

**Inspire policy making by territorial evidence**



# Possible European Territorial Futures

Applied Research

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# Possible European Territorial Futures

## Introduction

Standing in the tradition of past ESPON foresight and territorial impact assessment studies, ESPON Territorial Futures developed and tested a territorial foresight methodology.

The methodology was tested on three foresight topics: a place-based economic organisation as part of a circular economy, 100% renewable energy supply and consumption and a collapse of European property markets. To understand how the territorial development in these three cases might differ, the project also studied likely territorial developments up to 2030.

## What is the added value of doing territorial foresight?

**Territorial foresight** is a future oriented approach characterised by (a) critical, lateral thinking concerning long-term developments and their impacts on territorial patterns, (b) wider participatory engagement and (c) informing public and/or private decision making. Territorial foresight provides a framework to support participants in a structured forward thinking concerning territorial development.

This study has shown, territorial foresight can help to better understand the implications of either development trends or ideas for a wanted or unwanted future. This has various benefits:

- **Understanding territorial consequences of (im)possible futures:** This helps to understand what are possible territorial consequences of a larger trend, large development objectives or possible dystopias.
- **Approaching complexity and uncertainty:** Bringing together the insights and knowledge of a wide range of different participants allows to approach complexities and uncertainties where no quantitative information about the future is available.
- **Creating a larger ownership:** The focus on participatory forward thinking involving people with a common issue, can strengthen the ownership of the foresight topic, possible territorial consequences and pointers for policy making.
- **Informing decision making:** Being aware about territorial consequences of a foresight topic, can inform policy making. This can lead to policy decisions to avoid unwanted territorial implications or policy decisions to further accelerated wanted implications.

Territorial foresight can be conducted at any geographical level. While this study focused on the European level, it could equally well be applied at any other scale from local to global.

## Which steps shall be included in a territorial foresight?

Once the foresight theme or question has been identified, the actual work can start. The following steps entail key methods to consider when designing and performing a territorial foresight.

- **Preparation**, including the background research of available information on the foresight topic and relevant territorial development trends, as well as the pre-selection of participants for the participatory processes.
- **Interactive participatory involvement**, including structured participatory events to discuss the understanding of the foresight topic, relevant cause-effect chains, indicators and maps allowing to territorialise relevant aspects, territorial variations of exposures and sensitivities. All this will be brought together in a set of foresight narratives and mental maps.
- **Finalisation / post-processing**, including the follow up on the participatory processes with additional back ground research, data analysis, the development of fuzzy maps and coherent texts. This also includes feedback loops with the participants.

A more detailed step-by-step guide to territorial foresight is presented in volume C.

### **What might the European territory look like in 2030?**

To compare the territorial consequences of (im)possible futures from three distinct topics against the expected territorial changes, a prognosis of Europe's territory 2030 has been performed. Existing territorial patterns and expected changes by 2030 point to:

- **Increasing polarisation of settlement patterns.** Aging is expected to increase rural-urban disparities in Europe with increases in working-age population in metropolitan areas. This will not be ubiquitous as some metropolitan areas, e.g. in Eastern Europe and Germany, may face population decline, while some rural areas, e.g. in France, Italy or Scandinavia, may see population growth.
- **Increasing concentration of economic activities.** Socio-economic cohesion in Europe was stalled by the crisis starting in 2008 and gaps between north and south and within countries are widening. Areas in Greece, but also Cyprus, Spain, Ireland and Italy are likely to continue facing increased social disparities.
- **Climate change and environment are growing concerns.** Increased soil sealing and artificial land use, as well as energy production and consumption remain important territorial development issues linked to climate change. Artificial land use is intensifying particularly in Eastern Europe and some coastal areas around the Mediterranean. The energy intensity of economies is still high in Eastern Europe where renewable energy production is lagging.
- **Technology and innovation hold the potential to make new regional stars.** Major technological innovations including robotics and fusion technology hold potential for more decentralised production (e.g. through 3D-printing). At the same time there is uncertainty about which regions will host future technological leaders. Most likely R&D and innovation capacities will concentrate in Europe's capital city regions and regions where there are substantial technological activities and suitable legal framework conditions.

- **European disintegration processes challenge the path towards territorial cohesion.** Regions in Europe that are lagging behind are likely to face more negative effects of a halt or reversal of the European integration process than advanced regions.
- **Increasing role for metropolitan regions, but not necessarily all across Europe.** There is potential for polycentric development. However, territorial cohesion is unlikely to be achieved without policy intervention, including rural-urban partnerships, revamped EU Cohesion Policy and instruments, better use of endogenous renewable energy potentials, place-based policy making and fair access to services of general economic interest. Territorial cohesion can also be helped by a policy and legal environment preparing the ground for innovation and the early adoption of key innovations and technologies.

