Federal Ministry
of Education
and Research

Funding Activity REFINA: Objectives, Fields of Action and Results

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Forum on Sustainable Land Management in Europe, Brussels

21st June 2011

Challenges in Europe I

Global change: climate, structure, demography, migration, etc.



Europe 2020 Strategy: smart, sustainable and inclusive growth

Redesign of funds for research, innovation and cohesion

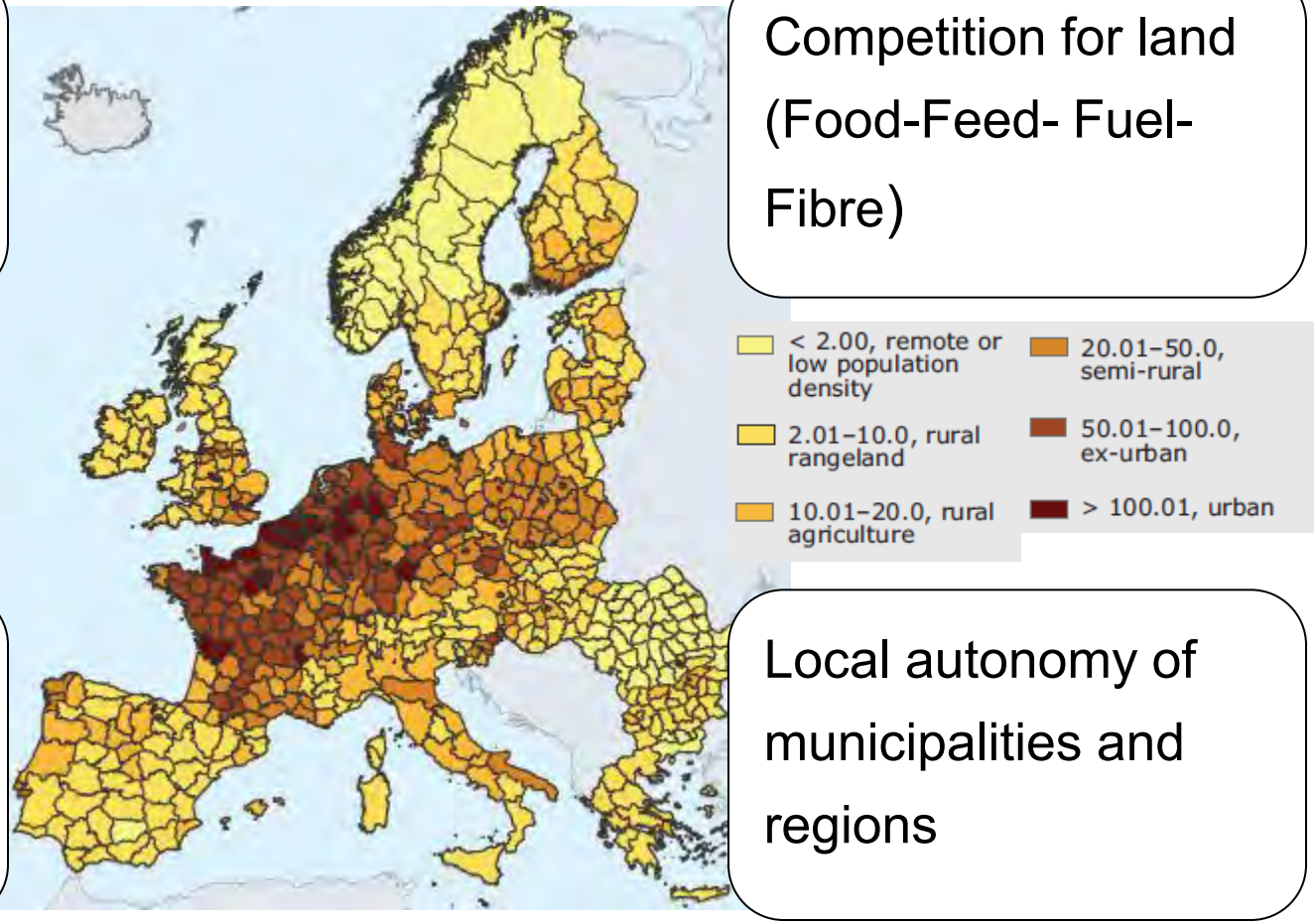
European Strategy for Sustainable Development

