

# RURAL – URBAN REGIONS AND PERI-URBANISATION IN EUROPE: TOWARDS A EUROPEAN POLICY TO SUSTAIN URBAN-RURAL FUTURES

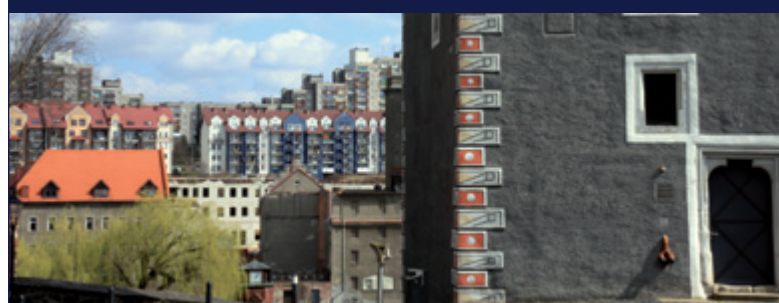


## EXECUTIVE SUMMARY December 2010

New research results from the FP6 project PLUREL 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 conse-

quences, for example through urban sprawl. A better balanced and sustainable development requires more policy attention on the regional level and the urban – rural interface. The EU can promote an integrated rural-urban development by targeting its policies and funding towards peri-urban areas.

## Facts on peri-urbanisation



- ▶ Today the European areas classified as 'peri-urban' have the same amount of built-up land as urban areas, but are only half as densely populated.
- ▶ There is a real risk of increasing urban sprawl: the growth of built development of peri-urban areas will be up to three times as high as in urban areas.
- ▶ European wide projections of built development in peri-urban areas are for 1.4 – 2.5% per annum – if such trends continue, total built development in peri-urban areas could double between 2040-2060.
- ▶ Similar modelling on the impacts of urbanisation show that land fragmentation, loss of habitats and amenity values will each be more serious in the peri-urban than today.
- ▶ Meanwhile the peri-urban is also place of innovation and growing employment in the service and IT sectors: 25% of peri-urban regions are classified as 'highly innovative'.
- ▶ New research from the EU Project PLUREL quantifies the trends, risks and potentials for peri-urban regions, and provides recommendations for targeted policies and new concepts of urban- rural linkages.

## A NEW KIND OF SPACE

### Why the peri-urban?

The peri-urban – the space around urban areas which merges into the rural landscape – is growing rapidly across Europe. There is about 48,000 km<sup>2</sup> of built development in peri-urban areas, almost equal to that in urban areas. But while most urban areas are now slow growing (at 0.5-0.6% per year), built development in peri-urban areas is growing at four times this rate.

There are many impacts of such rapid expansion. In many cases the

result is sprawl with increasing problems of social segregation, urban decline, wasted land, and dependency on oil for transport. However there are examples of alternatives, with opportunities for improved quality of life, green infrastructure, better linkages between city and countryside, and more sustainable urban and rural development.

How to avoid the sprawl, and achieve the opportunities? A wide range of trends, projections and policy responses has been investigated by

PLUREL, an Integrated Project under EU's 6th Framework Programme (EC FP6 036921). From this come a set of recommendations for policy.

Overall, the challenges of the peri-urban need to be addressed at the wider strategic level of the surrounding 'rural-urban-region'. This requires more effective local government, alongside new forms of social enterprise and cooperation, for 'integrated development' (i.e. 'joined-up policy') in the rural-urban-region. Achieving this is a multi-level agenda, from local to national and European: and at this higher level there are a range of options for EU action. ▶



This is a short version of the full  
**Synthesis Report: Peri-urbanisation in Europe: Towards a European Policy to Sustain Urban-Rural Futures**  
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 Rural –Urban Regions and Peri-urbanisation in Europe: Towards a European Policy to Sustain Urban-Rural Futures *Executive Summary*



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## What is the peri-urban?

The peri-urban is the area between urban settlement areas and their rural hinterland. Larger peri-urban areas can include towns and villages within an urban agglomeration. Such areas are often fast changing, with complex patterns of land-use and landscape, fragmented between local or regional boundaries.

- Peri-urban areas are defined in the PLUREL project as 'discontinuous built development, containing settlements of less than 20,000,

with an average density of at least 40 persons per km<sup>2</sup> (averaged over 1km<sup>2</sup> cells)'.  
► In the EU there are nearly 48,000 km<sup>2</sup> of built development ('artificial surfaces') in areas which are classed as peri-urban; similar to the 49,000 km<sup>2</sup> in urban areas.