### **What if we had a place based, circular economy in 2030?**

#### ***What would the European territory look like in 2030, if Europe had completed a transition to a place based circular economy?***

One of the topics for testing the territorial foresight approach addresses a place-based circular economy. In a place-based circular economy, resource efficiency is key to economic activities, particularly production. This includes reducing waste to a minimum while maintaining the value of products, materials and resources in the economy for as long as possible. In a circular economy the amount of newly produced products declines as reuse and repair become mainstream. This implies that territorial patterns change:

- **Cities and regions with high shares of employment and/or GDP generation in the manufacturing sector,** especially those with low resource efficiency and/ or similar manufacturing activities, will face particular transition challenges.
- **The focus on ‘repair, reuse and recycle’ implies new jobs in labour intensive sectors.** In economically stronger regions this may help to replace jobs lost on other sectors, whereas economically weaker regions should see new job opportunities.
- **Sharing products and services requires critical mass and social trust.** Sharing economy in form of e.g. internet platforms or small scale collaborations, increases resource efficiency. It is more viable in areas with a critical mass of inhabitants and high level of social trust.
- **The quality of sub-national government affects local and regional capacities to benefit from change,** particularly in south-eastern Romania, eastern Bulgaria and southern Italy.
- **Transport and goods flows will change.** Major international freight transport hubs, cities and regions with highly international economies and businesses will lose importance, as less physical products are produced and transported.
- **Territorial disparities between strong and lagging regions may become less pronounced.** Additive manufacturing, the focus on ‘reuse, repair & recycle’ and a

declining importance of transport hubs, provide opportunities for smaller, more peripheral and lagging areas to grow, while some of the dominant urban agglomerations may lose importance. At the same time, regions leading in green technology may become even more dominant and some behavioural changes may affect convergence regions more than leading regions.

To counteract negative effects and to support positive effects on territorial cohesion, policy makers could consider:

- Supporting the development of polycentric structures for additive manufacturing and local and regional industrial symbiosis processes in smaller and lagging areas, as well as small polycentric transport hubs.
- Supporting the transfer and diffusion of circular economy solutions, especially in regions with low innovation.
- Providing adequate frameworks to support a sharing economy, paying attention to the needs of sparsely populated areas and inner-peripheries.
- Considering policy action for tourist areas with high volumes of household waste.

### **What if we had a fully renewable energy system in 2030?**

#### ***What would the European territory look like in 2030, if Europe had completed a transition to a fully renewable energy system?***

The second theme to test the methodology of the developed territorial foresight addresses renewable energy production and consumption. Achieving a fully renewable European energy system by 2030, will imply steep increases in energy costs and difficulties in matching supply and demand. Territorial consequence will vary due to differences in renewable energy sources (RES) production, energy consumption and socio-economic conditions. In territorial terms, this means that key patterns change:

- **Regions with a high level of RES production and potential will benefit.** For wind power, these regions are around the North Sea, along the French Atlantic coast, in central Poland and in large parts of the Iberian Peninsula. For solar power, large parts of Spain will benefit due to the high solar potential, installed capacity and available land. Biofuels and biogas will play an important role as transport fuels, benefiting rural agricultural areas and densely wooded environs. Areas with a high hydropower potential, such as Alpine regions, Scandinavia and mountainous areas in the Balkans, will experience conflicts between biodiversity protection and energy production. Also geothermal power will expand further.
- **Regions relying on fossil or nuclear energy, or with significant fossil fuel extraction will face adaptation challenges,** including the need to deal with obsolete infrastructure.
- **Less wealthy regions will face difficulties in financing investments of energy infrastructure.** Investment needs will lead to a surge in energy costs. Regions with high

per capita household energy consumption, together with low household disposable income, will be particularly vulnerable.

- **Highly energy-intensive regional economies will face a loss of competitiveness** and, ultimately, jobs. The most energy-intensive regions are found in Eastern Europe.
- **Remote regions will become less accessible.** Remote areas are often highly dependent on transport modes and technologies that are most challenged by a rapid change to renewable energy sources e.g. air transport. Without technological changes, these areas will see a further decrease in accessibility affecting their economies.
- **It is unclear whether there will be greater cohesion or greater disparity.** While better use of potential for RES generation may benefit small rural economies, rising transportation costs will give an advantage to central, highly urbanised locations. Current economic disparities may persist as the ability to finance investments is linked to a region's economic performance. Europe's east-west divide may also continue as energy-intensive industries often play a more important role in regional economies in Eastern Europe.

In order to foster the positive and cushion the negative effects on territorial cohesion, policy makers could consider:

- Deepening regional coordination on energy and land use to keep areas suitable for RES production free from infrastructure and settlement development.
- Support remote, rural areas to become centres of RES generation, also by developing the grid, and introduce targeted policies to maintain them as liveable environments.
- Encourage “citizen energy”, introduce social protection measures against energy poverty and launch an open dialogue about alternatives to our current growth-based economic model in order to enhance acceptance of measures to promote a fully RES future.