Challenges in Europe: Land management

Urban sprawl

Adaptation and mitigation of climate change

Protecting biodiversity



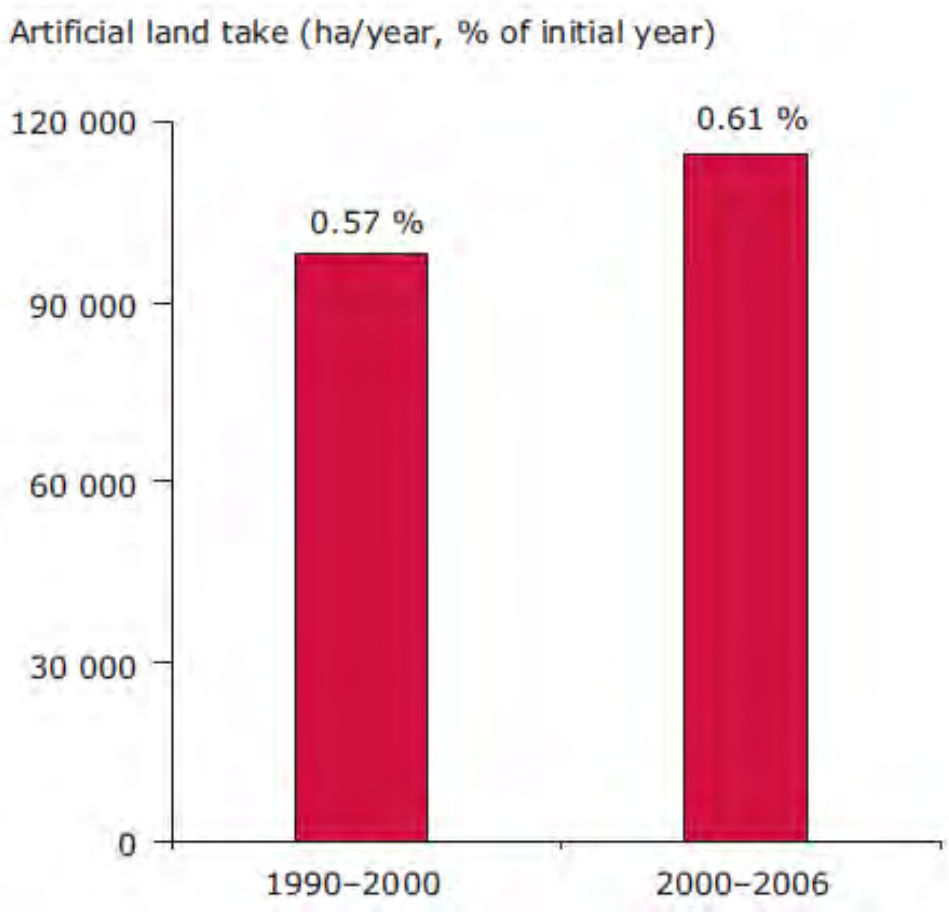
Competition for land (Food-Feed- Fuel-Fibre)

Effects of the CAP and its reforms on land use

Local autonomy of municipalities and regions

Source: Landscape Fragmentation in Europe, EEA/FOEN joint report 2011, forthcoming.

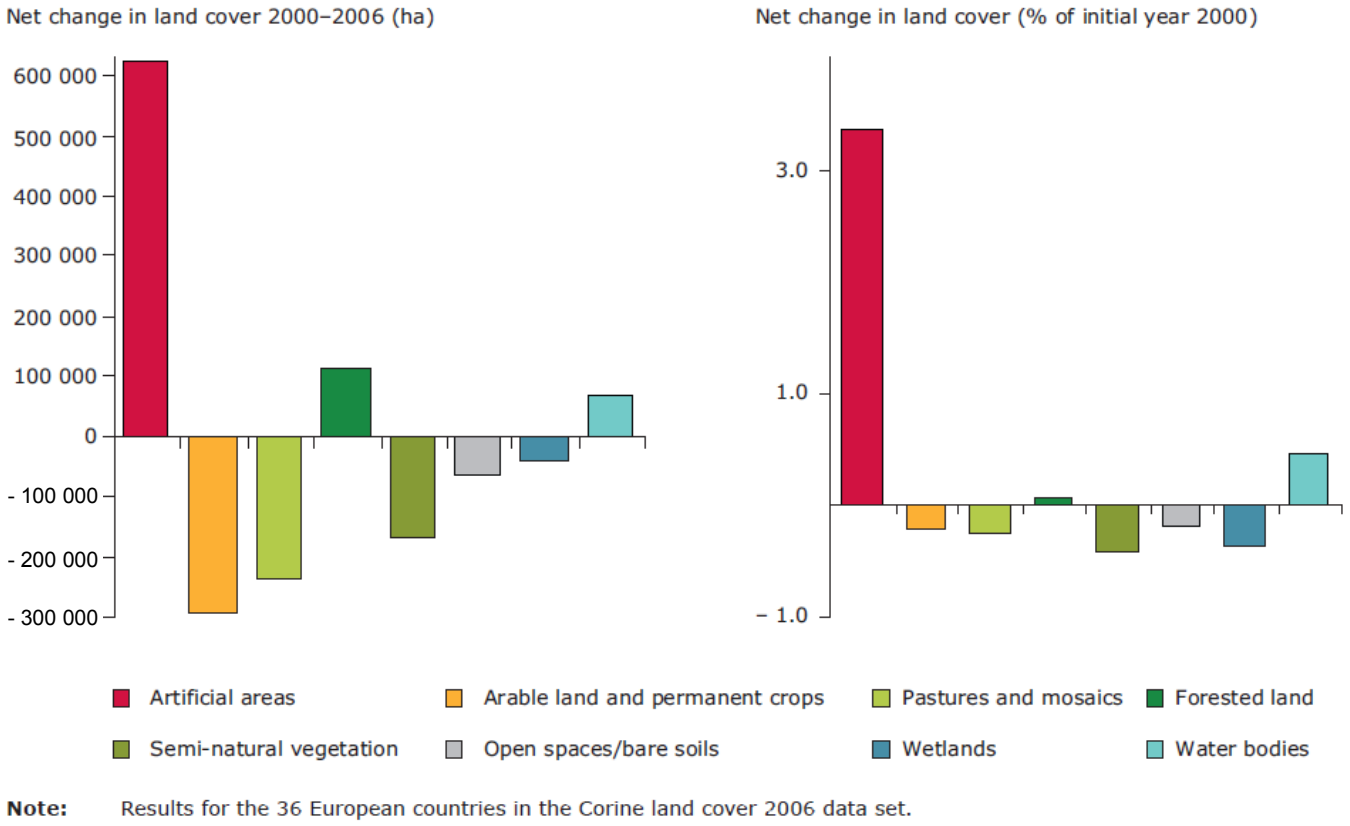
Some Facts - Land management / land use changes



