



Newsletter

Issue 1

May 2010

The purpose of this newsletter is to disseminate the results of the SCALES project among stakeholders and the general public and to continue the dialogue between administrators, managers and policy-makers on the one hand and the scientific community on the other hand on scales-related biodiversity conservation issues. It will be used as a communications tool for dissemination of information to interested parties and will keep them informed of all planned activities and recent news.

To subscribe to SCALES newsletter please contact: [info@pensoft.net](mailto:info@pensoft.net)

Dear readers,

We are proud to present the first newsletter of the new SCALES project. The newsletter will provide you with information about the progress, recent achievements, and important forthcoming activities related to the conservation of biodiversity across ecological scales and administrative levels. In this first newsletter, we also introduce the SCALES project to you. More information is provided on our website [www.scales-project.net](http://www.scales-project.net). Via the website you will be able to access further in-depth information about project results, PR materials, all publications of the project, as well as detailed partner information. Announcements about job opportunities and training workshops can also be found there. Our main target groups are administrations and NGOs in the policy and management field, as well as scientists working on scale-related biodiversity conservation issues.

We hope this newsletter will keep you informed of state-of-the-art developments in the field of biodiversity conservation and will greatly facilitate your work.

Kindest regards,

Dr. Klaus Henle  
SCALES Project Co-ordinator



## CONTENTS:

<b>SCALES in a nutshell</b>	<b>2</b>
<b>Recent progress/results from SCALES</b>	<b>3</b>
<b>Policy news</b>	<b>3</b>
<b>Selected recent publications from SCALES</b>	<b>4</b>
<b>Conferences</b>	<b>5</b>
<b>Other scale-related news</b>	<b>7</b>

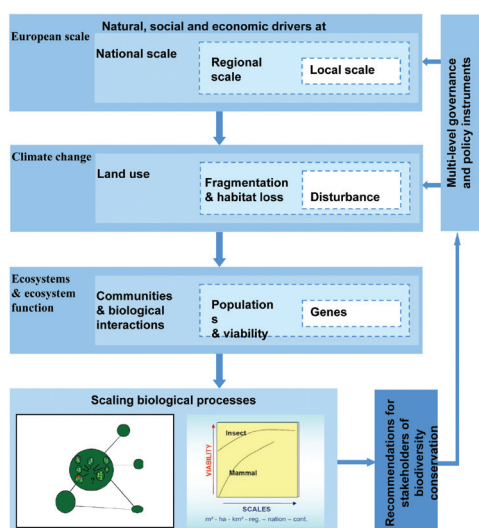




## SCALES in a nutshell

### SCALES – Securing the Conservation of biodiversity across Administrative Levels and spatial, temporal, and Ecological Scales

The ongoing year marks the deadline for EU's goal to halt the loss of biodiversity by 2010. Despite the efforts to date, there are clear indications that the EU will not achieve its target and increased efforts are needed to step-up the conservation of biodiversity and ecosystems beyond 2010. Scale-related issues can be foreseen as one of the key challenges for the EU biodiversity policy beyond 2010. These aspects are crucial, for example, to improve the ecological coherence of the Natura 2000 network and to safeguard the integrity and functioning of trans-border ecosystems (e.g. the supply of ecosystem services).



Anthropogenic and environmental pressures on biodiversity act differently at different scales. Consequently, effective conservation responses to these threats must explicitly consider the scale at which effects occur. To address this issue 28 partners from 19 countries of the European Union started the new EU project SCALES in May 2009. The project is funded by the EU within the Seventh Framework Programme as a large-scale integrating project. The general objective of SCALES is to provide the most appropriate assessment tools and policy instruments for biodiversity conservation across ecological scales and administrative levels and to disseminate them to a wide range of users.

SCALES therefore evaluates existing and develops new methods to facilitate the provision of environmental, ecological, and socioeconomic information at relevant and matching scales. SCALES assesses and models the scaling-properties of natural and anthropogenic processes and their scale-dependent impacts on biodiversity from genes to ecosystem functions. It tests the most promising approaches, methods, and policy instruments in EU-wide and regional case studies, focussing on Greece, Finland, France, Poland, and UK.