## **What if we had a complete property markets collapse by 2030?**

### ***What would the European territory look like in 2030, if Europe's property markets had collapsed?***

The third topic for testing the territorial foresight approach addresses the dystopia of a full European property market collapse. A collapse of European property markets would mean a severe drop in transactions on all residential property markets, possibly as a result of property price developments that induced speculation of further price increases and led to the formation of a bubble. Different territories would respond to such a slump and find different ways to restore transactions on the housing market, as well as the impact on Europe's territorial structure. In territorial terms, this means that key patterns change:

- **People in peripheral and rural regions risk getting ‘locked-in’**, since sustained financial obligations combined with increased uncertainties for homeowners regarding the value of their property may mean that they can't sell their home or rent it out temporarily. This hinders people to move to economic centres e.g. for finding new jobs.

- **Regions with the highest housing cost burden would be hit** hardest since the share of over-indebtedness would increase. As a secondary impact, unemployment would go up, which would particularly affect regions where employment in construction and in real estate is high.
- **Regions with high shares of outstanding home loans against GDP are particularly exposed**, e.g. regions in northern and western Europe, on the Iberian Peninsula and in Cyprus. There would probably be a spill-over effect to other economic sectors as decreasing consumption hampers the overall economy.
- **Regional markets and governments differ in coping capacity** to contain the collapse to a relatively short or shallow crisis. While cities are most at risk of a steep decline in demand, inner peripheries are most likely to face a long period of decreasing demand.
- **Disparities may reduce in the short term** as prosperous regions are faced with low demand directly after the collapse. However, most of these regions are expected to recover quickly. Rural regions in eastern and southern Europe may experience a longer period of decline as they lack the opportunities to stimulate demand or limit supply, suggesting increasing territorial imbalances at European and urban-rural levels.

In order to avoid or manage the negative impacts of a collapse on territorial cohesion, policy-makers have different policy instruments at hand:

- Increase diversity in tenure structure and economic sectors to increase resilience.
- Intervene in the housing market, reducing the rules or their strictness to encourage new entrants to the housing market, making it more robust, e.g. through different spatial planning tools.
- Rethink their use of instruments whose net effect is to increase prices rather than increase the affordability of accommodation for specific target groups.

### **What could be done next in terms of territorial foresight?**

The three test cases illustrate the added value of a territorial foresight and of the method tested. As concerns possible next steps and future research some of the key ideas are:

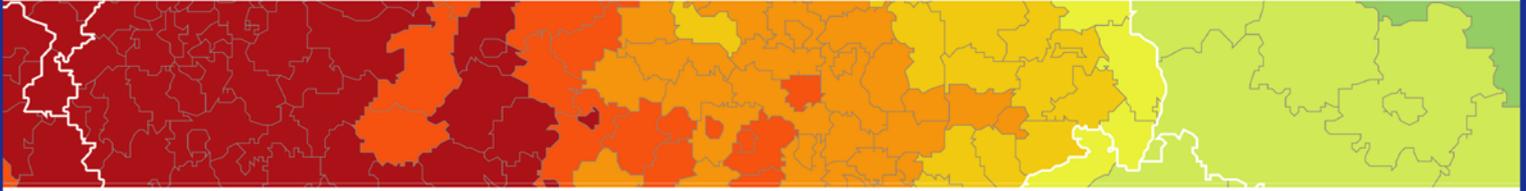
- **Applying the method to other topics.** Stimulate a discussion about 'What if questions' which are of high relevance to policy makers at different geographical levels.
- **Applying the method in different contexts.** Encourage decision makers at all geographical level to consider territorial foresight as a tool in complex policy processes.
- **Testing the method for thematically open and geographical limited foresights.** Could the approach be applied to foresight processes where the geographical scope is more limited but the thematic scope wider?
- **Further developing the tool and making it more accessible to policy makers.** Develop an online tool which guides through the different steps of a territorial foresight process and helps to collect available research in a structured form, moderate

participatory processes and follow up on the participatory process in terms finding additional evidence, developing narratives and maps.

### **What could be done next in terms of policies supporting territorial cohesion?**

Regardless the foresight topic considered, to achieve territorial cohesion, major efforts are needed to ensure more balanced development at all geographical levels. Single measures addressing single drivers will not be sufficient to ensure territorial cohesion. Below are a few suggestions, or pointers, for both high and low level policies:

- **Rural-urban partnerships and inner peripheries.** Policies covering rural-urban partnerships and inner peripheries have been less emphasised in recent years. Given growing disparities, this choice could be reconsidered.
- **EU Cohesion policy to diminish disparities.** To reduce socio-economic disparities, basic ideas behind EU Cohesion Policy may need to be revamped and instruments reconsidered to ensure maximum contribution to that objective.
- **Ensure attractiveness of all places.** To ensure that key points of attraction and drivers for development are not only selected metropolitan areas, all locations need to be empowered for further development. Services of general economic interest may be an important vehicle for this.
- **Wide European and national policies.** In many cases the key to improved territorial balance lies not just with regional policy but with a 'tailor-made' mix of sector policies at various levels.
- **The policy and legal environment matters.** Encouraging early adopters of key innovations and technologies is not only about the right environment, human capital, technology infrastructure and venture capital. It is also about adjusting regulatory and legal frameworks to suit upcoming technologies. This may decide where winners are located.



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