- The 'hotspots' - regions with largest share of peri-urban land-use, and generally highest rates of peri-urban growth - are mainly concentrated in the central Pentagon area (i.e. between London,

Paris, Milan, Munich and Hamburg), but also in parts of central and eastern Europe. Of the 'top twenty' peri-urban regions, 9 are in the Netherlands, 5 in the UK, and others in Germany, Poland and Belgium.

- Rural-urban-regions ('RUR') are the overall territorial unit for the PLUREL project. They include both the 'Functional Urban Area' (zone of daily commuting), and the surrounding rural hinterland. The map below shows 'statistical' rural-urban-regions across the EU: how-

ever, in policy terms the boundaries are flexible in order to respond to problems and opportunities.

- So, in summary: the urban area + peri-urban area = Functional Urban Area:

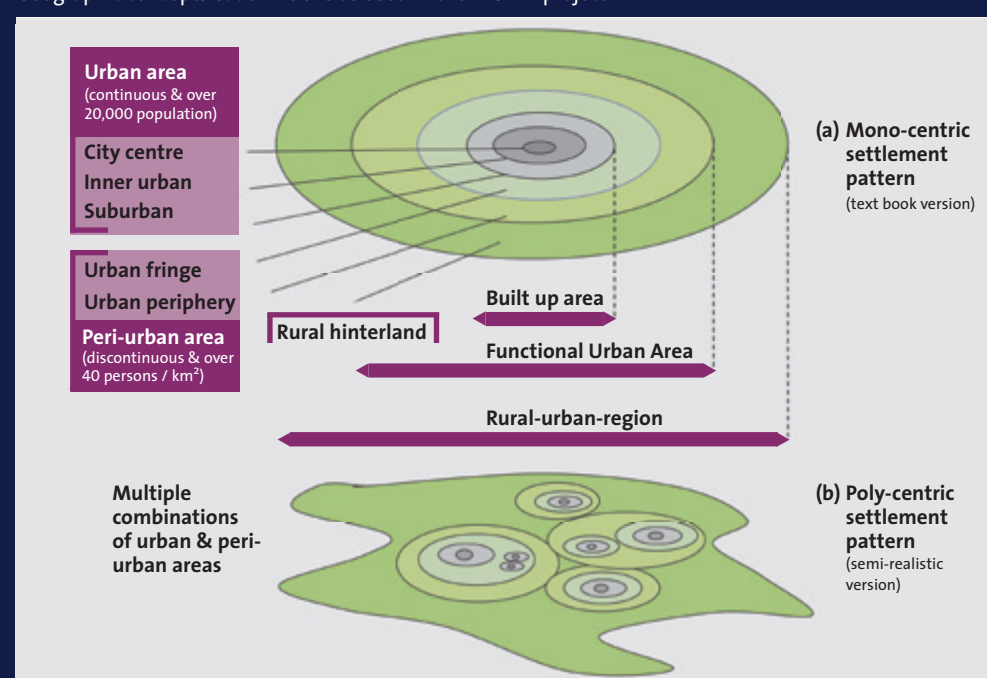
- And also: the urban area + peri-urban area + rural hinterland = rural-urban-region (RUR).

Peri-urban areas suffer from urban pressures, but they also gain from proximity to urban areas, markets and cultures. The direct impacts of uncontrolled

