

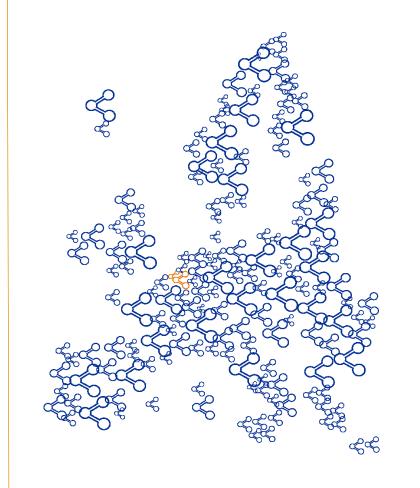
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Inspire Policy Making with Territorial Evidence

Country fiche

Territorial patterns and relations in Belgium

Demography Urbanisation Environment Accessibility Economy



Interactive version: www.espon.eu/belgium

Introductory remarks

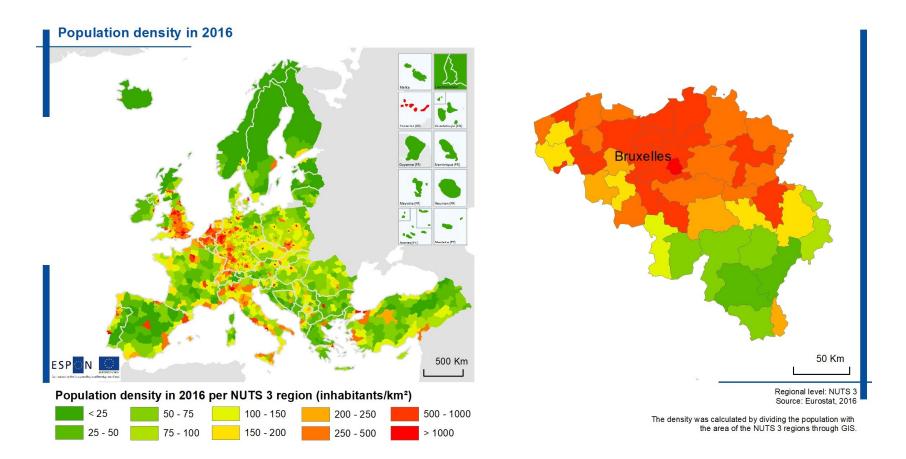
The content of the following overview is a summary of research results from different thematic applied research projects under the ESPON 2020 programme. As a consequence, most indicators and analyses are not based on most recent data but represent the data availability at the time when the research was undertaken. Only in a few cases, for some rather basic indicators that could easily be reproduced, more up-to-date information was used.

It is therefore important to note that this overview is mainly a collection of available findings with different time stamps and not an up-to-date, comprehensive analysis. Its main goal is to showcase the wide range of ESPON research and, by zooming-in on a specific country, to raise interest for the scientific results at a more national and even regional scale.



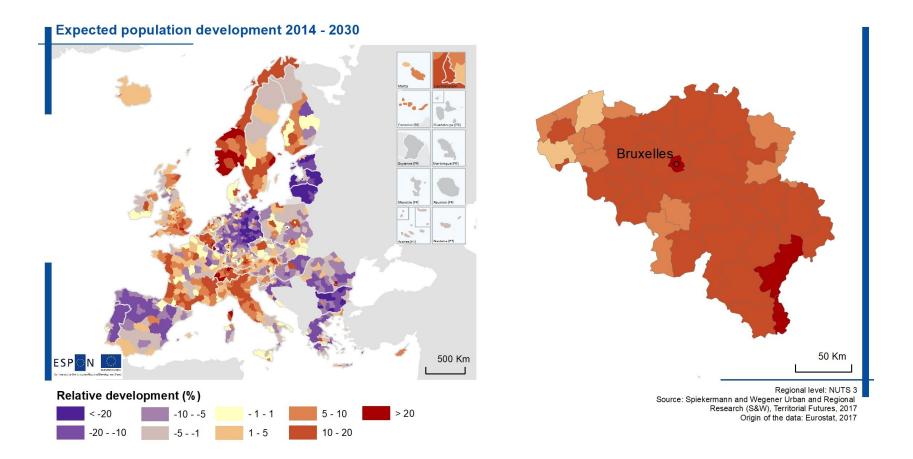
Demography

Population density in 2016 Expected population development 2014-2030 Housing cost burden of population in 2015 Total population aged 24-64 with a higher education degree (level 5-8) in 2016