Annual land take by artificial surfaces in the 36 European countries in the Corine land cover 2006 data set

Source: EEA/ECT-LUSI 2010

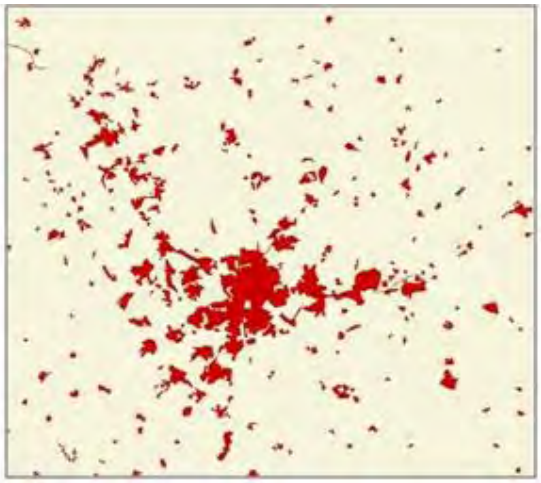
Some Facts - Land management / land use changes



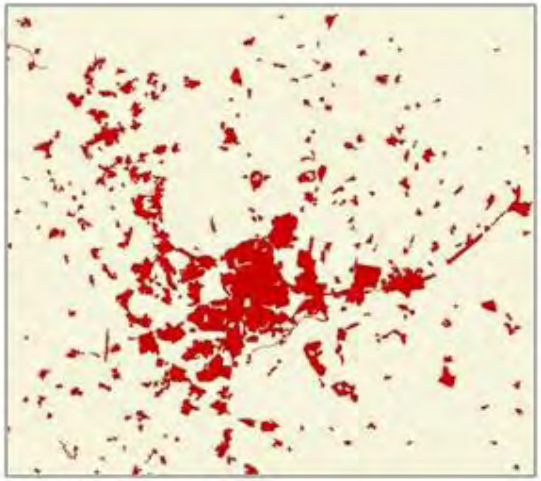
Net land-cover changes 2000–2006 in Europe: total area in hectares (left) and percentage change from 2000 (right); Source: EEA/ECT-LUSI 2010, amended

Some Facts: Urban Sprawl

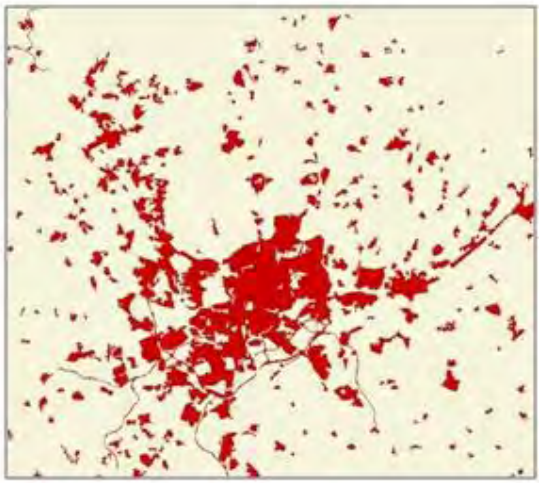
CORINE Land Cover 1990, 2000, 2006 - Madrid



1990 (CLC)



