

The German Impact Mitigation Regulation and habitat banking: introduction, experiences and lessons learnt

**Prof. Dr. Marianne Darbi,
Hochschule Geisenheim University
May 2021**



Outline

1. Basic principles of the German Impact Mitigation Regulation
2. Habitat Banking under the German Impact Mitigation Regulation
3. Habitat Banking in the federal state of Saxony: "Sächsische Ökoflächen-Agentur"
4. Advantages and Obstacles of habitat banking
5. Lessons learnt: key factors to success

1. Basic principles of the German Impact Mitigation Regulation

German Impact Mitigation Regulation

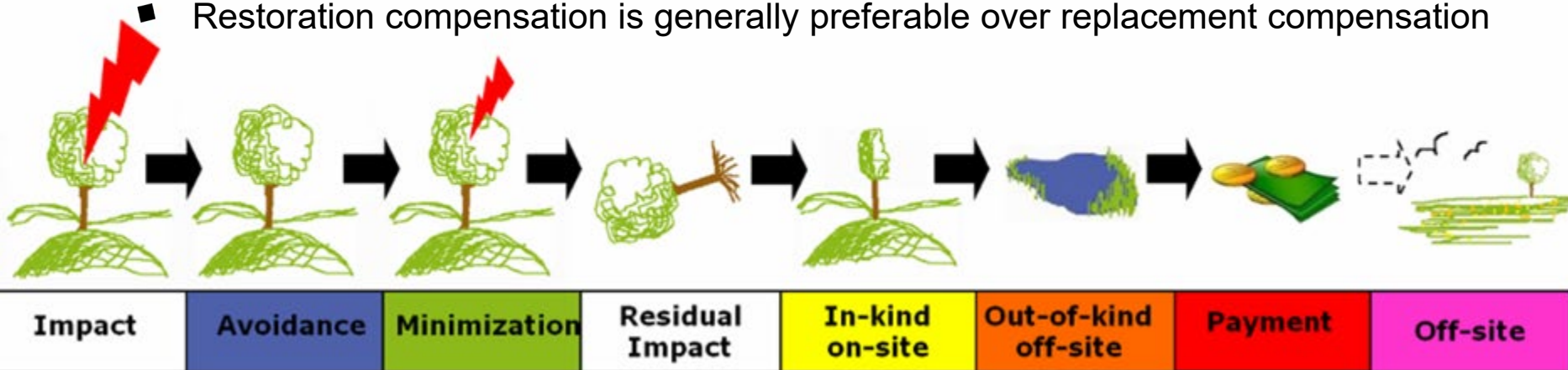
IMR (“Eingriffsregelung”) is the major landscape conservation instrument to address mitigation and compensation for impacts from developments and projects in Germany:

- entered into force as part of the Federal Nature Conservation Act 1976, later complemented by the Federal Building Code and the Federal Spatial Planning Act
- comprehensive approach covering projects at the levels of both urban planning and sectoral planning (for all impacts, on all scales, not restricted to specific areas)
- Precautionary in nature: encompasses (1) the assessment of significant impacts likely to occur, (2) the decision as to the admissibility of the project and (3) the stipulation of measures to avoid, minimise or compensate for impacts

Brief system description

For the remaining unavoidable impairments, appropriate compensation measures must be applied. The law distinguishes two types of compensation:

- “Restoration compensation” involves a direct spatial and functional connection to the lost components of nature and landscape (“in-kind” and “on-site”), ensuring the equal ecological functioning and values
- „Replacements compensation“ measures do not necessarily have to restore the same functions and may only have a loose spatial and functional relationship to the impact area („out-of-kind“ and „off-site“)
- Restoration compensation is generally preferable over replacement compensation



