Spatial Development of an Enlarging European Union
The territory of the European Union provides a fundamental component of economic, and social development and environmental conservation in Europe. It is also important as the setting for the daily lives of European citizens. Promotion of Europe as a vibrant economy and society, investment in innovation and jobs as well as improvement of the quality of life for European citizens all have a territorial dimension.

Europe enjoys a spatial pattern embracing a diversity of economic and social activities, infrastructure connections and facilities, as well as natural and cultural resources. Towns, cities and metropolitan urban regions are now major places for the creation of wealth and jobs. Rural regions, coastal areas, islands and mountains fulfill a multitude of important functions. Flows of people, goods and information rely on efficient transport and communication networks and connections to the wider world. Natural and cultural assets provide potential for development and need to be safeguarded and integrated in the efforts to ensure attractive and sustainable development.

A European Union of 27 countries will provide the living space for approximately 500 million people, with over 4 million km² of land at their disposal. The enlarged European Union has, seen from a European perspective, a dominant core area - the "Pentagon" shaped by London, Paris, Munich, Milan and Hamburg. Around 40 % of the population lives in this core area, this covers only 20 % of the territory, but accounts for 50 % of GDP per year within the EU. Similar imbalances in economic development exist within many European countries, including differences in access to markets and essential services, basic infrastructure and knowledge. A number of specific areas are facing problems due to geographical features, demographic development and a fragile environment.

Territorial cohesion and balance promotes the political objective of a competitive, innovative and sustainable Europe. Territorial diversity entails a multitude of opportunities for development that are linked to specific territories and locations. Different types of areas and regions already provide specific functional contributions to the economy, society and environment. Some sector policies trigger off unintended territorial impacts, which call for improved coordination. Territorial cooperation provides new options for added value.

Promoting territorial balanced and polycentric development, as defined by an informal EU-Council of Ministers in the European Spatial Development Perspective (published 1999), requires observation and a sound knowledge of spatial development, imbalances and potential within the territorial diversity of the enlarged European Union and its neighbouring countries.

The ESPON programme was created to pursue this aim.
The ESPON programme is making significant advances on three fronts – finding of facts, findings about policy impacts and development of new contexts. All three contribute to a better understanding of the territorial cohesion challenges facing an enlarged European Union. In turn this helps to identify the future direction European spatial development policies should take.

Facts

Diversity

Imbalances in Europe are many and diverse including infrastructure provision, accessibility and development potential. At European level, the most significant concentration is found in the “Pentagon” – the economic core of the EU – as opposed to various peripheral areas.

This lack of balance not only puts certain regions at a disadvantage in respect to others. Even more importantly, development potential is in danger of not being realised. From past experience, EU enlargement contributes to the widening of some existing imbalances, but also to the diversity of development potential.

Balanced and polycentric development

In recent years there has been a shift from East to West in the balance of population in Europe. This constitutes a challenge to achieving a more balanced and polycentric distribution of growth in Europe. However, in terms of wealth the situation is reversed. The dominance of the Pentagon is still evident, but with some signs of decrease.

This constitutes an opportunity for achieving a more balanced distribution of economic forces in an enlarged EU. The area identified as the “Eastern European Triangle”, in particular the cities of Prague and Budapest, has the potential to challenge the current dominance of the Pentagon. This would create a second European region with global significance. As well, other groupings of larger urban centres have the potential to act as counterweights to the Pentagon, if appropriate policies are applied.

Accessibility

Europe-wide accessibility shows a clear centre/periphery pattern, as far as road and rail are concerned. Regions with the highest degree of accessibility are located within the Pentagon. Accessibility by air shows a somewhat different pattern, with a number of regions of the European periphery having high accessibility levels, provided they have a major airport.

Telecommunication systems are subject to rapid change. The combination of the liberalisation of markets and the deployment of new technologies has created a highly dynamic context for the development of telecommunications in Europe.

Fixed line networks remains important. The digitalisation of telephone exchanges and transmission has been completed in most EU countries. The availability of mobile telephones is progressing rapidly, with a number of peripheral countries having the highest rates. Although most countries in the eastern part of
Europe still have low rates of uptake, they have the highest growth rates.