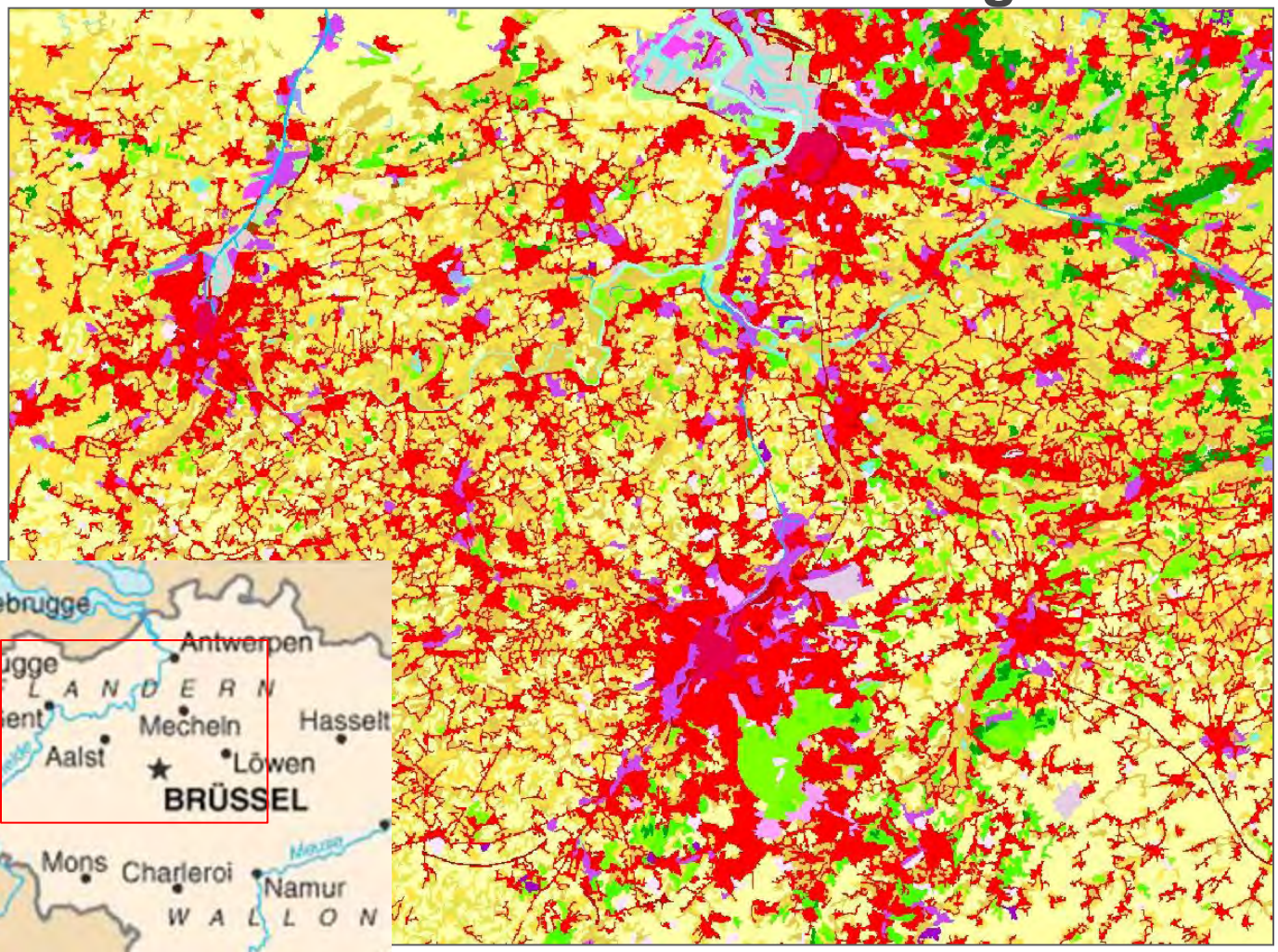
2000 (CLC)



2006 (CLC)