## Project main tasks

- ◆ Assess and model the socioeconomic drivers and the resulting environmental pressures affecting European biodiversity across scales;
- ◆ Synthesise and improve the methodology for analysing the scale dependent impacts of these pressures on components of biodiversity;
- ◆ Develop and evaluate new methods for upscaling and downscaling;
- ◆ Assess the effectiveness and efficiency of policy instruments to address scale-related conservation problems and improve multilevel biodiversity governance;
- ◆ Test and evaluate the practical suitability and matching of methods and policy instruments under applied constraints to deliver effective European biodiversity conservation across scales;
- ◆ Translate the results into policy and management recommendations and integrate them in a web based support tool kit.

Contact and further information:  
[www.scales-project.net](http://www.scales-project.net)  
[coordination@scales-project.net](mailto:coordination@scales-project.net)



## 1. Recent progress/results from SCALES

### First annual meeting

**SCALES recently held its first annual meeting in Barcelona and reviewed its progress**  
**8-11.3.2010**



Photo: Annette Schmidt

Representatives of all partner institutions met this spring in Barcelona for the first annual project meeting to discuss the achievements of the first year and the next steps. The SCALES consortium came together to execute the following main steps in the next years:

### 1. A new Open Access Database Journal on Biodiversity Conservation

SCALES plans to establish a new open access database journal on biodiversity conservation that will have a strong focus on scaling and related issues. It will be the first journal of its kind in the field of conservation biology responding to the increasing demand from the scientific community for open access to scientific data, multiple use and re-use of published information and better searchability of information. It will offer a possibility to authors to be credited for publishing original datasets and databases and will apply innovative technologies in online publishing.

### 2. Integration of trait databases

One of aims of the SCALES project is to improve our understanding of the impacts of environmental pressures on biodiversity from gene to ecosystem level and how they act across spatial and temporal scales. Therefore trait databases of amphibians, butterflies, wasps, and plants will be analysed together. These databases will be jointly implemented in a common system hosted by the Helmholtz Centre for Environmental Research to be made accessible by interested users outside the project. In a first step accessible these databases will be accessible after negotiation only; however, at a later stage of the project they will most likely be made freely accessible.

### 3. Development of a driver typology

The SCALES project assesses and models the scaling properties of natural and anthropogenic processes and their impact on biodiversity. This assessment requires a clear definition of drivers, pressures, and their consequences. The SCALES consortium therefore developed a typology of drivers that have direct impact on biodiversity. This typology is going to be the basis for the identification of drivers and the scales at which they act.



Photo: Annette Schmidt

## 2. Policy news

**Crossing scales for biodiversity: Can the development of scale sensitive policies help to promote effective conservation of biodiversity in the EU beyond 2010?**

**21. September 2010, Brussels, Belgium**

SCALES will organise a workshop to discuss how the recognition of scale can improve biodiversity conservation across administrative levels. The objective of this stakeholder workshop is to support the identification and development of EU policies and policy instruments that can better address the changing, scale-dependent pressures on biodiversity and support more scale-sensitive biodiversity governance in the EU.

Contact and further information:  
[www.scales-project.net](http://www.scales-project.net)  
[coordination@scales-project.net](mailto:coordination@scales-project.net)





In particular, the workshop seeks to answer the following key questions:

1. To what extent do the existing EU policy instruments and ongoing trends in EU biodiversity governance succeed in addressing scale-related aspects relevant for safeguarding biodiversity and ecosystems in the EU, e.g. the different scales and scale-dependent thresholds at which anthropogenic pressures act and impact biodiversity?
2. How can the scale-sensitivity of EU policies be improved and what attributes make a policy instrument and/or a mix of instruments scale-effective?
3. What concrete steps should be taken to ensure that the post-2010 EU biodiversity policy regime will be able to address the scale-related challenges in an effective manner?

SCALES scientists will discuss with participants from applied biodiversity conservation the challenges ahead and potential solutions to these issues. The results of the workshop will feed directly into the research carried out by SCALES, supporting the contribution of this project to the future development of EU biodiversity policy beyond 2010. The workshop will be an important step in the science-policy dialogue of SCALES and will get participants acquainted with the scale-related problems on different levels and the possible ways for their solution.

This workshop is by invitation-only, targeted at policy-makers, experts, and researchers involved in developing and implementing EU biodiversity policies and policy instruments at different administrative levels (i.e. from the European to the national and local level).

### Policy pages on SCALES' web portal

SCALES has designed special pages on its web portal to disseminate results specifically to administrations, NGOs, and scientists working in the policy and management of biodiversity conservation. Key results for applied biodiversity conservation will be posted on these pages as SCALES briefs. The first one will be about biodiversity monitoring and will be released together with the launch of that section in May.