As far as Internet use is concerned, there are significant differences between the centre and the periphery, although large cities in the periphery reach reasonable levels. Rural areas are generally lagging behind. Broadband provision shows both a north/south and an east/west divide. Some areas are unlikely to obtain access to broadband technologies if development is left solely to the market.

Policy Impacts
Research and Development
Innovation, together with the research and development on which it is based, all show an unbalanced distribution across Europe. Securing a better balance requires policies in favour of the less advanced countries and regions. EU support for science and technology has been diversified in recent years. This recognises that the capacity to innovate depends not only on the supply of technology, but also on the capacity of the local economy, in particular small and medium sized firms.

The emergence of European scale major telecommunication networks has produced a threefold spatial pattern. Regions with the most interconnected networks are found in the Pentagon. Other relatively well-connected regions include the major city regions of the Nordic countries and of the Mediterranean border from Catalonia to northern Italy. The less well-connected regions are to be found on the periphery.

A further dispersion of telecommunication networks has strategic importance. The role of information and communications technology is important for the creation of wealth, and its growth and distribution. Hence, EU policies in this sector appear extremely relevant in implementing the Lisbon/Gothenburg strategy, and for a balanced European competitiveness and territorial cohesion.

Improving Access
The accessibility of urban centres in Europe is primarily a function of their location - central versus peripheral - and not their size. Improvement of accessibility is an important policy for enabling the development of more polycentric urban systems in Europe.

While north/south transport corridors still have a dominant position, EU enlargement contributes significantly to the use of east/west corridors. This increase in flows will cause congestion, unless the new EU transport networks are implemented. Integration within the enlarged EU cannot be fully achieved if crossing borders is difficult.

Transport infrastructure contributes significantly to the ability of a region to be competitive. A more equal balance in the infrastructure endowment of EU regions would help in this respect. The improvement of links to peripheral regions and countries is a
key EU task for the years to come. It seems particularly important to ensure that the discrepancy in terms of connections between the central and the peripheral regions, notably those of the countries in the eastern part of Europe, does not increase further.

Transport policies, both investment and pricing, can be used to encourage various forms of polycentric urban development in Europe. In the context of spatial development policies the full added value of infrastructure investments often requires a range of complementary initiatives supporting other development potentials.

**EU Funding**

EU funding for agriculture and rural development has significant spatial impacts. Support for agriculture has not been targeted to contribute to economic and social cohesion. Rural development policies have been the more supportive. Current reforms of agricultural policy seem not to add significantly to cohesion, particularly in the newer Member States.

Regional and social spending by the EU contributes to territorial cohesion and polycentric urban development. However, much depends on the use national governments make of EU funding.

In the eastern part of Europe, cross-border cooperation seems to be in need of more coordination in order to explore inherent development potential. With enlargement a significant number of external EU borders have become internal borders. In addition, new external EU borders have been formed with Belarus, Croatia, Macedonia, Moldova, Russia, Serbia-Montenegro and Ukraine. For both reasons close coordination of funding for and administration of cross-border cooperation are required.

**New Contexts**

**Functional Urban Regions and Metropolitan Economic Growth Areas**

The urban system is a key component of the territorial structure of Europe. Understanding the potential and functions of urban nodes can help to identify new opportunities for development and synergy through cooperation. This can support territorial cohesion.

Mapping the Functional Urban Regions of Europe has defined nearly 1600 areas based on common criteria. In demographic terms the larger ones are concentrated in the “Pentagon” and as “islands” outside the core. The most crucial economic functions are in general located in the Pentagon, while knowledge functions are distributed in a more balanced way.

A typology based on functional importance, offering a clearer view on comparative advantages from a European perspective, has identified potential Metropolitan Economic Growth Areas. The definition of these MEGAs includes their mass, competitiveness, connectivity and knowledge base. Outside the Pentagon these
may play a role as counterweights, supporting a better balance of economic activities and polycentric development at European scale.

Hazards
Natural and technical hazards are of various types - earthquakes, flooding, drought, forest fires, volcanic eruptions and winter storms as well as risks relating to nuclear power plants, large dams and oil spills. Spatial development policies include measures to contain the impact of these hazards on people and property.