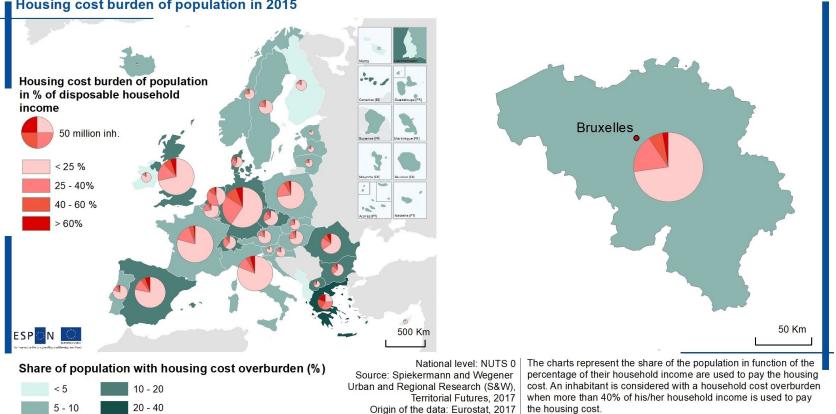
The map shows an area of high population density extending in a rough arc from north-west England down to Milan, with a little break in the Alps. In the less populated countries, a number of metropolitan areas are recognizable as well, such as Lisbon (PT), Madrid (ES), Paris (FR), and Cracow (PL). Physical factors that affect population density include water supply, climate, relief, vegetation, soils and availability of natural resources and energy. Belgium shows a decreasing population density from north to south. Flanders and Brussels' high population density is contributable to its

central location as one of the most important traffic intersections in Western Europe. In Wallonia, the map shows a higher concentration of population on the backbone, bringing together the main Walloon cities from west to east, and the centre and north of Walloon Brabant. These are the first Walloon municipalities to be affected by the peri-urbanisation of Brussels in the 1950s. A higher density zone is also developing in the extreme south of the province of Luxembourg due to the attractiveness of the employment centres of the Grand Duchy of Luxembourg.



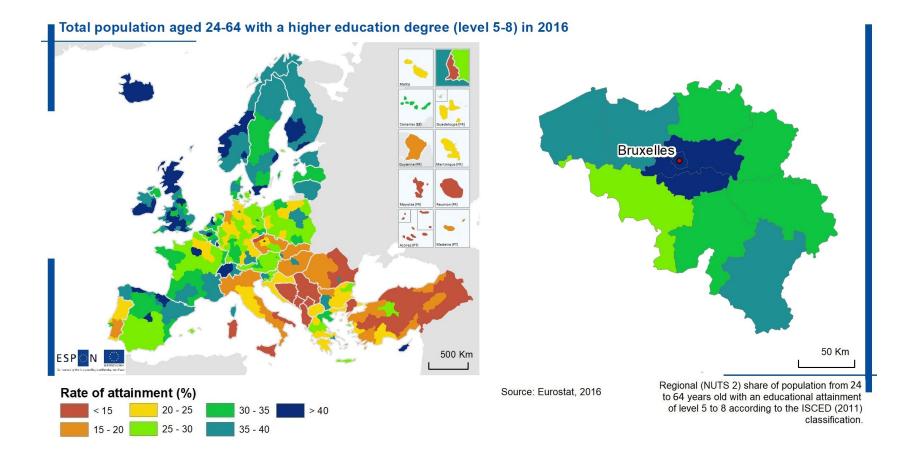
Overall, large portions of Eastern Europe, Italy, Spain and France have a decreasing population. For the latter two, however, an increasing population can be observed in urban areas such as Madrid, Bordeaux, Nantes or Paris. Other regions that are characterised by an increasing population are the Lowlands, Western Germany, the UK and Ireland. These trends of population are significantly influenced by the job opportunities and the economic situation of the regions. In Belgium, these conditions are particularly favourable in Brussels-Capital, Arlon and

Bastogne. Belgium's total population of 11.3 million inhabitants increases each year by an average of no less than 40,000 inhabitants. This is mainly due to an increase in life expectancy and international immigration. In the long term, however, demographic growth is not as strong as that observed since the beginning of the 1990s. The migration balance will halve (from 48,000 in 2015 to 25,000 from 2025). In addition, the natural balance is decreasing, mainly due to the increase in the number of deaths (due to the ageing of the baby boomer generation).



Housing cost burden of population in 2015

Disposable household income is the amount of money that households have available for spending and saving after income taxes have been accounted for. Housing cost burden includes rental or mortgage interest payments, but also the cost of utilities such as water, electricity, gas or heating. Such costs are considered as an overburden when they represent more than 40% of equivalised disposable income. In 2015, 11.3% of the EU population lived in households with such an overburden. Countries where a relatively small proportion of the population live in households with a housing cost overburden are Malta, Cyprus, Ireland and Finland. Conversely, only Greece shows a population of with 20 to 40% experiencing a housing cost overburden. The cost of living in Belgium is relatively high, but still considered affordable, including the cost of living in Brussels, when compared to some of its neighbours. However, with constantly growing prices, questions of affordability naturally arise. In Belgium, the gap between poor households and the total population in terms of the cost of housing is particularly significant.