Planning yes, implementation maybe, control no?*

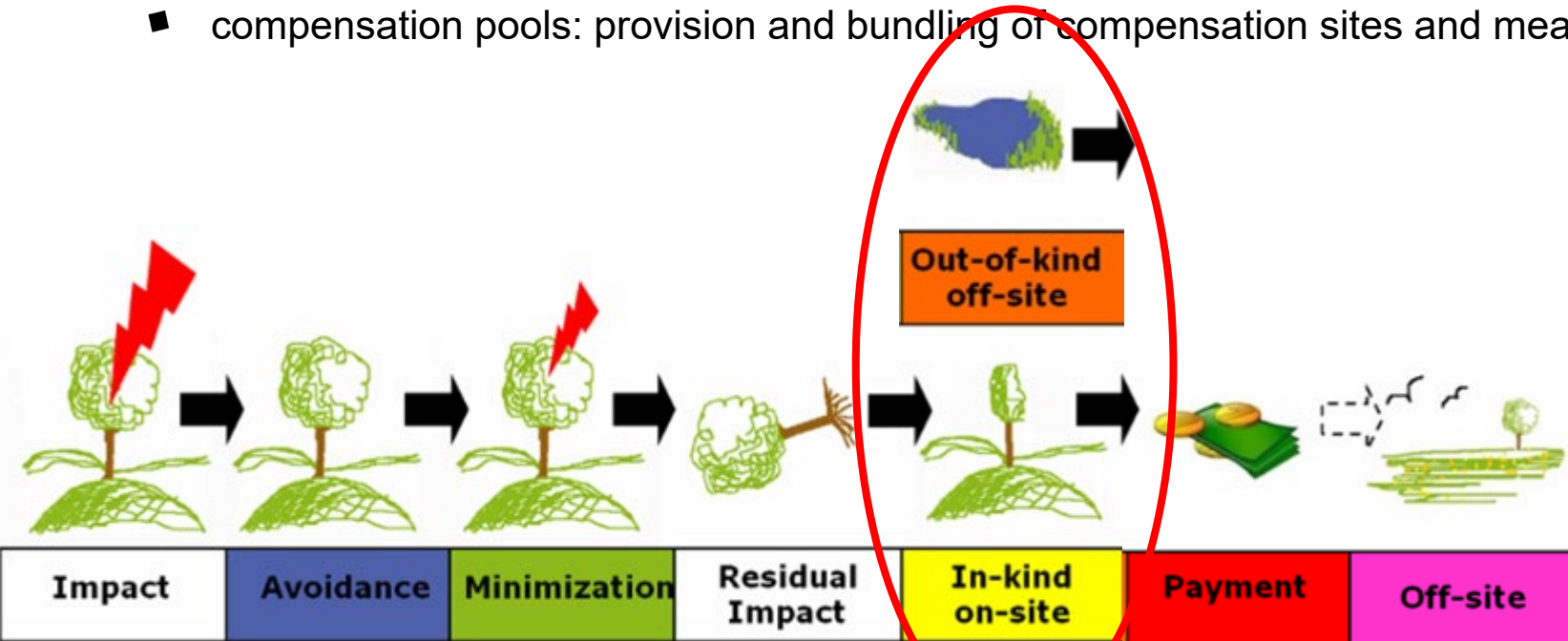
- Deficiencies in the proper implementation of compensation measures
- high land use pressure and lacking land availability
- Not enough capacity for control
- Time lag



* ANL – Bayerische Akademie für Naturschutz und Landschaftspflege (ed.) (1999): Ausgleich und Ersatz. Planung ja, Umsetzung vielleicht, Kontrolle nein? Laufener Seminarbeiträge 1/99.