## 3. Selected recent publications from SCALES

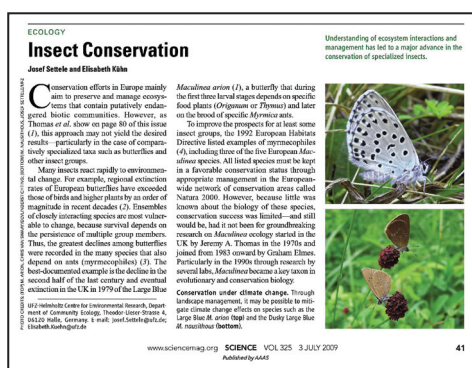
### Insect conservation under climate change

Conservation efforts in Europe mainly aim to preserve and manage ecosystems that contain putatively endangered biotic communities. However, this approach may not yield the desired results—particularly in the case of comparatively specialised taxa, such as butterflies and other insect groups. In insects, management based on the precise knowledge of an endangered species' ecological requirements under a given climate may increase by two to three orders of magnitude the size and stability of current populations, as well as creating new ones in landscapes and generating more emigrants to migrate in the future to climatically suitable habitat patches.

SETTELE, J. & E. KÜHN (2009): Insect Conservation. – *Science* 325: 41-42.  
<http://www.sciencemag.org/cgi/content/summary/325/5936/41>

### Intensive agriculture homogenises butterfly communities

The homogenisation of butterfly communities has increased significantly in intensively cultivated areas. A study in Finland showed that species which



Contact and further information:  
[www.scales-project.net](http://www.scales-project.net)  
[coordination@scales-project.net](mailto:coordination@scales-project.net)



exhibit high sensitivity in terms of their habitat, and the related low mobility, are particularly vulnerable to such change. New, more efficient measures in support of biodiversity should be taken in use in agri-environment schemes.

EKROOS, J., HELIÖLÄ, J. & M. KUUSSAARI (2010): Homogenization of lepidopteran communities in intensively cultivated agricultural landscapes. – *Journal of Applied Ecology* 47: 459-467.  
<http://www3.interscience.wiley.com/journal/123237342/abstract>

### Relative importance of density-dependent regulation and environmental stochasticity for butterfly population dynamics

The relative contribution of density-dependent regulation and environmental stochasticity to the temporal dynamics of animal populations is one of the central issues of ecology. In insects, the primary role of the latter factor, typically represented by weather patterns, is widely accepted. The impact of density dependence as well as density-independent factors, including weather and mowing regime, on annual fluctuations of butterfly populations of *Maculinea alcon* and *M. teleius* living in sympatry is evaluated and the effect of their potential competition is analysed. These results provide strong evidence for density-dependent regulation in *Maculinea*, while the influence of environmental stochasticity is rather minor. In the light of several recent studies on other butterflies that detected significant density-dependent effects, it would appear that density-dependent regulation may be more widespread in this group than previously thought, while the role of environmental stochasticity has probably been overestimated. This misconception is the result of deficiencies in the design of most butterfly population studies in the past, including (1) a strong focus on adults and a neglect of the larval stage in which density dependent effects are most likely to occur; (2) an almost exclusive reliance on transect count results that may confound the impact of environmental stochasticity on butterfly numbers with its impact on adult longevity.

NOWICKI, P., BONELLI, S., BARBERO F. & BALLETO, E. 2009. Relative importance of density-dependent regulation and environmental stochasticity for butterfly population dynamics. – *Oecologia* (2009) 161: 227-239 Doi 10.1007/s00442-009-1373-2

## 4. Conferences

### Green Week Conference 2010 1–4 June 2010, Brussels, Belgium

This year, the largest annual conference on European environment policy turns the spotlight on biodiversity. Over some 30 sessions, the conference will address the state of biodiversity and nature in Europe and the world, the benefits they bring, present-day pressures on them, and possible solutions to the current rates of loss. Some 3800 participants are expected from EU institutions, business and industry, non-governmental organisations, public authorities, the scientific community and academia.

For more information go to: <http://www.greenweek2010.eu>  
 To register go to: <http://gw2010.regware.be>



Contact and further information:  
[www.scales-project.net](http://www.scales-project.net)  
[coordination@scales-project.net](mailto:coordination@scales-project.net)





## Biodiversity post-2010 – biodiversity in a changing world 8–9 September 2010, Gent, Belgium

Conference under the Belgian EU presidency organized by Flemish Region in collaboration with Brussels Capital Region, Walloon Region, Federal government and the European Commission with support of IUCN.