Source: Source: DLR-DFD
based on CORINE Land Cover

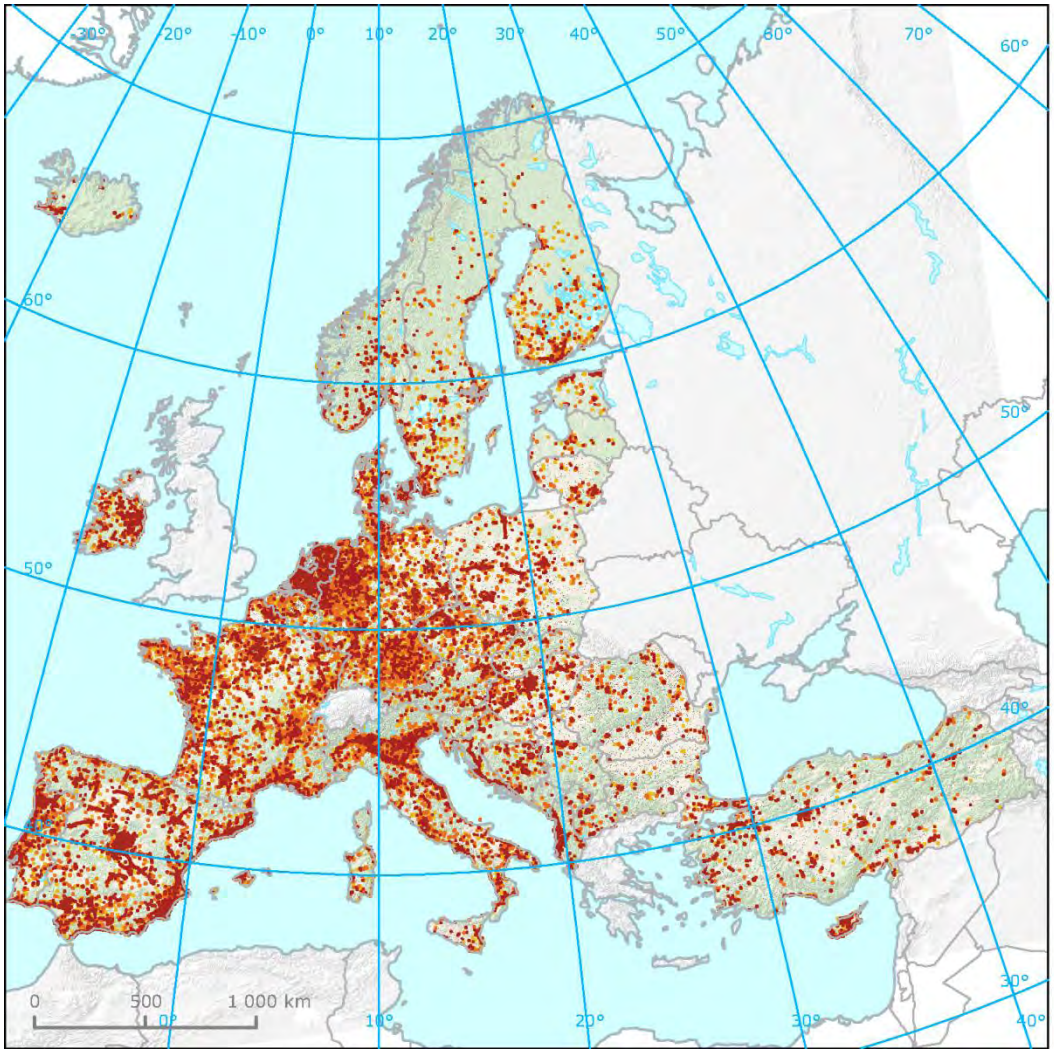
Some Facts: Urban Sprawl
in CORINE Land Cover 2006 – Region of Brussels



CLC2006
in the region of
Gent,
Antwerpen,
Brussels

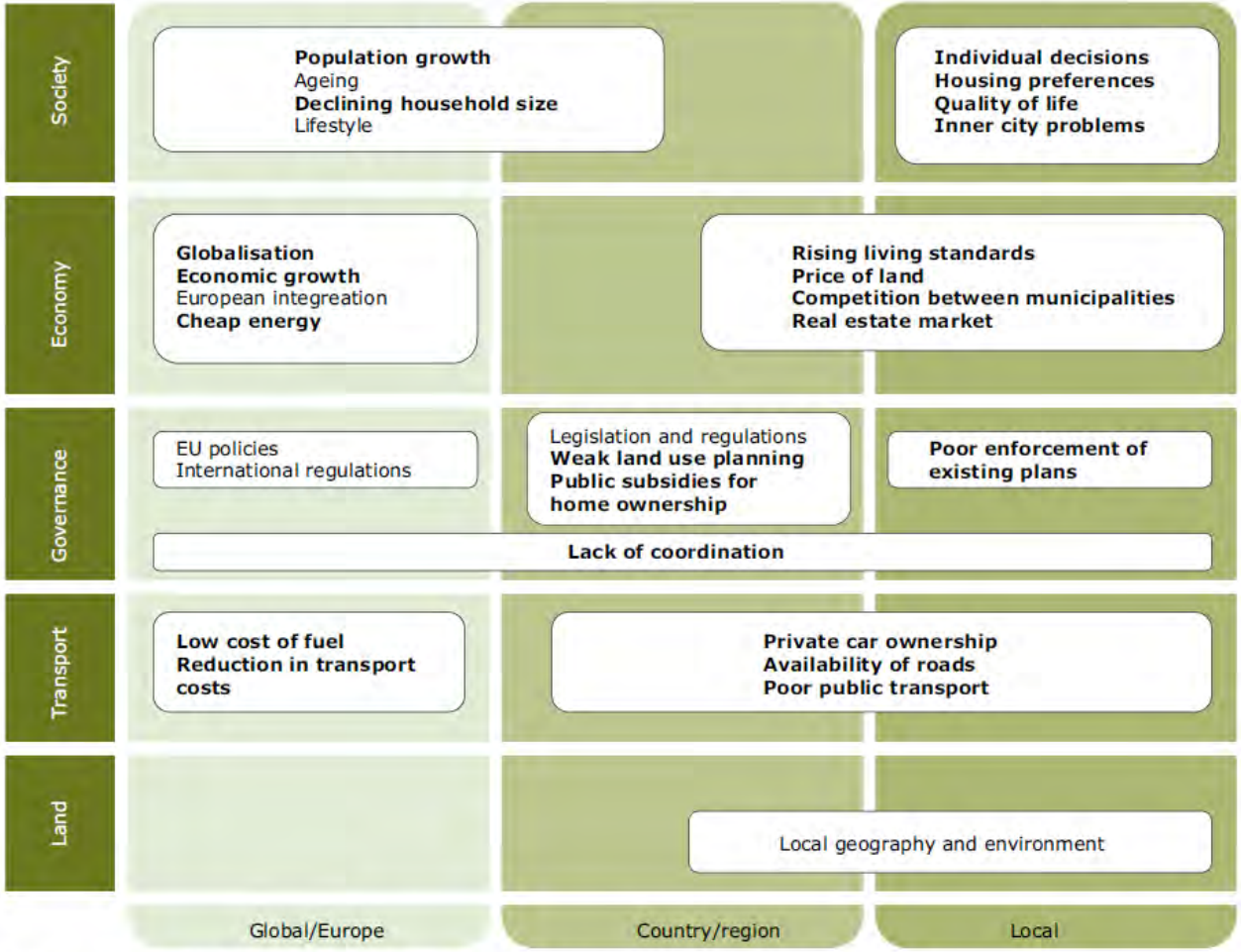
Source:
DLR-DFD based
on CORINE
Land Cover