Amendments to the law

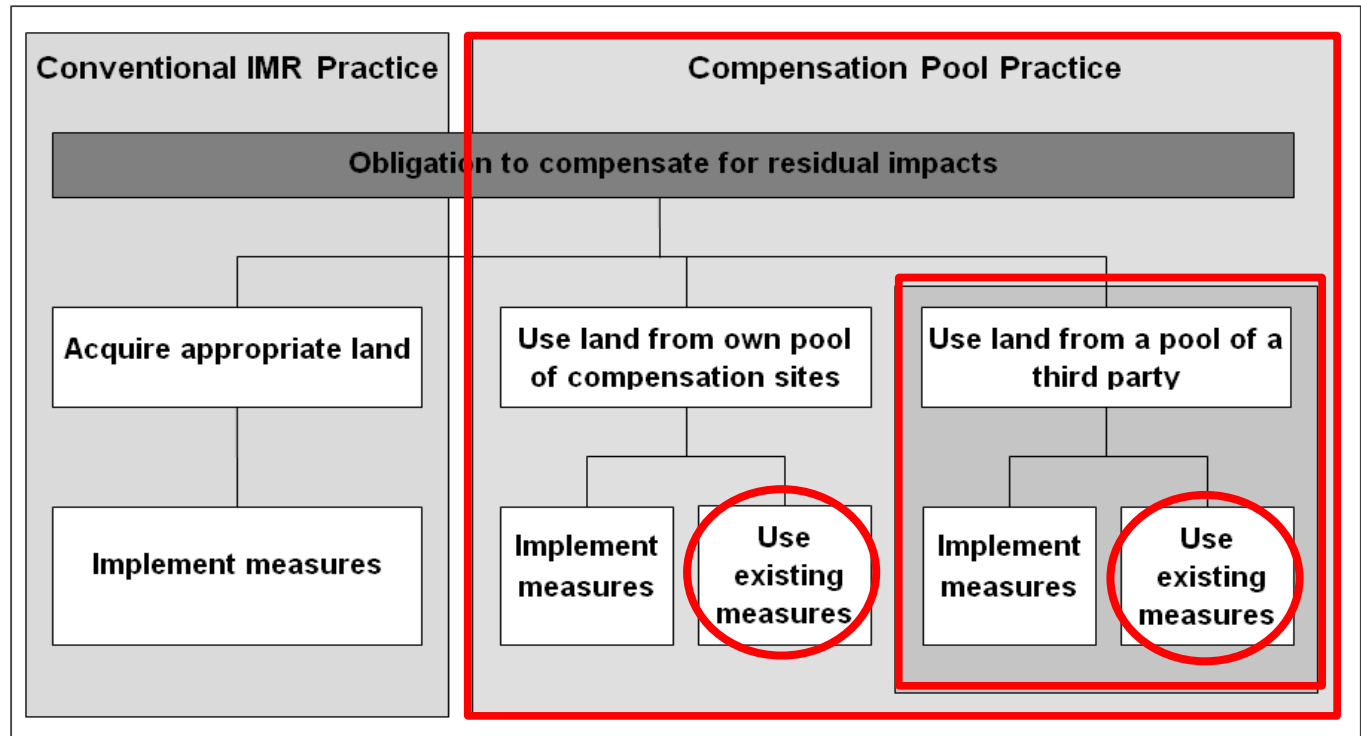
- 2002 and 2009 amendments to the Federal Nature Conservation Act: loosening of spatial and functional connection between impact and compensation
- In some cases replacement measures may take priority, if this generates a greater overall benefit („trading-up“)
- compensation pools: provision and bundling of compensation sites and measures



2. Habitat Banking under the German Impact Mitigation Regulation

Forms of Habitat Banking

- Developer may either follow conventional IMR practice in accordance with the conditions set by the competent nature conservation authority or use compensation pools
- Compensation pools: aggregation of compensation sites (and measures)
- Eco-Accounts: advanced implementation of compensation measures
- Compensation agencies: provision of compensation sites or measures to a third party



Scope and development

- In the 1990s first compensation pools have emerged and their number continues to increase (~ 600 identified in a state-wide survey 2005)
- Compensation agencies providing compensation sites and services to project proponents have been successfully installed in recent years. Some of them operate mostly locally, while others are approved or certified by a German state, and thus provide compensation sites and measures for a larger area (e.g. the Flächenagentur Brandenburg GmbH in Brandenburg).

Compensation agencies ('Flächenagenturen')

“Compensation agencies are new service providers in the field of nature conservation, which establish compensation pools and procure sites and measures for developers“ (BFAD e. V. 2008).

Compensation agencies are experts on compensation pools – including planning, implementation and long-term management. They provide services and support to investors, authorities and all local partners“ (BFAD e. V. 2008).