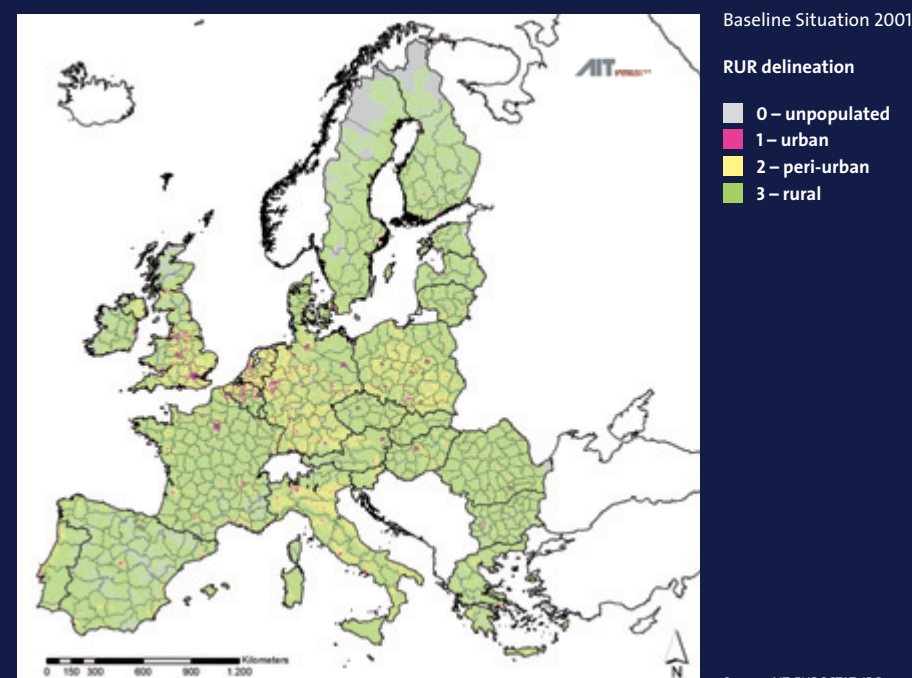
expansion of built development are focused on urban sprawl – defined by the European Environment Agency as 'unplanned incremental urban development, characterised by a low density mix of land uses on the urban fringe'. Even without the expansion of built development, there are urban pressures on peri-urban areas: housing shortages, transport congestion, decline of landscape quality, economic restructuring and social change. On the other hand there are positive effects, such as proximity to markets and work places, quality of life, and innovation.

## Peri-urban areas & the 'rural-urban-region'

Geographic concepts & definitions as used in the PLUREL project



## RUR subregion delineation



## What are the dynamics of change?

Urban expansion on a wider front is driven by economic growth and restructuring, new employment opportunities, growth of transport infrastructure, population growth and household change, and decline of traditional rural economies. There are also more intangible factors such as cultural values, lifestyles, social segregation, and urban / rural attitudes and perceptions. The combination of high economic growth with weak or fragmented governance, generally produces the worst types of urban sprawl. The PLUREL project developed a set of scenarios, based on the global climate scenario scheme of the IPCC.

For each of these a set of detailed models calculated the effects of economic growth, population change, environmental and technology factors onto land-use change and built development, up to the year 2025. The projections for increase in built development, (defined as 'artificial surfaces') are especially high in peri-urban areas, at 1.4 – 2.5% per annum. In contrast, urban areas can expect growth rates of only 0.5 – 0.7%. If such trends continue, the total built development in peri-urban areas could double between 30-50 years. In practice there are many localized differences within and between regions, depending on factors



such as migration, transport systems and spatial planning.

There are implications for the EUROPE 2020 strategy, with its goal of "smart, sustainable and inclusive growth", which is almost in line with the innovation friendly PLUREL scenario A1 – 'hypertech'. This economic development path tends to assume large amounts of new built development: but there are side-effects which don't appear in the strategy. The implication is clear – unless governance and spatial planning systems can be strengthened rapidly in some parts of eastern and south eastern Europe, the EUROPE 2020 strategy is likely to produce more urban expansion and uncontrolled urban development.

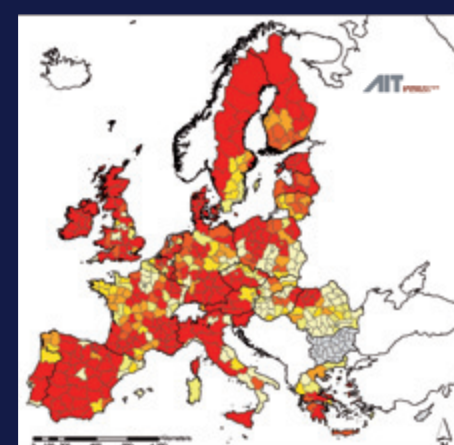
## Changes in proportion of artificial surface

A1 – 'hyper-tech': growth, technology innovation, and out-migration to rural areas