Some Facts - Artificial landtake in Europe 2000–2006



Source: EEA 2010 (http://www.eea.europa.eu/data-and-maps/figures/artificial-land-take-2000-2006)

Main drivers of current urban sprawl



Note: Drivers have been organised in two dimensions: type (vertical) and spatial scale (horizontal). Demand/supply has not been differentiated. In bold: factors that drive urban sprawl; the remaining factors may become drivers under certain conditions.

Source: Adapted from EEA, 2006a and PBL, 2008.

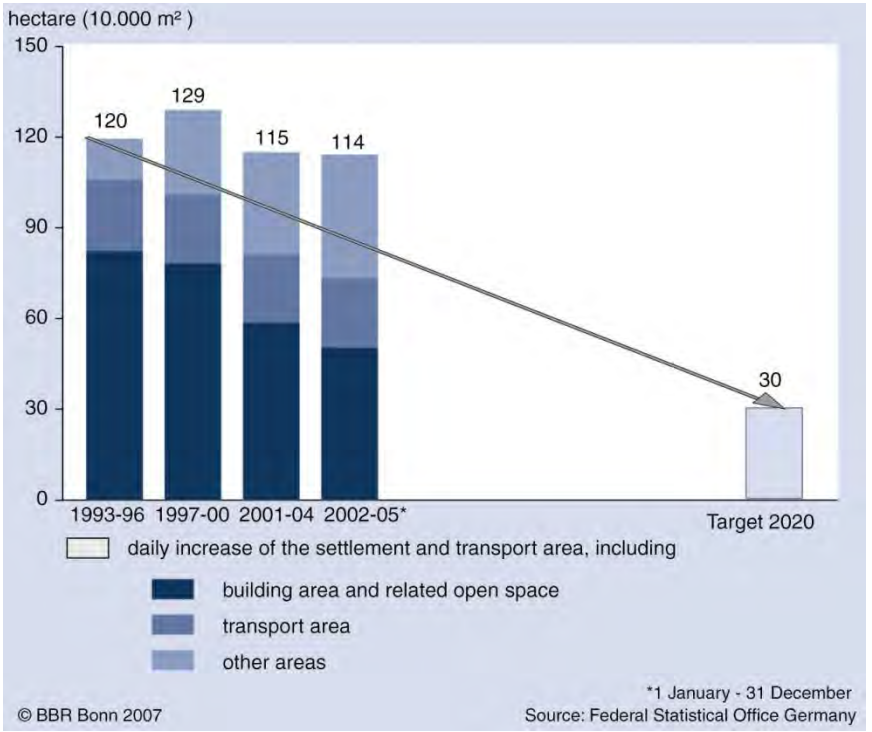
BMBF funding priority REFINA

Research for the Reduction of Land Consumption and for Sustainable Land Management

*Forschung für die **RE**duzierung der **F**lächen**I**nanspruchnahme und ein **NA**chhaltiges Flächenmanagement (**REFINA**)*

Aim of National Sustainability Strategy:

