EUROPEAN COMMISSION
European Research Area

# SCALES

### AT A GLANCE

**Title:** Securing the Conservation of biodiversity across Administrative Levels and spatial, temporal, and Ecological Scales

**Instrument:** Large-scale integrating project, FP7

**Total Cost:** 9.925.715 €
**EC Contribution:** 6.995.640 €

**Duration:** 63 months

**Consortium:** 27 partners from 19 countries

**Project Coordinator:** Helmholtz Centre for Environmental Research (Germany)

**Key Words:** Scaling, biodiversity conservation, networks of protected area, connectivity, monitoring, anthropogenic drivers, fragmentation.

## THE CHALLENGE

Our capacity to effectively sustain biodiversity across spatial and temporal scales is an essential component of European environmental sustainability. Anthropogenic and environmental pressures on biodiversity act differently at different scales. Consequently, effective conservation and policy responses to these threats must explicitly consider the scale at which effects occur, and therefore it is crucial that administrative levels and planning scales match the relevant biological scales.

## PROJECT OBJECTIVES

The general objective of SCALES is to provide the most appropriate assessment tools and policy instruments to foster our capacity for biodiversity conservation across spatial and temporal scales and to disseminate them to a wide range of users. This general objective can be broken down into several detailed objectives.

Firstly, assess and model the socioeconomic drivers and the resulting environmental pressures affecting European biodiversity across scales. Secondly, improve the methodology for analysing the scale-dependent impacts of these pressures. Thirdly, develop and evaluate new methods for upscaling and downscaling. Additionally, assess the effectiveness and efficiency of policy instruments to address scale-related conservation problems, and improve multilevel biodiversity governance. Moreover, test and evaluate the practical suitability and matching of the respective methods with policy instruments and translate the results of SCALES into policy and management recommendations and facilitate their application via a web based support tool kit. Finally, disseminate the results to a wide range of relevant policy makers, public sector representatives, land users, NGOs, scientists, and the general public at international, national, and local level.

## METHODOLOGY

SCALES employs a variety of methods and models, adapted to the projects' diverse components. It will apply recent methodological advances to new and existing data and develop new methods and approaches for innovative analyses of processes that affect biodiversity across multiple scales. It will assess and model how the impacts of natural and anthropogenic processes on various levels of biodiversity from genes to ecosystem functions change with scale. We will develop a database on key biological characteristics of organisms to assess how these characteristics can be used to extrapolate impacts to organisms not yet studied in detail. We will further evaluate the effectiveness of management and policy responses to biodiversity loss in terms of their scale-relevance using policy documents and interviews with key actors. We will merge and test the most promising approaches, methods, and policy instruments in EU-wide and regional case studies, focussing on UK, Finland, Poland, France, and Greece as focal regions. Data compilation and communication employ state-of-the-art IT for gathering, storing, and presenting data, information, and results through advanced computer based portals. We will provide the results and recommendations of SCALES as input into continuous science-policy dialogues on the national and EU-level, allowing us to support biodiversity policy and management and to adapt our work to new policy needs arising in the course of the project as far as necessary.

## EXPECTED RESULTS

SCALES will provide the scientific research needed to guide scale-dependent policy and management actions by advancing and integrating our understanding of natural and anthropogenic processes and their effects upon biodiversity at different scales. It will provide knowledge essential to choose the appropriate policy instruments for conservation and sustainable use of biodiversity across different administrative levels.

SCALES will assemble, integrate, and improve the most promising approaches and results into a comprehensive framework that consists of a set of methodological tools, databases, policy recommendations, and background information. We will make the framework and its tools widely available in a user-friendly form, the SCALETOOL via an Internet portal. SCALES will disseminate its results using traditional and new communication gateways, including the Internet and science-policy dialogues. The ideology of open-access publishing will be applied to make the outputs of SCALES available to any interested party.

| PROJECT PARTNER | |
|---|---|
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