, the State of New South Wales in Australia has developed a similar scheme (BioBanking) in order to better integrate biodiversity values into urban development projects. According to this mechanism, any landowner may enter into an agreement with the Minister of the Environment (BioBanking Agreement) in which they commit to manage all or part of their property with the objective of improving or maintaining the ecological values of the site. This commitment generates credits that can be sold to developers that have to compensate for their negative impacts on the environment (offsets). If a developer chooses to enter into the program, their project is deemed to have no significant impacts on endangered species and they are exempted from the obligation to conduct a species impact statement (SIS) under the Environmental Planning and Assessment Act. The whole project, including the offset, must at least be environmentally neutral (SUVANTOLA, 2009; ROBINSON, 2011).

In light in those experiences, we will show that only a strictly regulated biodiversity offset regime administered by a specialized agency is to guarantee the effectiveness, efficiency and fairness of such a mechanism, given the relatively fungible nature of biodiversity and the difficulty of reconciling the public interests of nature conservation with commercial logic intrinsic to any market (CAMPROUX-DUFFRENE, 2009; MARTIN, 2014). Financial and Legal Safeguards are in addition essential to ensure the long term ecological success of compensation projects and to reduce abuses of the scheme. (GLICKSMAN, 2014)

Indicative Bibliography:

- BBOP, Biodiversity Offset Design Handbook, BBOP, Washington D.C., 2012.

- BORN Ch., DUPONT V., PONCELET C., " La compensation écologique des dommages causés à la biodiversité: un mal nécessaire? ", Amén, 2012, N○ Spécial sur la compensation en droit de l'urbanisme et de l'environnement, pp. 12 – 40

- BIO IS, ICF GHK, Exploring potential demand for and supply of habitat banking in the EU and appropriate design elements for a habitat banking scheme, Final Report submitted to DG Environment, London, January 2013, 132 pp.

- CAMPROUX-DUFFRENE, M-P., "La création d'un marché d'unité de biodiversité est-elle possible?", RJE, 2009, pp 69 -79

- CARROLL, N., FOX, J., and BAYON, R., Conservation and biodiversity banking : A guide to setting up and running biodiversity credit trading systems, Earthscan London, 2009

- CHEVASSUS-AU-LOUIS, B. (dir.), Approche économique de la biodiversité et des services liés aux écosystèmes : contribution à la décision publique. Centre d'analyse stratégique, France, avril 2009, 376 pp.

- EFTEC & IEEP, The use of market-based instruments for biodiversity protection- the case of habitat banking, Technical report for European Commission DG Environment, London, February 2010, 264 pp.

- GLICKSMAN, R. L., " Regulatory Safeguards for Accountable Ecosystem Service Markets in Wetlands Development ", Kansas Law Review, 2014.

- GOFFART, Ph., " La compensation écologique en Wallonie : de la théorie à la pratique " Amén, 2012, N○ Spécial sur la compensation en droit de l'urbanisme et de l'environnement, pp. 41- 47

- HAUMONT, F., " L'application des mesures compensatoires prévues par Natura 2000 ", in ERA Forum(2009) 10, pp. 611-624

- HOUGHP. et ROBERTSON, M., " Mitigation under Section 404 of the Clean Water Act: where it comes from, what it means ", Wetlands Ecology and Management, 2009/1, pp. 15-33

- IEEP, Policy options for an EU no net loss initiative, Report to the European Commission, Institute for European Environmental Policy, London, January 2014, 338 pp.

- LUCAS M., "La compensation environnementale, un mécanisme inefficace à améliorer", RJE, 2009, pp 59 – 67.

- BECCA, M., CARROLL, N., KANDY D., BENNETT, G. 2011 Update: State of Biodiversity Markets. Washington, DC: Forest Trends, 2011. Available at: http://www. ecosystemmarketplace.com/reports/2011_update_sbdm- MARTIN, G., " quelle(s) régulation(s) dans l'hypothèse d'un recours aux mécanismes de marché pour protéger l'environnement ? ", in Marché et environnement, Bruylant, 2014, pp. 463-477.

- MCGILLIVRAY, D., "Compensating biodiversity loss: the EU Commission's approach to compensation under Article 6 of the Habitats Directive." Journal of Environmental law, Vol 24, Issue 3, 2012, p. 417 et s.

- MCKENNEY, B. A. B. A. et KIESECKER, J. M. J. M., " Policy development for biodiversity offsets: a review of offset frameworks ", Environmental Management, 2010/1, pp. 165-176.

- MILLENIUM ECOSYSTEM ASSESSMENT, 2005. Ecosystems and Human Well-being: Biodiversity Synthesis. Washington, World Resources Institute DC, 86 pp.

- MORANDEAU, D., VILAYSACK, D., La compensation des atteintes à la biodiversité à l'étranger – Etude de parangonnage, Etudes et documents, n○68, août 2012.

- ROBINSON, D., " Biodiversity banking in NSW: a critique ", Australasian Journal of Natural Resources Law and Policy, 2011/1-2, 115-137

- RUHL, J.B., KRAFT, S.E., LANT, Ch. L., The Law and Policy of Ecosystem Services, Island Press, Washington / London, 2007, 345 pp.

- SCHOUKENS, H., CLIQUET, A., "Mitigation and Compensation under EU Nature Conservation Law in the Flemish Region:Beyond the Deadlock for Development Projects?", Utrecht Law Review, Vol 10, Issue 2 (May) 2014, pp.194-215.

- STEICHEN P., " Le principe de compensation : un nouveau principe du droit de l'environnement ? " in La responsabilité environnementale : prévention, imputation , réparation, CANS C., Dalloz, 2009, pp. 143 – 161.

- SUVANTOLA, L. " Regulatory concerns regarding the NSW BioBanking Scheme ", Australasian Journal of Natural Resources Law and Policy, 2009/1, pp. 113-135.

- TEN KATE, K.., BiISHOP, J., and BAYON, R. Biodiversity offsets: Views, experience and the business case. IUCN, Gland, Switzerland and Cambridge, UK and Insight Investment, 2004.

- The Economics of Ecosystems and Biodiversity, TEEB for national and international policy makers, 2009.

- VAN HOORICK, G., "Compensatory Measures in European Nature Conservation Law", Utrecht Law Review, Vol 10, Issue 2 (May) 2014, pp. 161-171.

- UNTERMAYER J., " La compensation dans l'utilisation et la protection de l'espace " in La règle et l'urbanisme, AUBY J-B., et al., ADEF, 1987, pp 203 -216

- ZIJLMANS, J., and WOLDENDORP, H.. "Compensation and Mitigation: Tinkering with Natura 2000 Protection Law." Utrecht Law Review,Vol 10, Issue 2 (May) 2014, pp 172-193.

**Mots-Clés:** Biodiversity Offsets, Habitat Banking