Stakeholders and implementation in practice

- Compensation pools may be run by a variety of different institutions under several distinct organisational forms either under private or public law, by districts, cities and municipalities, or by associations, foundations, limited liability companies (LLCs) etc
- distinction between pools used to cover own needs and those to provide compensation services to others (biodiversity offset credits are to be sold)
- organisational form significantly characterises the overall work of the pool or agency with regard to its capacity to act, to obtain pre-financing and particularly to safeguard areas and measures permanently
- Risk of bankruptcy has to be avoided – solution in practice: having the ownership of the land assigned to a nature conservation foundation
- in legal terms, the project proponent remains responsible to demonstrate the execution and maintenance of the offset, but may contract a provider of compensation services (compensation agency), which will in practice carry out the necessary activities

Institutional framework

An ever growing demand and interest in the field led to the foundation of the Federal Association of Compensation Agencies (“Bundesverband der Flächenagenturen in Deutschland e.V.”, BFAD) which pursues the goal of promoting compensation pools and compensation agencies, and calls for ecologically and economically sustainable conservation policy. With the formation of the BFAD a platform to discuss and assure quality standards has been established:

- assuring enhancement from a nature conservation perspective;
- safeguarding areas and measures over the long term;
- monitoring and follow up of the development of the pool areas;
- integrating offsets into superordinate strategies and instruments of landscape development; and
- complying with high performance standards (BFAD 2007).



<http://www.verband-flaechenagenturen.de/index.html>

How does it work?

- Once a project proponent has contracted a pool operator, he has to pay all expenses at once, and is then exempted from further payments. This means that the provider of compensation services has to calculate the amount the investor is to pay carefully, including costs for implementation, maintenance and monitoring of the measures, as well as of land acquisition and the planning and management expenses.
- The use of compensation pools includes two steps: (1) areas and measures are registered in the pool (registration procedure requires selecting and designing appropriate areas and measures, which then have to be made available to project proponents and secured from competing land use), (2) can be “booked out” later when compensation areas or measures are needed
- pools are registered by the local nature conservation authority.

3. Habitat Banking in the federal state of Saxony: “Sächsische Ökoflächen-Agentur”

Legal and policy framework in the state of Saxony

Saxon Law on Nature Conservation and Landscape Management SächsNatSchG, 2013

- Art. 10 para. 2: Regulation of exemption from liabilities (“Freistellungsregelung”)
- Available at: <http://www.revosax.sachsen.de/Details.do?sid=5111430356025>

Regulation of the Saxon State Ministry for Environment and Regional Development on the balancing of interventions in nature and landscape (Naturschutz-Ausgleichsverordnung) NatSchAVO,

- Available at: <http://www.revosax.sachsen.de/Details.do?sid=371123303329>

Regulation of the Saxon State Ministry for Environment and Agriculture on the eco-account and the compensation land register (Sächsische Ökokonto-Verordnung) SächsÖKoVO, 2008

- Available at: <http://www.revosax.sachsen.de/Details.do?sid=2301212391829>

Legal and policy framework in the state of Saxony

Recommendation for the assessment and balancing of interventions in Saxony

- Technical principles, guidance and tools, case example illustrating the work steps, balancing forms
- Biotope value based procedure
- Available at: <http://www.umwelt.sachsen.de/umwelt/natur/8516.htm>

Compensation land register

- are implemented and managed by the Lower Nature Conservation authorities of counties
- New web portal online: KoKa-Nat (Compensation land register for Nature Conservation)
- Available at: <http://list-sachsen.de/b6/KoKa.htm>



“Sächsische Ökoflächen-Agentur” - compensation services provider in the state of Saxony

- The Saxon rural settlement GmbH (Sächsische Landsiedlung SLS) was commissioned in 2008 by the Saxon State Ministry for Environment and Agriculture in a public tender as compensation services provider for the state of Saxony
- SLS is the non-profit settlement organization in Saxony
- Member of the Federation of compensation agencies in Germany BFAD and is committed to its quality standards

