Habitat Banking the in the EU: Demand, Supply and Design Elements

A report prepared for the European Commission: “Exploring potential Demand for and Supply of Habitat Banking in the EU and appropriate design elements for a Habitat Banking Scheme “

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6th March 2013
A focus on biodiversity offsets and habitat banking as means compensating for biodiversity loss

Key elements of the study:

- The **legislative framework** for addressing compensation for biodiversity loss in the EU and the MS
- The potential **demand** for biodiversity offsets and habitat banking in the EU
- The **supply** of biodiversity offsets and habitat banking, and the factors that affect it
- The **costs and benefits** of biodiversity offsets and habitat banking schemes
- Key **design elements** of biodiversity offsets and habitat banking schemes
- **Gaps in knowledge** and **priorities for future work**
EU policies – main findings

- Framework for compensation is provided by:
  - the Habitats Directive (covering the Natura 2000 (N2K) network) but no clear criteria / method
  - the Environment Liability Directive (ELD) (more detailed but reactive)
  - Some requirements in the Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) Directives but scope limited and more procedural than substantive

- Compensation clearly required for N2K, and for protected species to a certain extent

- However there are several issues and gaps, e.g.:
  - Definition of ‘significance’ of impacts
  - Compensation ‘if possible’,
  - Cumulative effects,
  - Consideration of the mitigation hierarchy
  - Scope of the EIA and SEA Directives
  - Implementation and monitoring issues
Member State policies – main findings

- Uneven implementation and requirements regarding offsets and compensation in the different MS
- Most MS implement the EU framework without going beyond its requirements
- Compensation mostly in N2K areas & for certain types of developments; measurable biodiversity benefits not always required
- Some MS have more stringent requirements (e.g. Germany), produce guidance (e.g. France) or are implementing/testing habitat banking (e.g. Germany, France, the UK), others allow financial rather than in-kind compensation (e.g. Sweden)
- However, there are issues with implementation
The current legislative framework is the main factor constraining demand in the EU

- Lack of clarity as to the nature of compensation required
- Low requirements for compensation in unprotected areas (some requirements for strictly protected species)
- Insufficient coverage of development projects
- Lack of effective compensation for small impacts that cumulatively result in significant biodiversity losses
- Insufficient enforcement and long-term monitoring of the compensation measures
- Uneven requirements for compensation measures in different MS, and possibly different regions of a MS
The demand for offsets is determined by three key factors

- The level of demand for offsets depends on:
  - **The extent of loss** due to development and other activities that can trigger compensation
  - The degree to which compensation is required (i.e. as a result of the regulatory framework)
  - **The metrics** being used to determine offset requirements
“No net loss” in the EU could mean offsetting the loss of ~50,000 – 100,000 ha of habitat per year

- This relates to the loss of undeveloped land to development up to 2020 (excluding brownfield land)
- Figure could rise if loss due to human-induced natural disasters is included (e.g. figure rising to 160,000 – 540,000 ha lost per year if include human-induced forest fires), but establishing legal liability for this damage is a challenge.
Current legislation only covers a small proportion of this loss

- EU requirements only cover ~10% of the area of land developed (largely as a result of the Habitats Directive)
  - The Natura 2000 network is generally rarely damaged to the point where compensation is required (~8,200 ha are damaged per year, 0.01% of N2K = 50,000 ha of offsets)
  - Only 4,000 out of 16,000 EIAs potentially give rise to compensation (and likely that overlap with N2K is high)
  - Current demand from ELD seems limited as implementation is still slow
- Requirements for compensation from national legislation only seem able to account for a small proportion of additional habitat that is lost outside of the N2K network
The supply of offsets are constrained by four key factors

- Four factors determine whether supply is limited or not:
  - The kinds of habitats that are being lost (i.e. level of demand)
  - The condition of existing habitats
  - The ability to restore or recreate different habitats
  - The extent to which like-for-like compensation is a requirement

- These factors interact (e.g. constraints on the restoration of a particular habitat is only important if the habitat is being damaged and if like-for-like compensation is required)
Policy decisions affect supply constraints; different decisions may apply in different contexts

- Supply constraints can be managed by balancing different elements through decisions on:
  - The extent to which off-site compensation can occur
  - The extent to which like-for-unlike compensation can occur
  - The extent to which the scale and type of resulting biodiversity benefit is important

- More flexibility (like-for-unlike and off-site offsetting) facilitates habitat banking, can ease supply constraints and allow for a more strategic, connected approach e.g. UK. (But: political/public acceptability; biodiversity benefits?)