Metropolitan areas in Europe generally have a greater share of people with higher education qualifications than their surrounding areas. There is a higher share in Northern Spain, Ireland, Scotland, Western Norway and Switzerland. Conversely, Portugal, Italy and countries in Eastern Europe have a lower share. While a large portion of the higher educated population of Portugal and Italy has emigrated to other regions of Europe after the financial crisis, the countries of Eastern Europe tend to have lower

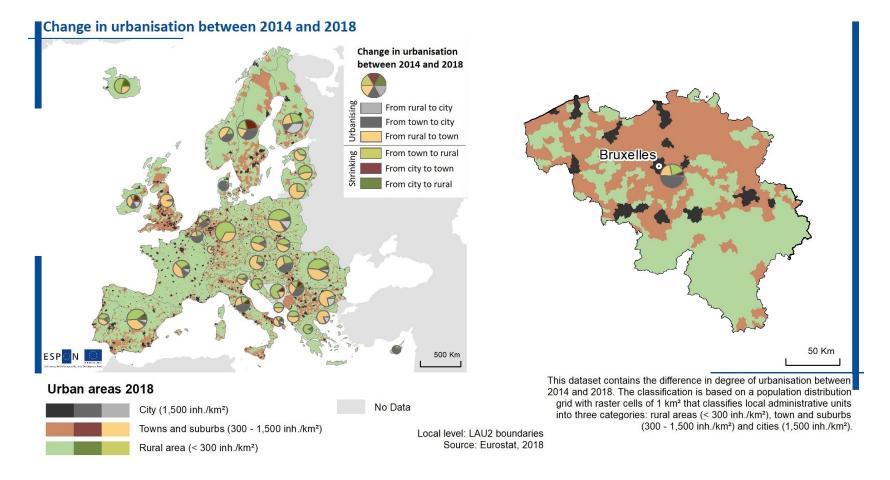
participation in higher education. In Belgium in 2016, 45.6% of 30-34 year

olds held a higher education degree. Belgium thus scores well above the European average, which is 39.1%. It is one of the countries where education is an important lever to find work. Moreover, Belgium is one of the cheapest; regular students pay only some 900 EUR enrolment fee. A working point, however, is that for children whose parents have completed higher education, the chance of continuing their studies is six times higher than those from low-educated families. Also the scores of pupils with low-educated parents or with a migration background are much lower.



Urbanisation

<u>Change in urbanisation between 2014 and 2018</u> <u>Delineation of MUA, FUA & MDA for Lille</u> <u>Delineation of MUA, FUA & MDA for Brussels</u>

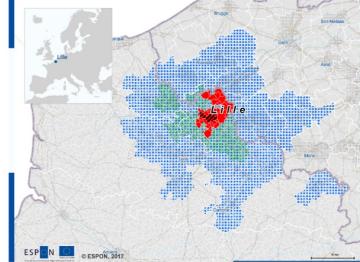


The classification in this map is based on population density rather than building density. Nevertheless, a large portion of rural areas in Europe have shifted towards towns due to densification. This means there is a tendency of the population to spread over large surfaces. In the Lowlands, Norway, Sweden, Finland, Italy and Hungary, however, a higher densification process can be observed with large areas shifting towards cities. Belgium is Europe's most urbanised nation. This urbanisation came about through the right of leasehold in the 1820's, which led to a reduction in the size of the parcels of land in the countryside, and got legally established by the regional zoning plans in the 1970's. Cities grew strongly from the beginning of the 19th century by means of residential and traffic ribbons in the surrounding countryside. This was accompanied by dilapidation in the city centre. However, despite the continuing urban exodus, the core cities continue to grow, albeit mainly due to migration. Morphological urbanisation now extends beyond the conurbation and reaches into the banlieues.









//// Core city municipality

- MUA of the core city (ESPON 2013 Database)
- Surrounding MUA's (ESPON 2013 Database) Metropolitan Development Area (MDA)
- FUA of the core city (ESPON 2013 Database)
- National border
- Railroad
- Motorway
- Primary road
- Other road
- rivers

Territorial level: LAU2 (version 2011) eographical information system of the Commission (GISCO), 2017 Origin of data: EUROSTAT, 2011 © EuroGeographics for the administrative boundaries

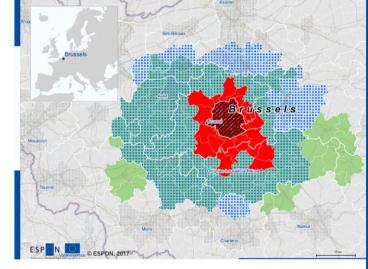
Delineation of the Morphological Urban Area (MUA), Functional Urban Area (FUA) & Metropolitan Development Area (MDA) for Lille