For this reason, the ESPON programme is developing indicators to measure the degree of exposure of European regions to various types of hazard. The intention is also to devise an overall indicator, which identifies those regions most threatened by a combination of hazards. This will assist in identifying policy priorities.

Global perspective
Increasingly intense and complex relationships are forming between different parts of the world. In this context, the position of Europe in relation to other continents and European interactions with them are both of growing significance. Therefore, understanding and representing relative positions and links at the global scale is of increasing importance in formulating spatial development policy at European as well as other scales.

The work carried out so far demonstrates that maps should not be used which give a false impression of European “centrality”.

New approaches to mapping have been devised to illustrate the positioning of Europe in the world context. These currently use a series of indicators - population and wealth, as well as trade and air traffic.

New Tools and Techniques
Cooperation among researchers in the ESPON programme is contributing to innovations in methods and instruments for spatial analysis. A significant example is the development of “multiscalar” analysis. This is being used to examine the distribution of various indicators at different spatial scales. This is particularly useful, because spatial development policies are relevant at various scales - local, regional, national and European.

Applications of multiscalar analysis have already produced a more comprehensive definition of lagging regions, a key concept in European development policies. In addition, regional classifications of strengths and weaknesses are under development as well as tools for assessing the territorial impacts of different policies. Moreover, the further development of an electronic, interactive atlas will make it easy to compute and map territorial indicators taking into account a variety of spatial scales.
In all 20-25 projects are being carried out by Transnational Project Groups of researchers and consultants. More than 100 partners are already involved in the ESPON networking process. In addition, a network of ESPON Contact Points support and promote the process at national level.

The ESPON programme will further develop over the coming years by deepening existing work and launching additional projects. The box shows the themes of ongoing projects and themes being processed in spring 2004.

**Thematic projects**
- Polycentric development
- Urban-rural relations
- Enlargement and polycentrism
- Demography and migration
- Transport services and networks
- Telecommunication services and networks
- Natural and technological hazards
- Natural heritage

**Territorial impact projects**
- EU Transport and TEN policies
- EU Research and Development Policy
- CAP and Rural Development Policy
- EU Energy Policy
- Structural Funds
- Pre-accession aid
- Structural Funds in urban areas
- EU Fisheries Policies
- Application of the ESDP in Member states
- Governance of spatial and urban policy

**Cross-thematic projects**
- Integrated tools
- Spatial Scenarios (2015, 2030 and beyond)
- The territorial dimension of the Lisbon/Göteborg strategy

The ESPON Programme envisages the following additional project themes.
- The role and spatial effects of cultural heritage and identity.
- Spatially relevant aspects of the information society.

Further themes will be decided by the ESPON Monitoring Committee, before the current programme ends in 2006, which might include a deepening of the theme “Europe in the World” and “Integrated analysis of ESPON results in relation to trans-national and national territories”.

**Adding a European spatial perspective**

Projects and studies on spatial development and planning, seen from the national, regional and local points of view, already exist, although only covering limited parts of the European territory. Looking at spatial dynamics and structures from a European perspective brings new knowledge and perceptions, which challenge national, regional and local perspectives.

New European wide maps and instruments are envisaged to improve the understanding of the spatial dimension of the Structural Funds and other Community policies, which might contribute a territorial dimension to cohesion and the implementation of the Lisbon/Göteborg strategy. This deeper knowledge should also help to explore how territorially relevant decisions, taken at the Community, national, regional and local level, can be better coordinated.

The clear focus on the enlarged EU territory as the unit of analysis should enhance the European and trans-national focus of national research and support the further growth of a European scientific community in the field of territorial development and spatial planning. Networking activities should bridge the gap between spatial development policy makers, administrators and professionals.

These objectives will be pursued through three types of study.
- Thematic studies on the spatial effects of major developments on regions and cities.
- Policy impact studies on the spatial impact of Community sector policies and national spatial development policy on different types of region. The focus of these studies is on the institutional inter-linkages between different levels of government.
- Horizontal and cross-thematic studies creating coherent and integrated results, such as territorial indicator systems and an ESPON database, typologies of territories, spatial development scenarios and policy recommendations linked to development of the enlarged European territory.
The ESPON web site offers full details about the work done so far. It is the main window for further information about the ESPON programme. Just enter www.espon.lu.