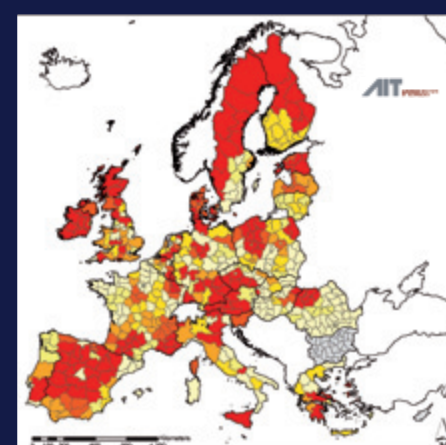
Scenario A1 2000 – 2025  
Difference to baseline in %

A2 – 'extreme water': rapid climate change, and defence against flood and drought



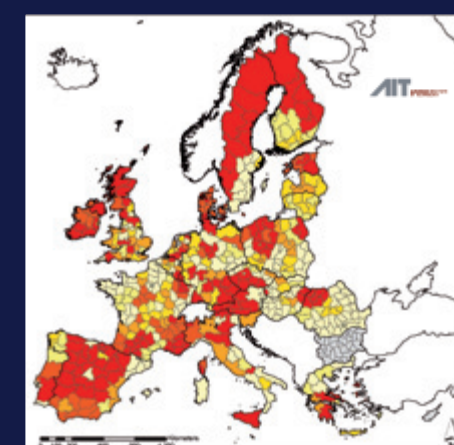
Scenario A2 2000 – 2025  
0 – 10 10 – 20

B1 – 'peak oil': energy price shock, with re-population of cities and towns



Scenario B1 2000 – 2025  
20 – 30 30 – 40

B2 – 'fragmentation': communities in retreat into private enclaves



Scenario B2 2000 – 2025  
40 – 50 50 no data



Economy & employment

Economic growth and restructuring often look towards lower density peri-urban locations. With the ‘pull’ of the global economy, and with the ‘push’ of urban overcrowding and congestion, there are strong pressures for relocation of economic activity to peri-urban zones, with easier access to large sites and major roads.

There is also a capital accumulation dynamic. The peri-urban is often seen as a place to make higher profits at lower risk than in urban areas: by landowners and developers, entrepreneurs and investors, and by housebuilders and house-owners. Rural economic change also contributes, as the reducing labour intensity of agriculture combines with the influx of more affluent workers and retired households to rural areas. This generates demand for local service sector activities, and encourages the transition from rural to peri-urban economies.

The economic policy agenda revolves around ‘*peri-urban territorial cohesion*’. There are crucial differences between an urban-regional economy based on ‘branch plants’ serviced by commuter settlements and one which is diverse, resilient and sustainable. If the latter goal is to be achieved, policies and programmes should aim at capacity building for restructuring, diversification, and better urban-rural linkages, especially for entrepreneurs, finance and markets.

Population & migration

Population changes in peri-urban areas show high contrasts. In the central and eastern EU, many rural areas depopulate, while urban areas experience modernization, some with population decline and others with growth. In the western EU, many rural areas are re-populated by urban-based residents. In both cases peri-urban change is about social and economic restructuring, as much as direct urban expansion.



PERI-URBAN AGENDAS

In the future, as population growth is projected to level off, migration at various levels will become a greater influence. Demographic trends will widen the inter-regional gaps across Europe, so that more peripheral regions in central and eastern Europe have less chance of catching up. Europe-wide migration (in particular from eastern EU as well as from outside the EU), as well as national level migration, will change the demographic structure, with effects on employment, lifestyles, cultures, and communities.

The policy agenda aims towards communities which are balanced in age, class, ethnicity, and occupations. Urban regeneration should increase the social and economic viability of inner areas, while rural development should sustain the rural social structure and balance. In between, the PLUREL research has identified the agenda for sustainable peri-urban communities, which combine old with new, and urban with rural. This is both a local issue for towns and villages in the peri-urban, and a strategic issue at the level of the rural-urban-region.

Housing & communities

Social and cultural preferences for housing location can be a powerful driver for spatial segregation and social fragmentation. Most peri-urban development is due to families and older groups, and most housing immigration is due to high income and education groups. This further encourages urban sprawl, gated communities and withdrawal of local community services from the peri-urban areas.

For the future, there are key drivers of change: rapid changes in lifestyles and housing location choices, teleworking, dual career households, flexi-

ble household and retirement arrangements. Self-determined lifestyles often result in less persons per household, with growth in housing area demand. Technology such as on-line public services and shopping is changing the structure of local centres and the pattern of housing and settlements. On the other hand, rising oil prices might constrain long-distance commuting.