- Like-for-like requirements (e.g. for high value habitats) should discourage damage & deflect development onto easier-to-restore or less costly habitats
In practice the main factor currently affecting the supply of offsets seems to be land availability

- Aside from land availability (and timescales to some degree), other factors limiting supply seem to be of less concern in the EU, potentially because:
  - Habitats which are inherently different to restore are rarely affected by development
  - Issues of demand tend to be more pressing
  - Constraints can sometimes be overcome by like-for-unlike compensation
The different types of costs associated with offsets

- Habitat management costs
  - Restoration
  - Creation
  - Long term management

- Land costs
  - Land purchase
  - Management agreements

- Management and transaction costs
  - Time, fees and expenses
  - Applications, negotiations, permits, project management, management planning, monitoring, reporting etc

- Administrative costs

- Price of credits includes profits of providers
Evidence of costs and credit prices in the EU

- **England:**
  - National study estimated costs at €63 to €500 million annually, based on average €30-60k per hectare
  - One provider estimates costs at €37-100k per ha

- **France** – credit prices €30-80k per ha in HB pilots

- **Netherlands:**
  - Costs of habitat restoration projects have been estimated at €20k per hectare; land costs can be very high
  - Costs of compensation normally about 1% of costs of road and rail projects

- **Sweden** – one 500 hectare wetland creation and restoration project averaged €25k per ha
Benefits of offsets and habitat banking

- **Main benefits**
  - Effectiveness in conserving biodiversity and ecosystem services
  - Contribution to NNL if losses are accurately measured and effectively compensated

- **Little evidence of benefits comparable to costs (i.e. monetary valuation of benefits)**
  - But is valuing benefits necessary as policy aims to meet clear sustainability criteria?

- **England:**
  - Impact Assessment put monetary values on benefits (2x costs)
  - Voluntary pilots focusing on enhancing effectiveness of compensation and streamlining processes
Design elements for a habitat banking scheme

- A number of widely accepted **principles** guide the design of offsets – these are formalised through BBOP Standard
- Key design elements can be divided into two groups:
  - Elements that determine **offset requirements**
  - Arrangements for **implementation** of offsets and habitat banking
Design of offset requirements

- **Objectives** of schemes vary:
  - BBOP Standard – offsets require at least no net loss
  - Varying objectives in EU, e.g. DE requires “no net loss”; SE general requirements for “compensation”
  - Objectives also differ in focus: habitats vs. species, wider ecosystem services, benefits to local population etc.

- **Implementation of mitigation hierarchy**
  - Widely accepted as key element of offset schemes
  - Clear guidelines often lacking on how it should be applied
  - Some policies stress avoidance or minimisation for more significant habitats - this may limit demand in some EU MS (e.g. DE)
  - Planning authorities key role to ensure adherence to hierarchy
  - Few examples of the use of Biodiv. Offset Management Plans
Design of offset requirements

- **Conditions and thresholds (upper and lower)** vary – e.g. whether restricted to more important sites or species or applied to any project that affects biodiversity
  - Most MS required only for certain (often ill defined) circumstances
  - Germany requires offsets for wide range of projects
  - England requires compensation for “significant harm”

- **Mandatory and voluntary** approaches
  - Mandatory schemes: across EU for N2K; in Germany for residual losses following impacts on other categories of biodiversity
  - Voluntary schemes: pilots in England; national in Netherlands

- **Like for like or better** compensation is preferred
  - Esp. for distinctive habitats vs. trading up for less distinctive habitats.
  - Requirements vary (e.g. Sweden, UK). NL recently more flexible
Design of offset requirements

- **Metrics** to determine offset requirements
  - Should ensure equity in type, space and time and take account of condition/quality, distinctiveness, risk and uncertainty.
  - Biodiv. measures, currency, accounting model. Range of approaches.
  - Generally no uniform / transparent approaches in EU. (e.g. UK developed a set of metrics but criticised by some; FR: equivalency often calculated in terms of area but wide variety of approaches; SE/NL: no official national method, but some local authorities have developed own (SE) or responsibility of regional bodies (NL))