Tasks

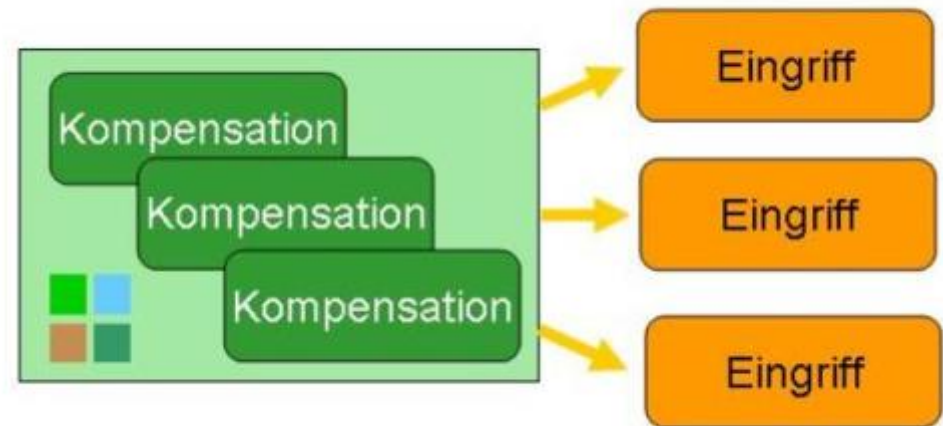
- Implementation of measures for the creation and improvement of terrestrial and aquatic habitats
- Production-integrated compensation
- Renaturation of sealed surfaces



“Sächsische Ökoflächen-Agentur” - compensation services provider in the state of Saxony

Range of services:

- Building a habitat bank of compensation measures, implemented in advance
- Procurement of own or third party compensation measures (or credits) to developers to fulfil their compensation requirements
- Support for developers with individual steps of the creation, procurement and safeguarding of their own compensation measures, e.g.
 - Selection of measures
 - Planning: Description and definition of goals
 - Coordination with authorities
 - Planning of measures
 - Evaluation according to guidance
 - Implementation of measures
 - Application for entry in the eco-account
 - Safeguarding of maintenance
 - Follow-up and monitoring



4. Advantages and Obstacles of habitat banking

Advantages and potentials

- Increased flexibility (react on high land use pressure, choose most suitable measure)
- Acceleration of the licensing and offsetting procedure and reduction of effort and cost (minimum of land consumption, maximum of conservation value, reduce bureaucracy)
- Facilitation of land acquisition (avoid competition and land speculation)
- can lead to a reduction of land consumption
- bundling of capacity and technical know-how increases the efficiency of the implementation and maintenance of measures
- Improvement of acceptance (involve farmers and local stakeholders)
- Reduction of time lag
- Bundling and matching of measures (larger and functionally more effective habitat networks with sound natural dynamics, minimum viable areas, cost-intensive measures)
- Consideration of landscape planning (in accordance with overall conservation goals)
- Development function (enhance poor landscapes)

Recommendations

- More extensive and coherent pool solutions are to be preferred over small-scale and dispersed insular measures (full and effective compensation).
- Appropriate mechanisms must be applied to safeguard compensation areas and measures in perpetuity, applying monitoring and follow-up (success and the target fulfilment of measures).
- Evidence of additionality is often cause for conflict during the licensing procedure, and must hence be considered meticulously.
- Quality standards must be applied properly in every case.
- A register of compensation areas and measures (“Kompensationskataster”) is recommended to facilitate the efficient management of a pool, ideally using GIS.
- Assessment methods should be harmonized (comparability and transparency).
- A clear pool concept with defined target habitats is preferable.
- A major focus must be on acceptance-building during the initialisation period of a pool.

Habitat banking has become the **major tool for ensuring appropriate and timely implementation of offsets** under the German impact mitigation.