The policy agenda aims towards social inclusion, integration and cohesion. Housing markets and allocation systems have the primary role to play: housing locations should be accessible, environmentally sustainable, available for all social groups, and integrated with the surrounding landscape. Positive support is needed for public and commercial services in peri-urban settlements, which are vulnerable to change and restructuring.

Mobility & transportation

At present, low density urban sprawl causes longer commuting distances, increased infrastructure 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 poor and car-less people, while encouraging longer distance commuting.

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

To achieve the optimum is a challenge: how to coordinate and get

investment into multi-modal transport choices in a fragmented peri-urban area? Or, how to locate urban developments and activities in the most accessible parts of the peri-urban? Each solution requires stronger and more strategic governance at the level of the rural-urban-region.

Agriculture & rural development

Food security is one of the first priorities for the EU, but there is a critical interface between agriculture and peri-urban land-use change. At present regions with strong agriculture sectors, combined with the highest proportions of peri-urban areas, include north west Germany, Denmark and the Benelux, large parts of Poland and Hungary, southern UK, western France and eastern Italy. Conflicts often arise where urban expansion destabilizes rural economies, patrimony systems and land markets. There is also great potential, where peri-urban farming provides local or high value products, in a more sustainable multi-functional landscape.

Future trends will depend on biotechnology; on climate change, water and soil; on fertilizers and the possibility of ‘peak oil’. A key factor is the changing rural economy and the availability of labour, full-time or part-time. The PLUREL scenario modelling projects a general increase in farm productivity, as former low-capital and small scale hobby farming is modernized. Some scenario projections show the doubling of peri-urban areas in 30-40 years, and peri-urban agricultural areas (many of them with the highest quality land) could be reduced by up to 15%.

Overall, the agricultural policy agenda aims to turn the conflicts between agriculture and peri-urban into opportunities – employment and quality of life in diverse, productive, multi-functional landscapes. Success will depend on a new peri-urban focus which links

agricultural policy with wider agendas, such as climate change and adaptation, public health and food quality, leisure and community services.

Landscape, ecology, recreation & tourism

Large parts of the European environment are under pressure from peri-urban development. This affects many types of ‘ecosystem services’ – a key theme for peri-urban policy – , including biodiversity, water supply, flood control, soil quality, landscape aesthetics and the capacity for climate change adaptation. The concept of ‘ecosystem services’ is a key theme for peri-urban policy. Moreover, many of Europe’s wide variety of landscapes – places for recreation and regional identity – are endangered by further urban growth, as shown by the PLUREL modelling results. This negatively affects flows of matter, energy and species, like fragmentation of habitats, reduced groundwater recharge etc.

As to the future – the PLUREL scenario modelling anticipates higher growth of artificial surfaces in areas which are already under the most pressure. On the social side, peri-urban areas are under pressure from recreation and tourism: where the local ‘brand’ and image lead the way, then housing and services often follow. The demographic shift towards semi- or non-working population is also a ‘leisure shift’ with the result that large peri-urban areas are in golf course or ‘horsi-culture’ uses for affluent consumers.

The policy agenda includes the goals of multi-functional landscapes, sustainable resource management, conservation of habitats, and cultural landscapes. But in reality there are challenges – how to manage and fund ‘ecosystem services’, in a fast changing peri-urban context? And how to build coordination and cooperation in a fragmented and undefined territory? Such challenges suggest the need for a new kind of multi-level, multi-functional governance.



MANAGING GROWTH



The problem of uncontrolled urban sprawl can be seen as a market failure: society would be better off as a whole by coordinating development, but often lacks the means to do so. This is a problem not only of urban expansion, but urban shrinkage (particularly in older industrial areas),

which also causes and is caused by expansion.