- **Additionality** of benefits is widely stated requirement
  - Allowable actions – restoration, creation, averted risk?
  - NL: legislative condition, UK: provided in principles
  - Additionality of funding – e.g. DE (private only), UK (Wildlife Trusts), SE (measures on PAs not additional; identification of projects from LAs)
Design of offset requirements

- **Locational requirements**
  - Most offsets have geographical limits ("service area")
  - Local offsets normally preferred for ecological and equity reasons but very local offsets not always feasible or optimal
  - Varying approaches in EU: SE stresses very local compensation; UK uses offset strategies to maximise conservation benefits; NL requirements have been relaxed slightly

- **Timing** of compensation
  - Projects cause immediate losses but offsets may deliver uncertain gains over long time periods
  - Habitat banking allows some progress to be demonstrated prior to project impact
  - Metrics to discount future benefits (e.g. England - up to 3:1 ratio)
Arrangements, and how these are regulated, have a significant influence on implementation

- **Institutional arrangements**
  - Need to be effective and based on clear responsibilities.
  - Many different approaches (e.g. developers, providers, brokers, national/local government, public agencies, NGOs, communities)
  - Liability can also vary (e.g. developers, providers)
  - Important to involve local community (but...), planners and include environmental considerations early on in the process

- **Regulators**
  - Without a strong regulator, HB unlikely to be successful or limited to “hotspots” of voluntary action. Clarity of roles also key
  - Currently offsets in the EU are normally the responsibility of local or regional authorities, with little national oversight.
  - Need for sufficient capacity and capabilities
  - Broad consensus that there is a need for a mandatory approach
Arrangements, and how these are regulated, have a significant influence on implementation

- **Instruments and models**
  - Vary considerably, including individual agreements, habitat banking schemes, etc.
  - In the EU this is mostly done through the planning system using conditions attached to planning permits, so detailed guidance especially important.
  - Market mechanisms in the EU are rare (e.g. Germany).

- **Land acquisition (availability and access)**
  - Often cited as a key barrier to implementation (e.g. NL, SE).
  - Various options are available, including purchasing or leasing land, management arrangements, community agreements.
  - Lack of formal mechanisms makes this difficult & time consuming
  - Land can also be more forcibly acquired through regulation (e.g. Sweden) or agencies with pre-emptive rights (e.g. France).
Arrangements, and how these are regulated, have a significant influence on implementation

- **Standards and performance criteria**
  - Important to ensure implementation is effective. Need to be specific, measurable, achievable, realistic and timetabled.
  - Their use in the EU is rare and usually ad hoc (e.g. France),
  - Likely due to lack of guidance and limited delivery experience
  - DE has quality standards for habitat banks (compensation pools)
  - Key are the BBOP standard and revision to IFC PS6 standard

- **Certification and accreditation**
  - Helps to build confidence in the process.
  - There are few examples in the EU (e.g. Germany), although some exist internationally (e.g. South Africa, Australia).
  - A range of mechanisms (e.g. third party, government standards) and options (e.g. of the bank, of the providers) are available
Arrangements, and how these are regulated, have a significant influence on implementation

- **Monitoring and reporting**
  - Essential e.g. for compliance, transparency, adaptive management
  - Key element in some international systems (US / AUS); practice in the EU tends to be ad hoc, although situation seems to be improving (draft doctrine in FR, DE/SE system working well).
  - Importance of a robust baseline, need to cover implementation & impact performance
  - Responsibility varies (regulator, third parties, developers, NGOs).

- **Enforcement**
  - Enforcement in the EU relatively undeveloped; penalties for non-compliance (SE) are rare
  - More common elsewhere (e.g. US/AUS) where can have administrative, civil and criminal penalties. Compliance can also be ensured through iterative release of funds
Arrangements, and how these are regulated, have a significant influence on implementation

- **Long term management and contingencies for failure**
  - Safeguards / adaptive management / contingency plans largely lacking (vs. US)
  - Some exceptions (e.g. Germany) and evidence of long term perspective at least being considered (e.g. France, UK)
  - Range of mechanisms, e.g. endowment funds, easements/legal restrictions on land use, mandatory renewal of credits following inspection, covenants to title deeds, public ownership
  - Contingency funds important (e.g. US) but rarely used in the EU

- **Overall:**
  - Implementation more advanced on some aspects than others
  - Usually ad hoc largely due to lack of demand (because of inadequate regulatory requirements)
  - Lessons to be learned from BBOP principles and int’l experience