However, some **obstacles remain**:

- advance financing as limiting factor
- uncertainty (refinancing of sites and measures cannot be guaranteed)
- need for trained personnel
- Competition, lacking coordination and price dumping can have a negative effect on the quality of the measures
- There may be a preference for low cost measures
- lacking transparency and transferability (valuation techniques to balance impact and compensation and cost calculation differ very much)
- interaction with the Common Agricultural Policy of the EU (subsidies)
- Unclear and uncertain administrative action and sometimes lacking engagement of municipalities

5. Lessons learned: key factors to success

Lessons learnt: key factors to success

- **Clear legal regulation and policy guidance:** a legal mandatory framework as a pre-requisite for success
- Strong cooperation and agreement of compensation services providers on **quality standards and procedures** (e.g. Federal Association of Compensation Agencies)
- **Regional cooperation** with stakeholders
- Strong **cooperation with land owners and farmers: production-integrated compensation** reduces consumption of farming land for compensation (combining environmentally sound cultivation with financial reparations for extra costs, loss of earnings and agricultural funding)
- **Active land management** (land purchase, land change, land consolidation) to secure land with a high nature conservation value or potential
- **Land consolidation** enables quick and easy land acquisition without costs for the notary, land registry survey of land



Lessons learnt: key factors to success

- Implementation of **larger, complex and high quality measures** add to reaching state-wide nature conservation goals and strengthen **biotope networks and connectivity**
- Larger measures (10.000-20.000 sqm) are **more cost-efficient** to plan and implement and deliver a higher nature conservation value than several small projects
- Importance of underlying **landscape planning**: design and plan measures clearly (e.g. landscape maintenance plan)
- Design creative measures (e.g. improving shelters for bats example)
- **Public acceptance** through clear nature conservation goals including socioecological aspects e.g. environmental education, aesthetic and recreational values
- **Sound business and full costing** preferably by **stable, independent and not profit-oriented** compensation services provider → enables the maintenance and safeguarding of the measures in perpetuity



Additional information available

- International approaches to compensation for impacts on biodiversity
- Compensation pools and agencies in Germany
- (Voluntary) biodiversity offsets
- Balancing and evaluation methods

Loss-Gain calculations in German Impact Mitigation Regulation

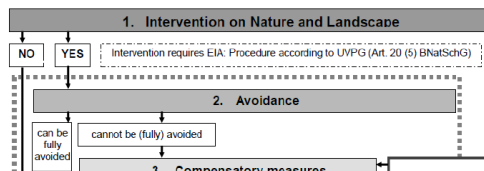
MARIANNE DARBI, CHRISTIAN TAUSCH

Keywords: evaluation, offset, impact mitigation, Germany, biotope valuation, compensation area coefficient, cost-of-restoration approach

1 Introduction

The use of natural resources is often in conflict with nature protection and biodiversity conservation. With the enactment of the German Federal Nature Conservation Act in 1976 the "Eingriffsregelung" (Impact Mitigation Regulation IMR) entered into force. Since then, it has become the major landscape conservation instrument to address mitigation and compensation for impacts from developments and projects. Its overall objective is to ensure the preservation of the existing ecological situation as a minimum standard by avoiding any impairment of nature and landscape and compensating for residual unavoidable impacts. It as an instrument both for assessment and impact mitigation following a mitigation hierarchy (see Figure 1 for the consecutive steps).

As a result of more than 30 years practice German IMR is a compensation approach which is outstanding due to its comprehensive character and the broad scientific base and discussion. One of the core issues of this discussion has - since the beginning - been the debate on appropriate balancing and evaluation



Impact mitigation and biodiversity offsets – Compensation approaches from around the world

Herausgegeben von: Hans-Joachim Lohmeyer, Christof Lohmeyer und Wolfgang Wehr



„Impact mitigation and biodiversity offsets – Compensation approaches from around the world“, Naturschutz und Biologische Vielfalt Heft 101 2010.

Contact

**Hochschule Geisenheim University,
Professorship of Landscape Planning and Impact
Mitigation**

Marianne Darbi

E-Mail: Marianne.Darbi@hs-gm.de

Twitter: @MarianneDarbi

Website: <https://www.hs-geisenheim.de/en/research/departments/landscape-planning-and-nature-conservation/professorship-of-landscape-planning-and-impact-mitigation/>