The MDA of Lille covers 7,516 km2 with a population of about 3.9 million inhabitants and a density of 520 inh./km2. It is a cross-border urban conurbation covering 682 municipalities (622 in France and 60 in Belgium). It represents a dynamic structure of urban agglomerations that have been formed over time and is still evolving, following more recent changes in the national territorial cohesion planning framework of France The central position of Lille and its economic values makes its urban context a real 'metropolitan heart'. The geographical location of the Lille Metropolitan Area is exceptional as it is at the crossroads between major European capitals such as Paris, London and Brussels This brings a unique cross border perspective of the metropolitan development of Lille and development issues such as commuting, population distribution and marginalization in relation to these European capitals The present economic dynamism have enabled the region to develop a genuine logistic approach, which has helped making the case for the Seine North Europe canal.









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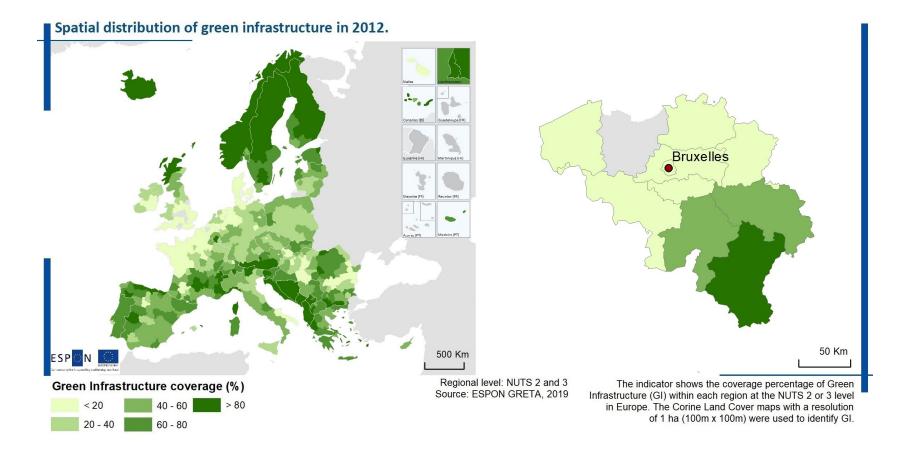
Delineation of the Morphological Urban Area (MUA), Functional Urban Area (FUA) & Metropolitan Development Area (MDA) for Brussels

The idea for the MDA of Brussels refers to the Brussels-Capital Region and the Railway Express Network zone (Zone RER) covering a 30 km ring around Brussels. The area consists of 135 municipalities, including 19 municipalities in Brussels-Capital Region and 116 municipalities around Brussels. The demographic social and economic development trends of the Brussels Capital Region show an expansion of the urban functions far beyond its current administrative borders and across the three federal regions This process has determined the need for a strategic territorial development at a metropolitan scale Such process would help planning and addressing more effectively the current urban growth patterns, including improved accessibility and mobility, balanced distribution of population, optimal provision of services and resources The discussion about the metropolitan development of Brussels is currently stimulated by the initiation of a collaboration process for establishment of the Metropolitan Community of Brussels.



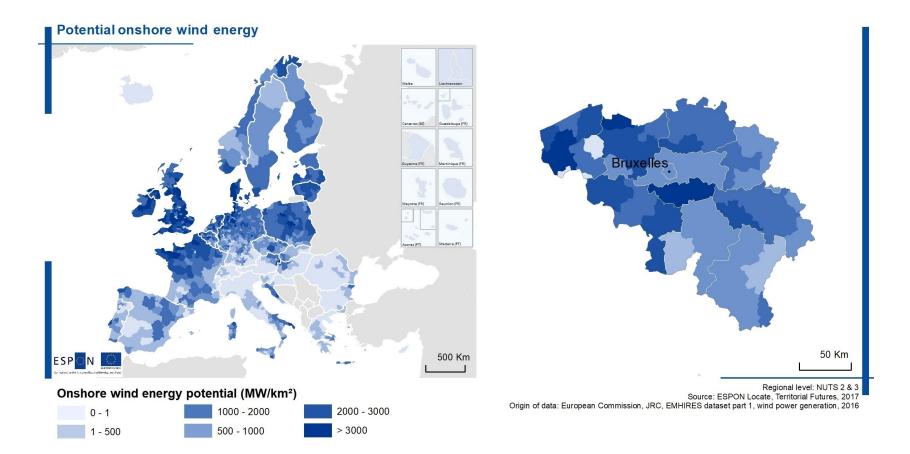
Environment

Spatial distribution of green infrastructure in 2012 <u>Potential onshore wind energy</u> <u>Potential photovoltaic energy</u>

