

# SELNAT

## How to make Natura 2000 work properly? – Socio-economic, legal & ecological management

DURATION OF THE PROJECT  
15/12/2006 – 31/01/2009

BUDGET  
487.855 €

### KEYWORDS

Biodiversity loss, Natura 2000, management, ecological objectives, external pressure, public support

### CONTEXT

Biodiversity is the complex diversity of living creatures, encompassing diversity within species (genetic), between species and in ecosystems and is hence essential for the stability and resilience of ecosystems. The conservation and sustainable use of biodiversity is therefore an essential component in sustainable development.

However, as a result of increasing human pressure on land during the last decades, biodiversity has declined, threatening to undermine environmental, economic and social benefits. In order to stop fragmentation (of habitats, populations and genotypes) and thus to halt biodiversity loss, the EU has built *NATURA 2000*, an ecological network of protected areas. However, many different users are present in this landscape and conflicts between interests may arise.

### PROJECT DESCRIPTION

#### Objectives

The EU legislation forces member states to «maintain or restore, at favourable conservation status, natural habitats and species taking into account economic, social and cultural requirements, regional and local characteristics». Thus, the main objective of this project is to perform an effectiveness analysis of integrated management of Natura 2000-sites. In order to be able to evaluate this effectiveness, we need to define this aim precisely. "Working properly" means the development of efficient management of nature areas that is robust and contributes to sustainable development (of local communities).

The ultimate goal of the SELNAT research project is then to attend decision-makers on the economic, social, and environmental consequences of biodiversity changes and to guide them in the development of more adequate and sustainable policies for the management of Natura 2000-sites. Moreover, integrated strategies are more likely to be supported by local stakeholders.

#### Methodology

A system analysis of the complexity of biodiversity loss and reach of discipline-transcendent bottlenecks is performed with an integrated model: the *SCENE model*. It distinguishes three forms of sustainability-capital: **So**Cial, **En**vironmental and **E**conomic. It was developed as a support tool for the analysis of regional sus-

tainable development. The model is composed out of stocks and flows. Each capital domain contains a number of stocks (such as 'quality of life' (social), 'environmental quality' (ecological), or 'economic vitality' (economic)). The main criterium for the inclusion of a specific stock is its relevance for research. Relationships between the different stocks are called 'flows'.

From this system analysis, basic and general management strategies are developed for a Walloon and Flemish Natura 2000-site. In an iterative process, strategies are presented to a group of local and non-local stakeholders and tested for robustness. The feedback will allow us to fine-tune the measures on different aspects and specify details. From here, a final management strategy for each of the sites will be developed.

To assess the final strategies, the *Ecosystem Approach* will be used. This is a new methodological approach, based on ecosystem and stakeholders participation, which is recommended by COP of Convention on biological diversity to tackle all kinds of problems of biodiversity conservation. In this integrated resource management paradigm, ecology and society are both important as both are essential parts of ecosystems.

### INTERACTION BETWEEN THE DIFFERENT PARTNERS

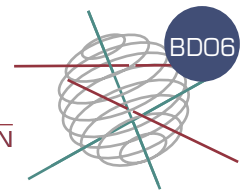
Since interdisciplinarity is the basis of our research, close interaction and communication between all partners is crucial. Therefore, a projectweb is set up to allow exchange of documents and information, with a forum and an important list of key terms, facilitating communication between the various disciplines. Moreover, frequent meetings are organised.

### EXPECTED RESULTS AND/OR PRODUCTS

The return of this project will be methodological at first, namely through the development of tools that enable to assess:

- the identification of land use types responsible for biodiversity degradation through history and links between sustainable use of territory and biodiversity goals
- the integral evaluation of (robustness of) measures concerning biodiversity;
- the contribution and limits of economic valuation of resources;
- the degree of public support for different management strategies;
- the complexity of legal aspects on Natura 2000;





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Since the cases are situated in Natura 2000-territory, our results will be directly useful for Ministries and NGO's involved in environmental protection. The results of the project will be valorised through various actions such as scientific publications in journals. Through dissemination of the original point of view of this project, we may contribute to the definition of sustainable policies for biodiversity conservation.

A particular effort will be devoted to the communication of methodology and results of this project to a more local audience, including the actors involved in management and land use. This will imply publications in regional journals. Next to the regular meetings of the users committee, a workshop, open to a broad audience, can be organised to stimulate interaction with and among potential users of the methodology.

## PARTNERS - ACTIVITIES

**Name** Jan Vincke, Greet Nulens and Stan Weyns  
**Institution** Resource Analysis NV

**Activities** Resource Analysis has gained a solid reputation as policy adviser to various government agencies involved in natural resources management. The company has developed a methodology for addressing complex issues, and a wide range of techniques to ensure that the most effective policy decisions are taken to resolve them. Policymakers are assisted in identifying the range of available policy options, and in the associated process of weighing these options and selecting the most appropriate one. Resource Analysis also carries out R&D focusing on the sustainable management and use of natural resources.

**Name** Prof. Dr. Martin Hermy, Patrick Endels and Els Ameloot

**Institution** K.U.Leuven; Faculty of Bioscience Engineering; Department of Land Management and Economics; Division Forest, Nature & Landscape (DFNL)

The research unit for plant ecology covers the field of "ecology, nature conservation & urban green management". It generally aims at studying the impact of various human related disturbances (e.g. habitat fragmentation, management (including restoration)) on biodiversity in a number of habitats. Our research group focuses on plant species composition, plant species diversity, population characteristics and fragmentation effects of changes in land use.

**Name** Charles-Hubert Born and Mary Mahy

**Institution** UCL, Séminaire de droit de l'urbanisme et de l'environnement (SERES)

**Activities** SERES aims its research on all topics in urban, land-use planning, rural and environmental international, European and Belgian law. Most performed activities are academic research for publications, applied research for land-use planning, agriculture and environmental administrations in Walloon Region and counsel for law making to ministerial cabinets

**Name** Prof. Dr. Grégory Mahy and Julien Taymans

**Institution** Faculté universitaire des Sciences agronomiques de Gembloux  
Unité Sol Ecologie Territoire, Laboratoire d'Ecologie

**Activities** FUSAGx has developed a set of fundamental and applied research in the domain of biodiversity management. The aim of research is to understand the complex ecological mechanisms responsible for biodiversity changes at the landscape levels. Researches are based on the development of methodologies to measure biodiversity at its different hierarchical organizational scales (genetic variability, morphological variation of taxon, species diversity and plant communities typologies).

**Name** Prof. Dr. Daniel Tyteca and Valérie Grogna

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### Follow-up Committee

For the complete and most up-to-date composition of the Follow-up Committee, please consult our Federal Research Actions Database (FEDRA) by visiting <http://www.belspo.be/fedra> or <http://www.belspo.be/ssd>