2010 is declared as the UN International Year on Biodiversity. This year is also a crucial moment for evaluating and renewing European and global targets for biodiversity to be adopted at the 10th Conference of the Parties (COP) of the Convention on Biological Diversity (CBD) in October 2010, in Nagoya (Japan). The Belgian EU Presidency will organize a conference at EU-level to inform about the current state in biodiversity and ecosystem services, to exchange ideas on the challenges of biodiversity conservation in an urbanizing and changing world, to reflect on the proposed post-2010 vision and targets and to highlight options for implementation, and to bring a policy message to COP10. This high-level stakeholder conference will be a milestone in the development of an EU biodiversity policy strategy for the post-2010 period and strengthen its position in international negotiations on a global biodiversity framework. The conference will focus on three thematic areas: (1) Biodiversity in an urbanizing Europe, (2) Ecosystem services - valuation of natural goods and services, (3) Vision and targets for biodiversity post-2010: implementation. Expected participants: policy makers, government representatives, scientists, NGO representatives, representatives from the private sector, other relevant stakeholders.

For more information please contact: [pieter.decorte@lne.vlaanderen.be](mailto:pieter.decorte@lne.vlaanderen.be) or [andras.krolopp@iucn.org](mailto:andras.krolopp@iucn.org)



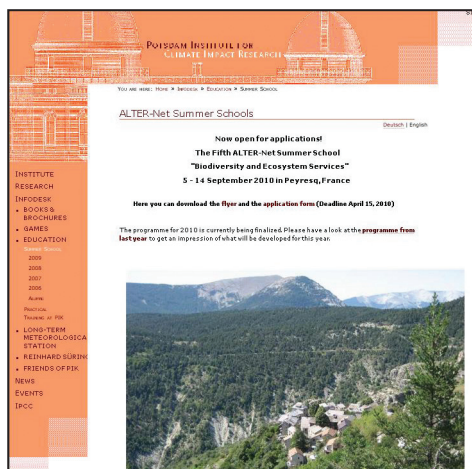
## Announcing the 5th Alter-Net Summer School 5–14 September 2010, Peyresq, France

The summer school will be held at Peyresq, Alpes de Haute-Provence, France and is organized by the ALTER-Net Summer School Secretariat at the Potsdam Institute for Climate Impact Research (PIK), Germany.

The topic this year is “Biodiversity and Ecosystem Services”. The school is a unique opportunity to explore this important issue with 32 like-minded post-graduate students and young scientists mostly from Europe. About 20 speakers will give presentations on this subject in the morning and late afternoon. In the afternoon working groups will apply what they have learned in their case studies study with different themes. The ALTER-Net Summer School will contribute to durable integration and spread of excellence within and beyond the network, with a view to promote interdisciplinary approaches.

The 2010 Summer School will focus on: Biodiversity and ecosystems in Europe; Ecosystem processes, function, services and benefits; Resilience of social and natural systems; Valuation of biodiversity and ecosystem services; Linking biodiversity research with policy and the public.

For more information: <http://www.pik-potsdam.de/alter-net/> or contact the Summer School Director: Sabine Lütke-meier [Sabine.Luetkemeier@pik-potsdam.de](mailto:Sabine.Luetkemeier@pik-potsdam.de)



Contact and further information:  
[www.scales-project.net](http://www.scales-project.net)  
[coordination@scales-project.net](mailto:coordination@scales-project.net)



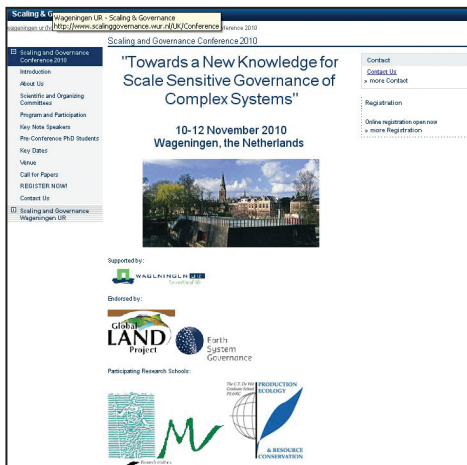


## ***Towards a New Knowledge for Scale Sensitive Governance of Complex Systems*** **10–12 November 2010, Wageningen, Netherlands**