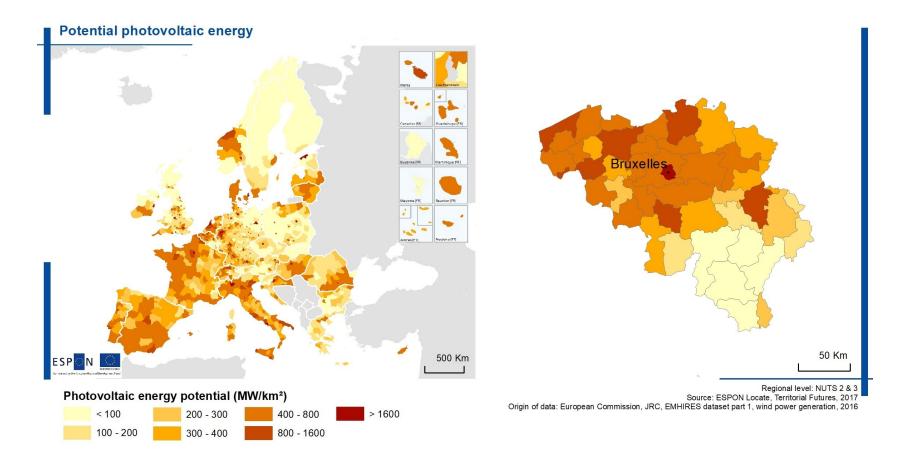


Most of the green infrastructure is found in the Nordic countries, the Balkan countries along the Adriatic Sea and the eastern part of the Alps. By contrast, the regions in north-west France and Germany, South-Eastern UK and Ireland and Denmark show a relatively low coverage. The pattern reflects population density, infrastructure development, climatic and topographical conditions and the distribution of agricultural areas. This is clearly visible in Belgium, which shows an increase in green infrastructure from north to south. Although Belgium has a National Biodiversity Strategy,

environmental policy is essentially a regional competence. While the Flemish Ecological Network consists of large natural units and large natural units under development, the Brussels-Capital Region aims to connect existing green infrastructure to create green and blue corridors. However, due to a high-density infrastructure network, they still are among the bottom EU regions. The Walloon Region aims to strengthen the development of green infrastructures through a combination of planning and environmental measures at the regional and municipal levels.



Potential onshore wind energy depends on average wind speeds and land availability for wind power installations. The regions with the highest potential for producing electricity from onshore wind power, are located in the areas of the North and Baltic Seas, the UK, Ireland, Northern France, Denmark, Poland, and the Baltic countries and Southern Scandinavia. In Belgium there is more potential of onshore wind energy in the north than in the south, because there simply is more wind on the coast. The development of onshore wind energy is further limited in Flanders and Wallonia by the close distance between of urban settlements. Furthermore, in Wallonia, wind turbines in forest land are only allowed close to transportation infrastructure, which excludes a part of the territory. Also Brussels-Capital Region is an urban area which is not particularly suited for large wind turbines, although smaller turbines more appropriate for urban environments are being studied. Hence, in Belgium, wind turbines are mainly installed offshore. These are significantly more expensive due to the more difficult conditions and the absence of infrastructure.



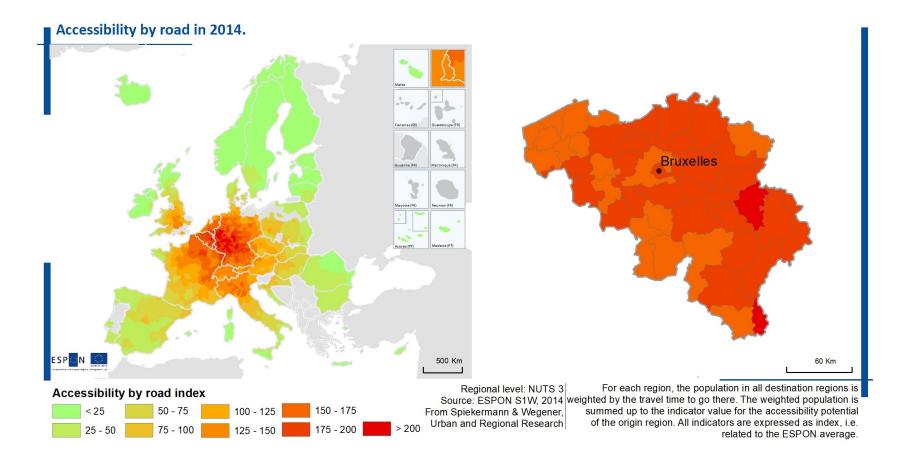
The map shows the regional potential for electricity production from solar panels, based on geographic and climatic conditions and the legal and aid frameworks. It does not include the investment necessary to exploit that potential. Areas with high full load hours, showing a high electricity harvest per installed capacity, can lead to low potential due to restricted potentials to install photovoltaic installations (e.g. parts of Spain). Areas with relatively low electricity harvest can have significant solar energy potentials when there are low restrictions on solar installations (e.g. some parts of

Norway and central Europe). Nevertheless, an increasing potential of solar energy can be observed from the north-east to the south-west of Europe, depending on the amount of direct sunlight. In Belgium, the installed capacity grew at a rapid pace from 2008 until 2012, but its growth has since slowed to a steady pace. Almost all of solar power in Belgium is grid connected. The regional differences are similar to those for green infrastructure: more forest means less land available for the deployment of renewable energy production (open fields and roofs).



