PROJECT

PLUREL

Peri-urban Land Use Relationships - Strategies and Sustainability Assessment Tools for Urban - Rural Linkages

Funding: European (6th RTD Framework Programme)
Duration: Jan 2007 - Jan 2010
Status: Complete with results

Background & policy context:

Urbanisation is arguably the most significant process of land use change in Europe. Over 70% of Europe's population is now living in urban areas, and these in turn have grown by almost 80% over the last fifty years (http://reports.eea.europa.eu/eea_report_2006_10). The most obvious signs of this is the spread of built-up areas, and the creation of large transport networks, but the establishment of recreational facilities such as theme parks and golf courses and the conversion of farmsteads into residences and hobby farms in near-urban landscapes are also very visible markers of this drift to urbanisation.

The changing nature of the relationship between rural and urban land uses has deep consequences both for human quality of life and for the environment. To understand the processes that drive these changes, we need to improve our knowledge and create better tools to assess the future social, environmental and economic impacts of these changes. Only then can we identify effective strategies for the planning of sustainable land use systems.

Objectives:

The PLUREL project set out to develop the new strategies and planning and forecasting tools that are essential for developing sustainable rural-urban land use relationships. These strategies and tools, generic in nature, support the analysis of urbanisation trends in the EU so that ways can be identified of both supporting this process and mitigating its negative impacts. In this way the PLUREL tools will help improve the quality of life of the population living in cities as well as in the peri-urban and rural surroundings. PLUREL evaluated costs for the implementation of these strategies, and helped stakeholders to better understand, plan and forecast the interactions between urban, peri-urban and rural areas.

Methodology:

PLUREL consisted of five interrelated research modules:

Module 1 - described the underlying driving forces of, for example, the urbanisation process, as well as other relationships between urban and rural areas. Examples of such driving forces were Europe's overall economic and technological development, demographic changes, and climate change.

Module 2 - translated these general trends into demands on land use, resources and public participation in the interface between rural, peri-urban and urban areas. This included analysis of different strategies for urban growth (or shrinkage) patterns (compact, sprawling, site-specific and site-adequate).

Module 3 - implemented these pressures or demands on a local, urban region level in seven case studies. Different scenarios for urban development were developed in an inclusive way, involving main stakeholders.

Impact assessment in Module 4 was carried out with economic, social and environmental methods and indicators.

Module 5 synthesised the results into a toolkit for planners and user-friendly information, such as input to GEO-compatible databases to support decision-making at European and regional levels. The site-specific and site-adequate conceptual approach as a basis for new strategies was elaborated upon, as were tools to enhance impact assessment.
**Parent Programmes:**  
FP6-SUSTDEV - Sustainable Development, Global Change and Ecosystems - Priority Thematic Area 6 (PTA6)

**Institute type:** Public institution  
**Institute name:** European Commission  
**Funding type:** Public (EU)  
**Other funding sources:** 6th RTD Framework Programme

**Partners:**

- **Austria**  
  International Institute for Applied Systems Analysis; Austrian Research Centres GmbH

- **China**  
  Research Institute of Forestry Policy and Information, Chinese Academy of Forestry

- **Denmark**  
  University of Copenhagen, Danish Centre for Forest, Landscape and Planning; Institute for Local Government Studies, Environment and Energy; Scandinavian Branding A/S

- **Europe**  
  Commission of the European Communities – Directorate General Joint Research Centre, Institute for Environment and Sustainability – Land Management Unit and Natural Hazards Unit

- **Finland**  
  The Finnish Environment Institute, Research Department, Programme for Environmental Policy

- **France**  
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- **Hungary**  
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Key Results:

New research results from the FP6 PLUREL project show that urban development is by far the most rapidly expanding land use change in Europe. Urban development has a lot of positive effects as a locomotive for economic development, but it can also have serious negative social and environmental consequences, for example, through urban sprawl. A better balanced and sustainable development requires more policy attention at the regional level and on the urban-rural interface. The EU can promote an integrated rural-urban development by targeting its policies and funding towards peri-urban areas.

Results related to the mobility and transport:

At present, low density urban sprawl causes longer commuting distances, increased infra-structure costs and less viable public transport systems. Urban expansion encourages car use, and car use encourages urban expansion. Improvements to infrastructure can reduce congestion and emissions, but often exclude the poor and those without cars, while encouraging longer distance commuting.

The PLUREL modelling looked at the effect of different spatial types. The transport system that has the lowest impact works with a monocentric settlement pattern with public transport modes. For a polycentric settlement pattern, multimodal and trans-modal systems are possible, but would require larger public investments.

Documents:

- Synthesis Report (Other project deliverable)

STRIA Roadmaps:  Smart mobility and services
Transport mode:  Multimodal transport
Transport sectors:  Passenger transport
Transport policies:  Deployment planning/Financing/Market roll-out
Geo-spatial type:  Urban