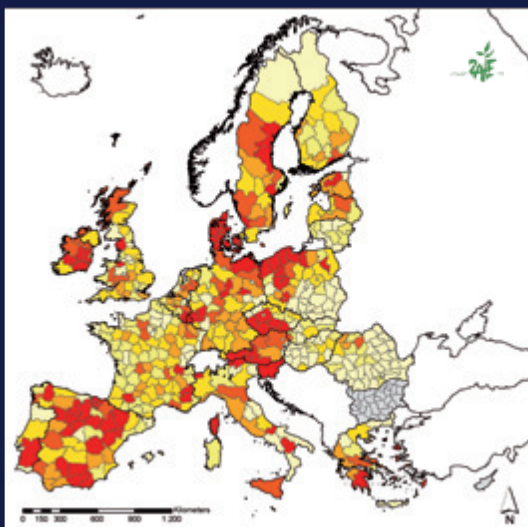
In reality there is often fragmentation between government units, and a ‘governance gap’ for decision making and investment. So, there is an urgent policy agenda to set up or enable such bodies. The PLUREL research looked at three main issues.

Firstly, there are general problems with the capacity of the formal government system, and planning policy regime to control land-use changes, in most EU member states. PLUREL analysed the level of organization, the level of democratic control, and the level of fragmentation of governance structures in a typical rural-urban-region.

The question of spatial planning follows: its lack of legal strength and capacity for cross-border coordination, and its lack of influence on infrastructure provision. Besides, there are problems with the NIMBY (“Not In My Back Yard”), and similar lobbies and political movements, with incentives for continuing urban sprawl.

Thirdly, financial and taxation mechanisms often create incentives for urban sprawl, directly (e.g. linking public support to population number), or indirectly (through local tax competition). Each country needs to review its system for local or regional taxation and re-investment. This can involve both the public sector, and also new kinds of partnerships, such as for ‘ecosystems services’ and social re-investment.

Density of natural habitats: impacts of urbanisation



Hypertech scenario 2000-2025 in %

Red	< -10
Dark Orange	> -10 - -8
Orange	> -8 - -6
Light Orange	> -6 - -4
Yellow	> -4 - -2
Light Yellow	> -2 - 0
Grey	no data

Changes in the Green Background Index, an indicator for the density and regional richness of natural and extensive land-cover types (negative values indicate a risk of habitat loss)

Leibniz Centre for Agricultural Landscape Research (ZALF)



## European policy agendas

National or EU policies rarely take the peri-urban sphere into account: and the peri-urban (often cross-cutting administrative boundaries) rarely makes the best use of policies and funding. Many peri-urban areas qualify for either urban or rural development funding from various sectoral budgets. But this is rarely focused on place-specific needs, and there are hidden incentives for uncoordinated development and urban sprawl.

Meanwhile it is clear that peri-urban areas have great potential and great opportunities. So we need to refocus policy to address this. At the EU level this applies particularly to the Structural and Cohesion Funds, the CAP and various transport / environment policies. Around 20% of the total Structural Funds in the Programming period 2007-2013 will be spent in rural areas, and around 32% in urban areas. The Structural Funds and associated programmes have an indirect but powerful effect on peri-urban development and in regions which are predominantly peri-urban. In some countries more than 10% of NATURA 2000 sites are in peri-urban areas. While Rural Development programmes support extensive agriculture and diversification in such areas of high ecological value, others such as LEADER do not.

## POLICY RESPONSES

In terms of agriculture, countries with large peri-urban areas spend more of the Rural Development budget for diversification measures than those countries which are mainly rural. In most other countries, investment support and agri-environmental payments are the main focus of Rural Development funding. In terms of better policy targeting it has to be stated that the potential for rural-urban-linkages is not yet realized. In future, the CAP should focus on these linkages, with a more multi-functional landscape of urban, peri-urban and rural food production, with short supply chains, peri-urban leisure activities, sustainable landscape management and urban-rural LEADER initiatives.

### European challenges & EUROPE 2020

Current and projected development trends are likely to bring rapid changes to peri-urban areas:

- Globalization and innovation: conventional economic development often takes peri-urban land as the location for large scale industry, science and business parks, roads and other urban infrastructure.

- Demographic change: the shrinking of some regions, the ageing of many others, and the one-sided migration tendencies bring challenges to the population stability of peri-urban areas, lead to Europe-wide unwanted restructuring of population, and further increasing the gap between over- and under-populated areas.

- Climate change impacts combine with urbanization and fragmentation of peri-urban areas: in some, flooding and sea-level rise, in others, soil erosion and habitat loss. Energy shortages will change the viability of peri-urban transport, while the search for renewable sources will claim peri-urban landuse.