Policies have many impacts on environmental and human processes at different spatial and temporal scales. Climate change, biodiversity, energy consumption, water resource management, and food security are a few of the many examples illustrating the complex multi-scale interactions within and between environmental and human processes. This observation fits well within a long history of disappointments in policy and management related to our environment and indicates that scale sensitive governance approaches are required. Wageningen UR invites participants of the conference to discuss integrative concepts, methodologies, and case studies related to scaling and governance issues in complex systems. Anticipated outcomes of the conference include an international research agenda and recommendations for scale-sensitive governance approaches. Several contributions from SCALES will be presented at this conference.

Due date for abstract submission: May 31, 2010.

For more information please visit: <http://www.scalinggovernance.wur.nl/UK/Conference>



## **EPBRS meeting under Belgian Presidency** ***“Positive visions for Biodiversity”*** **16–19 November 2010**

“What kind of world would we want to hand on to our children? What research do we need to reach it?”

In the context of the International Year for Biodiversity and under the Belgian EU presidency, the EPBRS, the Belgian Biodiversity Platform, and the Belgian Science Policy Office are initiating a challenging project on ‘Positive Visions for Biodiversity’.

A large meeting will develop inspirational, positive, achievable, and shared visions for our future and the Nature we want. It will develop a storyline to show how to reach those alternative futures, and to achieve the targets on the way. The results of the discussions will be debated by EPBRS delegates and scientists to suggest a long-term science policy to enable society to move towards these positive visions, and outline options for other policies. The scenarios and positive visions constructed at this meeting will be of global importance. They will be widely publicised and made available to European and International policy processes. The science policy options will be available to funding agencies to guide their research strategies. SCALES representatives will participate in the meeting.

For more information: <http://www.epbrs.org/epbrs/event/show/28>

Contact and further information:  
[www.scales-project.net](http://www.scales-project.net)  
[coordination@scales-project.net](mailto:coordination@scales-project.net)



## **5. Other scale-related news**

### **Natura 2000 online public viewer launched**

An interactive tool enabling the public to locate Natura 2000 sites and access related information is now available online. For the first time all sites are made available on an EU scale, encompassing the Natura 2000 network as a whole



and offering a panorama of what is now the largest coordinated network of conservation areas in the world. The tool is intended to help raise awareness of Natura 2000's rich assets amongst the general public as well as provide a useful instrument for developers, land use planners, landowners, government authorities, NGOs, researchers and educationalists, amongst others.

You may access the Natura 2000 public viewer under:

<http://natura2000.eea.europa.eu/#>

For more information: Eionet European Topic Centre on Biological Diversity

[http://biodiversity.eionet.europa.eu/activities/Natura\\_2000/index\\_html](http://biodiversity.eionet.europa.eu/activities/Natura_2000/index_html)

## New projects related to SCALES

### POLICYMIX

This year the new FP7 project POLICYMIX will start. The project has a duration of four years and includes nine partners in six European and two Latin American countries. The project aims to evaluate the cost-effectiveness of economic instruments versus command-and-control instruments in biodiversity conservation, the transfer of economic valuation estimates for biodiversity and ecosystem services from existing study sites to new policy sites ('benefits transfer'), and the transferability of policy lessons between Latin America and Europe.

POLICYMIX and SCALES will cooperate closely in the analysis of policy instruments, the assessment of networks of protected areas, and particularly in the development of web based support tool kits for biodiversity conservation.

### BIOFRESH

The BioFresh FP7 project will build a public biodiversity information platform to bring together the vast amount of information on freshwater biodiversity currently scattered among a wide range of databases.

Project main objectives are:

- improving capacity to protect and manage freshwater biodiversity in the face of ongoing changes to global climate and socioeconomics.
- predicting the responses of freshwater biodiversity and its services to multiple stressors at global, European and local scale, including future climate and socioeconomic pressures,
- increasing the awareness of the urgency for freshwater biodiversity conservation among scientists, policy makers and the public.

BIOFRESH and SCALES will exchange their experience in methodological approaches for downscaling climate models. The projects will share trait databases and distributional databases for species groups included in both projects. Joint topical sessions are planned at international conferences.

Contact and further information:  
[www.scales-project.net](http://www.scales-project.net)  
[coordination@scales-project.net](mailto:coordination@scales-project.net)