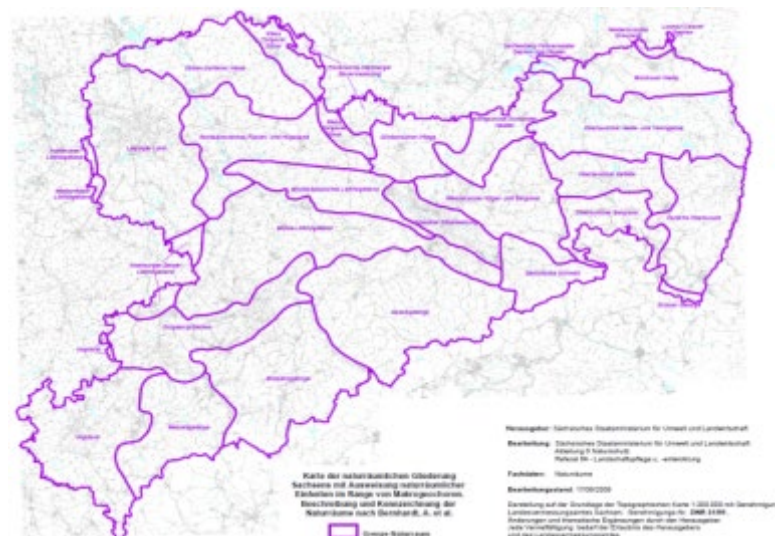


Spare material

Clear regulation and policy guidance

- Good experience with mandatory system as a prerequisite for success
- Installation of the habitat bank and approval of credits by the competent Nature Conservation Authority, Compensation land register
- Clear and consistent loss-gain-calculations and metrics: biotope value based procedure
- Spatial and functional relation of impact and offset: compensation within the same Natural Landscape Unit

	Biotope type		credits/m2	area in m2		biotope value in credits	
	STL 2004	Nutzung/Biototyp Bezeichnung	Wertpunkte je m²	Fläche [m²]		Biotopwert	
				vor Maßnahme	nach Maßnahme	vor Maßnahme	nach Maßnahme
Before	10.01.200	Intensiv genutzter Acker	5	72.736		363.680	
	Summe			72.736		363.680	
After	06.02.000	Grünland frischer Standorte (extensiv)	22		55.943		1.230.746
	01.10.200	Gestuffer Waldrand	22		2.721		59.862
	02.02.410	Baumreihe	21		612		12.852
	09.07.200	Steinrücken	18		439		7.902
	08.05.000	Magerrasen trockener Standorte	22		13.021		286.462
	Summe				72.736		1.597.824
Flächensumme				72.736	72.736	363.680	1.597.824
Biotopwertdifferenz							1.234.144



Active land management for higher nature conservation outcomes

- secure land with a high nature conservation value or potential through land purchase, change or consolidation (land consolidation enables quick and easy land acquisition without extra costs)
- Implementation of larger, complex and high quality measures adds to reaching state-wide nature conservation goals and strengthen biotope networks and is more cost-efficient
- Compensation is best implemented in the “normal landscape”, not in protected areas (where potential for enhancement is low and costs are high) → Don't touch the Habitats Directive!



Design and plan measures clearly, but be creative!

- Design and plan measures clearly, e.g. using a landscape maintenance plan
- design creative measures, e.g. using discontinued bunkers for improving shelters for bats



Landscape maintenance plan (Landschaftspflegerischer Begleitplan) for Berlin bypass road



Former bunker (above) transformed to bat shelter (below)

Sound business and full costing

- Stable, independent and not profit-oriented compensation services provider enables the maintenance and safeguarding of the measures in perpetuity
- Calculating a price for the single credit – full costing (“Vollkostenkalkulation”) includes all costs from planning of goals and measures over and land acquisition and project implementation to maintenance and monitoring, including parameters such as securities, risk and bridge financing
- Costing is a process that builds on balancing target values and actual values: a cost estimate at the beginning is quarterly compared with actual used resources → Price for the single credit adjusts over time to the actual costs

5



Strong regional cooperation

- Landowners and Farmers: compensation through Land Use Contracts reduces consumption of farming land for offsets
- Authorities: approval and agreement through the whole process
- Public: acceptance through clear nature conservation goals including socioecological aspects
- Federal Association of Compensation Agencies: common quality standards