EUROPE 2020 is a potential driver of policy innovation for “territorial cohesion”, integrating economic, environmental and social aspects. But achieving the Lisbon agenda, on current trends, is likely to produce urban sprawl on a massive scale. So, there is a need for a stronger policy focus on the peri-urban agenda, particularly in terms of major financial interventions. EUROPE 2020 could become an opportunity for new thinking on core agendas in the peri-urban. This would need, however, a multi-level approach, particularly with national government systems, planning policies and finance for local and regional development.

### Government and governance for integrated development

A strong and democratic government is the pre-condition for management of market forces for public benefit. In peri-urban areas there are particular problems of fragmentation, under-investment, and ‘winner takes all’ conflicts. So, government at the local and rural-urban-region level needs to focus on its effectiveness and outcomes:

### Integrated development models for rural-urban-regions

- **Spatial strategy:** policy framework at the level of the rural-urban-region; coordinate peri-urban development and low-impact infrastructure; set up controls and incentives to avoid sprawl. Focus on the potential for zoning, such as green belts, to be positive catalysts, more than restrictions.
- **Economic strategy:** peri-urban diversification and resilience of local economies and employment; rural diversification and multi-functional land-based activity; urban regeneration with improved urban-rural links. Focus on the social economy in the peri-urban, and on mobilizing hidden resources.
- **Social strategy:** housing and service provision to encourage balanced, inclusive and resilient communities. Focus on

the needs and opportunities in different settlement types, and on social functions and values provided by peri-urban areas.

- **Environmental strategy:** ecosystems services policy and investment system; climate change mitigation and adaptation; landscape and habitat conservation; multi-level green-blue-infrastructure. Focus on diversified, resilient, multi-functional agriculture and forestry.

- **Governance strategy:** strong and democratic municipal government; healthy finances, fiscal policy, and capacity for investment in infrastructure: active role in the local economy; transparency with public and stakeholder participation. Focus on the capacity for strategic and cross-border coordination, at the level of the rural-urban-region.

- The local government financing system, and source of revenue: this should avoid fiscal incentives which lead to wasteful competition for houses or investments.

- The local taxation system: this should encourage balanced development for business and households, and avoid tax incentives for urban sprawl.

- Sectoral policies and subsidies, for infrastructure, transport, housing or agriculture: each should aim at diverse and resilient patterns of development, for instance with multi-modal transport planning.

- Spatial planning and regulatory coordination of development, landuse change, and especially larger projects: aiming not only at restrictions, but positive enabling of poly-centric diversified activities.

- Finally, effective mechanisms for cooperation at the level of the rural-urban-region: aiming towards joint strategic planning, rather than ‘winner takes all’ competition for development.

There is also an agenda for more responsive, ‘bottom-up’ forms of governance

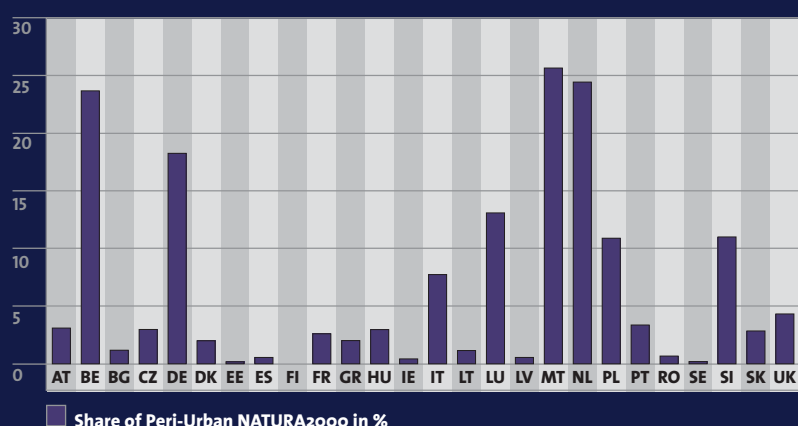
– not to replace formal policies, but to work alongside them and fill any gaps: ‘New institutional’ partnership models for collaboration between public, private and community sectors; ‘Policy intelligence’ models to deal with complex problems; ‘Social entrepreneur’ models to mobilize resources in the social economy.