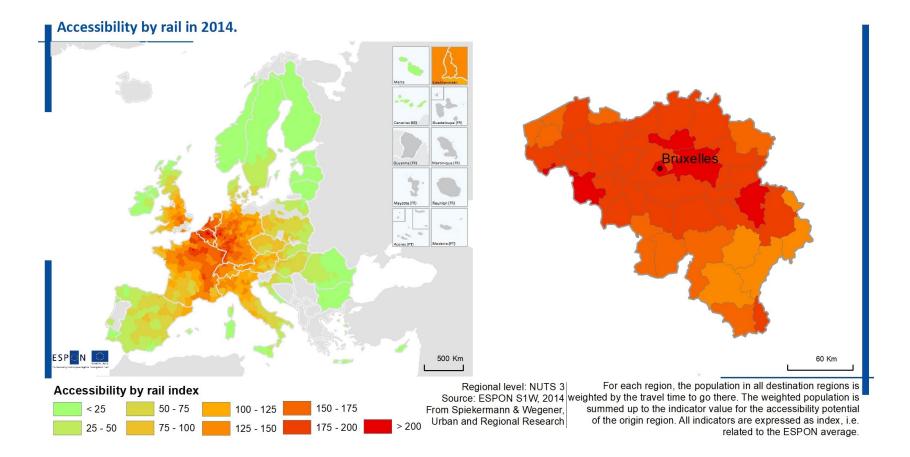
Accessibility

Accessibility by road in 2014 Accessibility by rail in 2014 Hinterland accessibility of maritime ports in 2014 Cross-border public services: Types of services

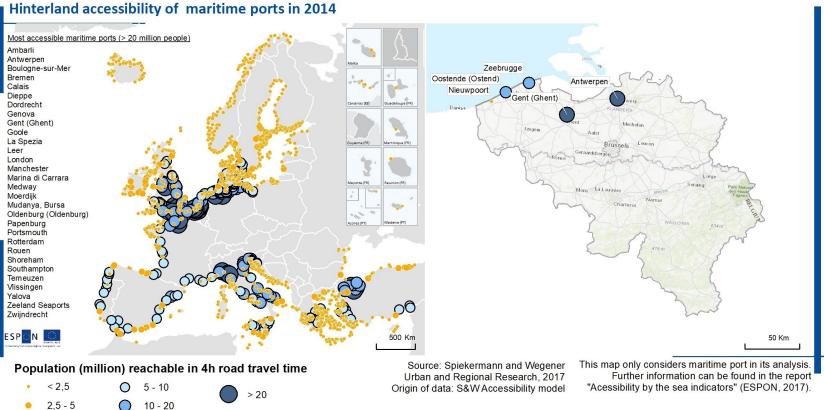


Accessibility describes how easily regions in Europe – in terms of travel time in relation to population - can be accessed from other similar regions in Europe. The highest level of accessibility in absolute terms is found in the economic centre of Europe, stretching from the south-east of England to the north of Italy through the Rhine valley. Conversely, the lowest accessible regions are Scandinavia, the Baltics, Scotland and Ireland as well as coastal regions and islands in Southern Europe. Belgium has a particularly dense road network made of highways, national (or regional)

roads (the secondary network) and communal roads (or streets). It is highly integrated with that of neighbouring countries with various motorway border crossings. From the 1980s onwards, the level of investment in Belgium's saturated road network fell sharply; in the period 2010-2013, Belgium spent only 0.6% of GNP on infrastructure, the lowest level in Europe. The main challenges for Belgium today are the wear and tear of infrastructure, concentration of fine dust and nitrogen dioxide in cities and congestion caused by spatial dispersion of housing and employment.