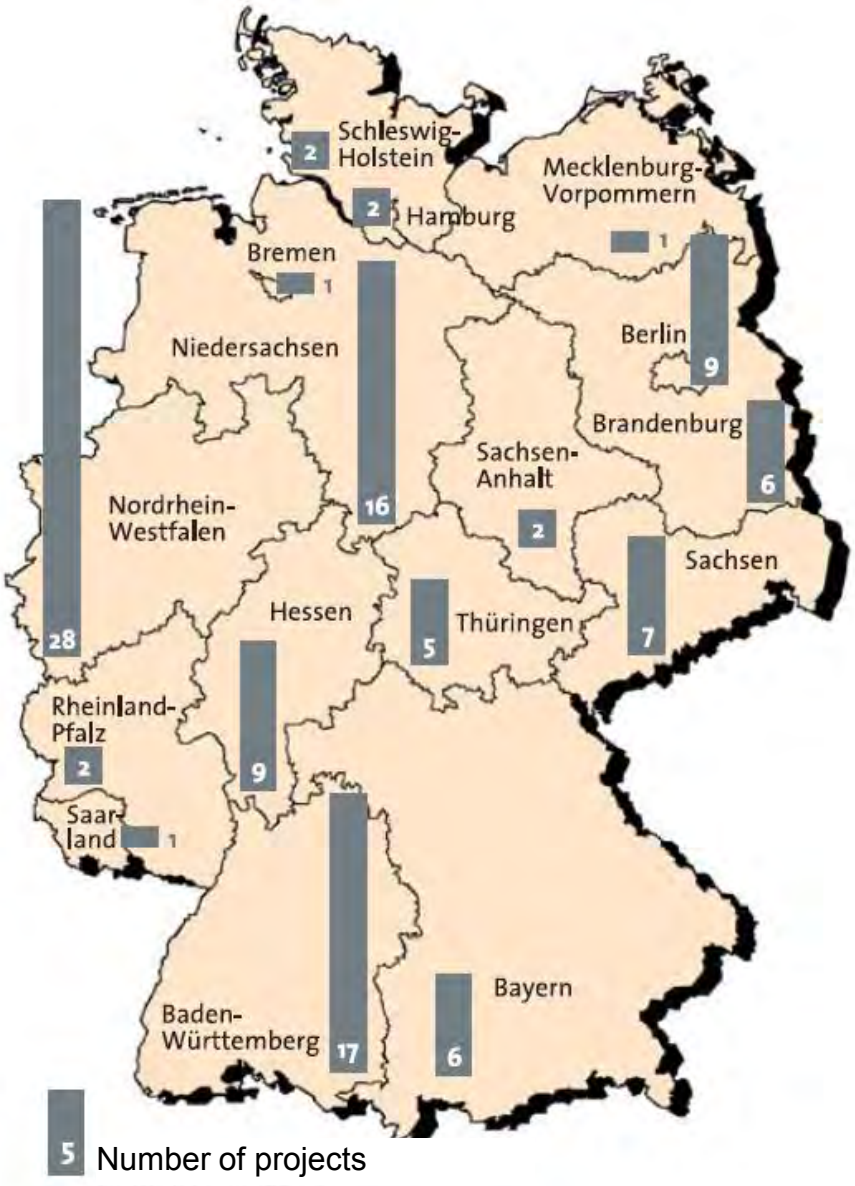
- Reduction of Land Consumption for new settlement and transport-related areas to **30 ha per day** in **2020**
- Qualitative aims for land use management



REFINA in numbers

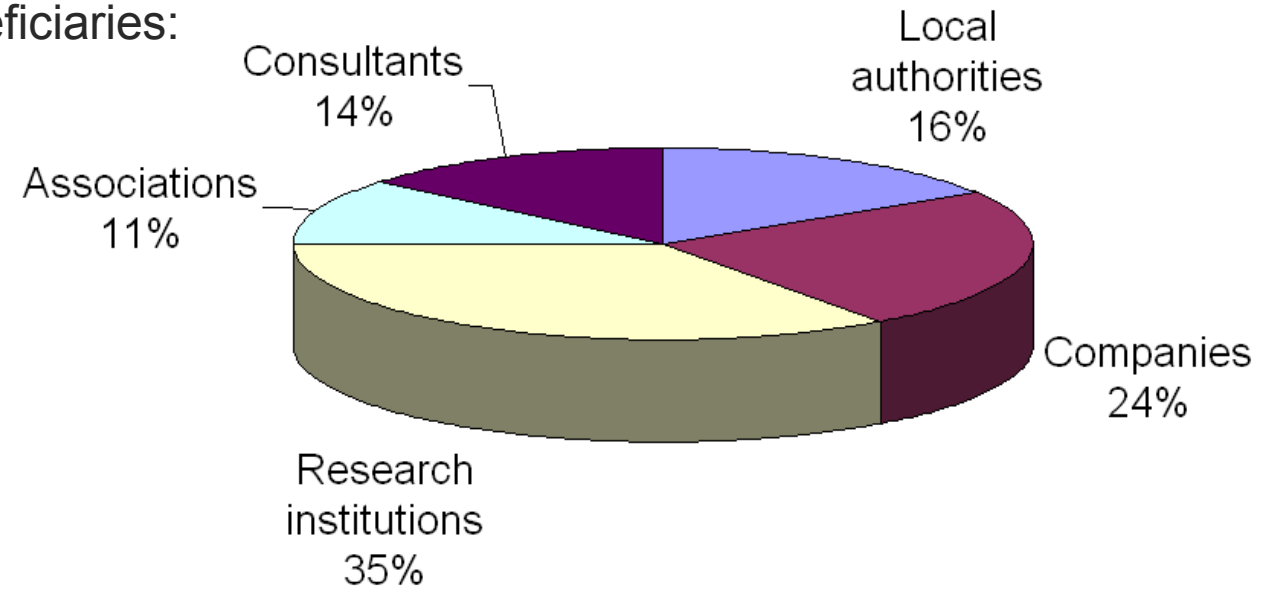
- Funding: 22 Mio. €
- Duration: 2006 - 2011
- Projects: 45 (32 collaborative and 13 single projects)