In parallel there are ‘territorial models’ for integrated spatial development. At the rural-urban-region level, strategic planning should promote low impact infrastructure and public services in sustainable settlement forms. This applies to many territorial types: from airport zones and business parks, to large urban infrastructure, to towns and villages, and to multi-functional landscapes connected by green-blue infrastructure.

Overall, there is a policy menu for putting the whole picture together – i.e. managing the peri-urban through ‘integrated development models for rural-urban-regions’.



### Natura2000 in peri-urban regions in Europe



The agenda for managing the peri-urban is multi-level: from the local, to the rural-urban-region, to the national and European levels. Policies and programmes at the European level may be part of the problem – or they may be part of the solution. So there is a new agenda for EU policies and funds with any kind of linkage to spatial development and territorial cohesion. In particular

## EU POLICY OPTIONS

ular the PLUREL results show that to meet the challenges of the EUROPE 2020 we need to refocus and re-target EU policy and investment, to include for its effects on peri-urban change.

To do this, the core objectives of EU policies and funding programmes

should include support for territorial ‘integrated development models for rural-urban-regions’. And by implication, if an EU intervention appears likely to produce urban sprawl, it should not proceed. To support this, in the optimal case a system of defini-

tions and boundaries will be needed (to be developed by the nation-states, along a given EU framework regulation), so that clear targets and benchmarks can be drawn.

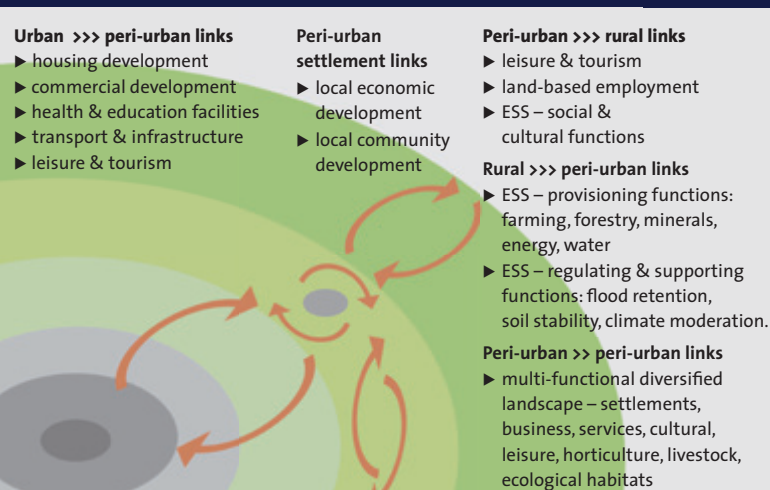
So, how to make this work for Europe? We set out here five possible ‘options’ for EU-level policy and/or financial intervention, which would promote ‘integrated development models for

rural-urban-regions’: the most effective option is first, and the fall-back is last.

Each of these options recognizes the immense challenges of peri-urban change, and the impacts of current EU and national policy. They also need to recognize the potential of positive visions, strategic goals, and integrated policy frameworks, to generate new opportunities for all involved. ◀

### The rural-urban-region and its linkages

Showing the ‘peri-urban land-use relationships’, with an extended ‘ecosystems services’ (ESS) approach



### Options for EU-level policy and/or financial intervention

- 1 EU DIRECTIVE for Integrated Rural-Urban Development:** a legal mandate and operational structure for ‘integrated development models for rural-urban-regions’. The target is defined in the form of framework criteria, with a focus on the procedural system. Following the example of the Water Framework Directive, this involves not only EU financing but all forms of development.
- 2 CONDITIONALITY for Integrated Rural-Urban Development.** For access to European financing (Structural Funds, CAP, etc.) inte-

grated development plans would have to be prepared on the rural-urban-region level, and approved by relevant authorities. Rural-urban-regions would be accepted as the main territorial basis for EU financial programming and assistance.

- 3 EU COMMUNITY INITIATIVE for Integrated Rural-Urban Development:** a dedicated fund would be allocated among the Member States to be used directly for specific pilot and demonstration projects (following the example of the pre-2007 version of the URBAN Community Initiative).

- 4 EU Open Method of Coordination for Integrated Rural-Urban Development:** benchmarking and indexing with a common support system. Member States would prepare a National Action Plan, with a capacity building programme of best practice, skills development and policy advocacy.

- 5 EU Reference Framework for Integrated Rural-Urban Development:** an advisory service with some technical backup, including guidance, tools and documentation.