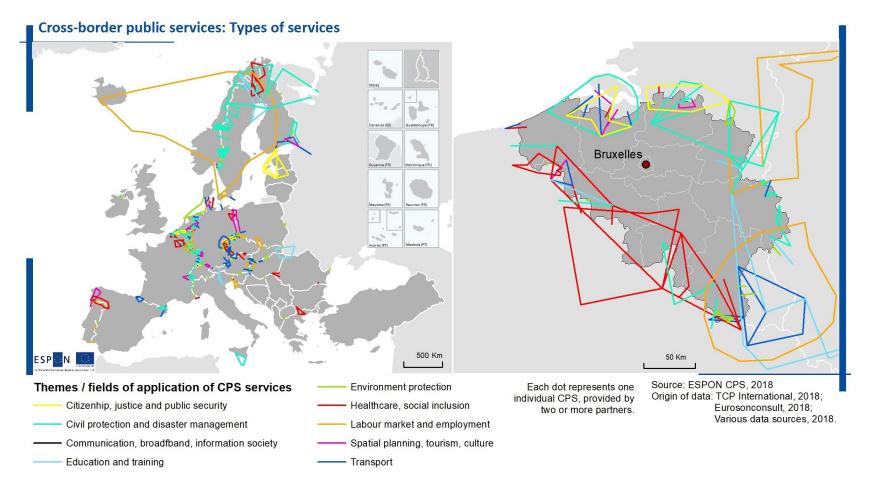


In contrast to accessibility by road, the south of the European core is now more visible than the north. Visible are the corridors along high-speed rail links in France towards the Atlantic and via Lyon to the Mediterranean regions or in Germany towards Hannover and Stuttgart. Conversely, lowest accessibility is found in the far north regions, the eastern regions in Bulgaria and Romania, and Greece. There is a clear dominance of urban regions, followed by rural, mountainous and coastal regions. In 1834, Belgium put all its cards on a massive extension of its railway network. As the country industrialised, it reached a length of more than 5,000 km by 1912. However, after the Second World War, local railway lines and stations with less economic value (due to a lower population density) were not restored. Many railway beds were converted into cycle paths and footpaths. Today, Belgium's internal passenger railway service is non-commercial. Challenges for its 3,500 km rail network are proper connectivity with regions from other countries, more and faster trains around major cities, and a better punctuality.



From most European ports, a population of at least 5 million inhabitants is reachable within 4 hours road travel time. A few ports in Northern Italy act as gates to Central Europe and provide access to a population of around 20 million, while the rest of the Mediterranean ports have lower hinterland connectivity values. Lower values in hinterland accessibility are also registered by ports in the Nordic and Baltic states and by the Black Sea ports in Romania and Bulgaria. Although the latter two serve an important trade route to the Orient. The North Sea concentrates the most ports with

good hinterland accessibility and large amounts of goods handled. In Belgium, the Flemish maritime ports Antwerp, Ghent, and Zeebrugge play a major role in their respective regional economies and the Belgian economy as a whole, not only in terms of industrial activity but also as intermodal centers facilitating the commodity flow. For that, the ports of Antwerp and Ghent are internationally the most accessible, due to a dense network of motorways, railways and inland waterways and the possibility to reach the most populated part of Europe.

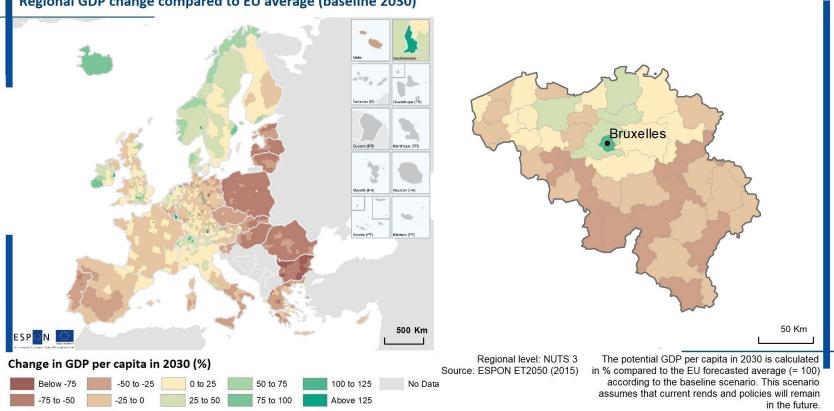


Cross-border public services (CPS) address joint problems or development potentials of border regions that are located on different sides of one or more nation state borders. The highest share of CPS is found along the borders between the Benelux countries, France, Germany and Nordic countries. The map also shows a high density of CPS along the German-Swiss, French-Swiss, Czech-German, Austrian-German and Danish-German border(s). This is largely determined by a long-standing tradition of general decentralised cross-border cooperation. To establish these overarching frameworks, Belgium has a number of multilateral and bilateral agreements, such as the "Benelux Convention" with the Netherlands and Luxembourg and the "Mainz-Agreement" with Germany. Along the Benelux borders, CPS investments have focused on training and education and healthcare services. Regarding the latter, the Belgian-French border area is a forerunner with its integrated health care zones. Labour and employment dominate the Belgian-Luxembourgish CPS, while the Belgian-Netherlands CPS focus on citizenship, justice and public security.