REFINA



REFINA Stakeholders

- Integration of Federal Government, Länder, Local Authorities and public and private stakeholders
- A REFINA Steering Group acted as one interface between research, practice, politics and public authorities.
  Inter alia, it secures the incorporation of important departmental research, especially from the BMVBS, BMU and of the *Länder*.
- Project beneficiaries:



REFINA Topics





Priority	Topics
New methods and instruments	Information on soil and land
	Cost of land consumption
New processes and constellations of actors	Communication and participation
Integrated model concepts	Revitalization of individual sites and conversion areas
	Model concepts for local authorities
	Regional model concepts

REFINA Topics: Cost of land consumption



Greenfield developments involve a wide range of follow-up costs

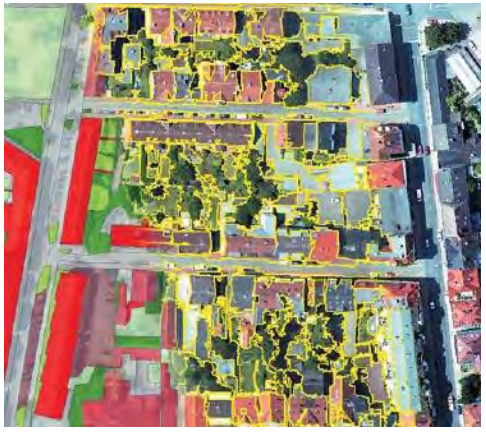


A house in the country: property prices are often lower, but mobility costs higher

Focus on:

- Follow-up costs
- Planning and development costs
- Cost-transparency for local authorities
- Follow-up costs for private households

REFINA Topics: Information on soil and land



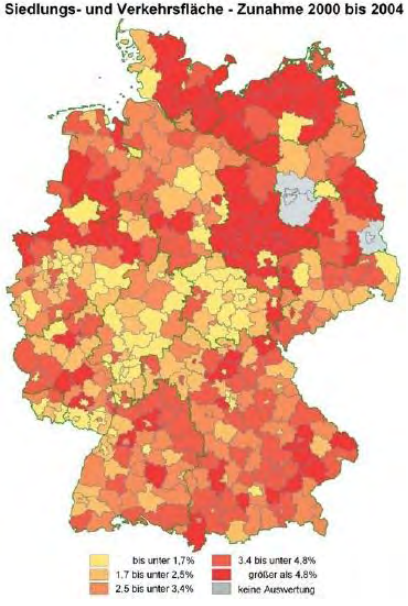
Focus on:

- Automated remote sensing methods, Land barometer
- Land information systems based on virtual 3D city models
- Urban soil evaluation for land use planning
- (Supra-)Regional analysis of settlement development base on a macroeconmic and multisectoral forecast model









REFINA Topics: Revitalisation of individual sites and conversion areas

Focus on:

- New life at old sites
- Intelligent remediation methods
- Management of conversion projects



The greening of old industrial areas (Landschaftspark Nord, Duisburg)



Structural change makes room for residential and commercial buildings (HafenCity Hamburg)



Disused military site (Bad Kreuznach)

REFINA Topics: Communication and participation

Focus on:

- Communication to general public
- On-the-spot dialogue creates room for political manouvre (transparent conversion)
- Specific offerings for local authorities (demand-driven life-cycle management, Information system on choosing a home, etc)
- Adress new target groups with innovative offerings (young people, computer game, e-learning, films)

spiel FLÄCHE









REFINA Milestones

2004

2005



2006

Kick-Off

2007

Projects working



2008



Projects finished

2009

Products



2010

Transfer



2011

Implementation

Bundesanzeiger

REFINA Products

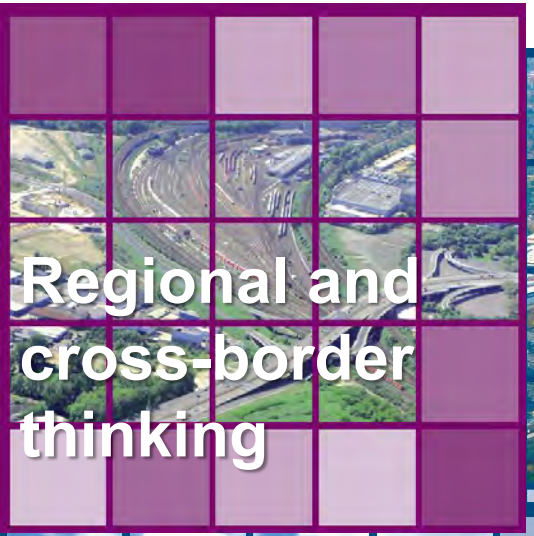
- Product data base: www.refina-info.de
  - 60 products
  - Tools, Best practice, Concepts, Guidelines
- REFINA Compendium for practice
  - Tools, Best practice, Concepts, Guidelines
  - Contact data
  - Print und online version
- Flächenpost (24 Stories)
- REFINA Series
  - Folgekosten der Siedlungsentwicklung
  - Kommunikation im Flächenmanagement
  - Flächen- und Standortbewertung
- Project reports



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FONA Research for Sustainable Development BMBF

REFINA Lessons Learnt















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More Information:

www.refina-info.de

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