Economy

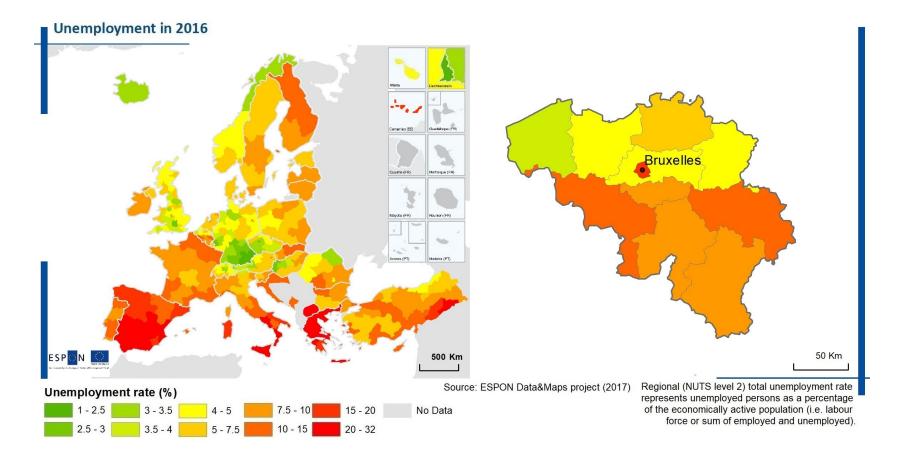
Regional GDP change compared to EU average (baseline 2030) Unemployment in 2016 Share of persons employed in small and medium enterprises in 2014 (10–249 employees) Share of persons employed in micro-enterprises in 2014 (1-9 employees) Enterprise birth rate in 2014 Enterprise death rate in 2014



Regional GDP change compared to EU average (baseline 2030)

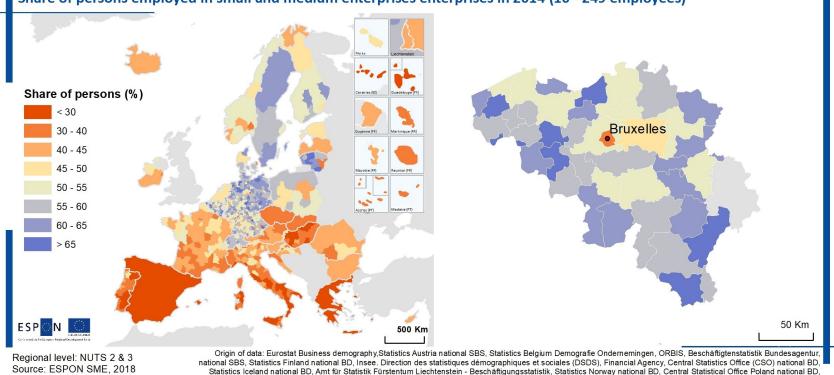
In Europe, the gaps between north and south and also between regions within countries are widening. Regions that are currently lagging behind, such as Greece, Spain and the Baltic States, are expected to grow the most, but high relative levels translate only slowly into the high absolute numbers needed for convergence: meaning that GDP per capita grows at faster rates than in richer economies, such as Iceland, Cork, Norway, Switzerland and part of Sweden. In Belgium, from the beginning of the 20th century onwards, Flanders concentrated on technology and light industry,

as well as Walloon Brabant. Wallonia was confronted with the gradual disappearance of its heavy industry, more particularly its steel industry, given globalisation and the relocation of productive activities. Conversely, Flanders benefits from a particularly favourable context for foreign investments with a well-trained labour force. However, mainly due to the establishment of important administrative and business headquarters, GDP per capita is the highest in the Brussels-Capital Region. Many Flemish and Walloon people commute to Brussels and thus contribute to its GDP.



Southern Europe suffers from higher rates of unemployment than the central and northern areas. Spain, Southern Italy, Greece and Croatia were generally hit harder by the financial crisis of 2008. Conversely, regions in Germany, Luxembourg, the Czech Republic, Austria, Norway, North-Eastern Romania and the UK have the lowest unemployment rates. In Belgium, when it comes to unemployment, the language border has been visible since the 1980s. Wallonia is facing challenges similar to those of other old industrial regions: a shortage of jobs and large industrial

wastelands to be reconverted. On average, Walloon workers travel a greater distance to work than Flemish or Brussels workers. Nevertheless, Wallonia has economic strongholds as well. The province of Walloon Brabant, for example, is part of the Brussels Metropolitan Development Area. In Brussels, and to a lesser extent in Wallonia, high unemployment rates are due to the lack of jobs but also to a lack of training of part of the inactive population. In Antwerp city, it is mainly young people who are unemployed, but also many disadvantaged groups.



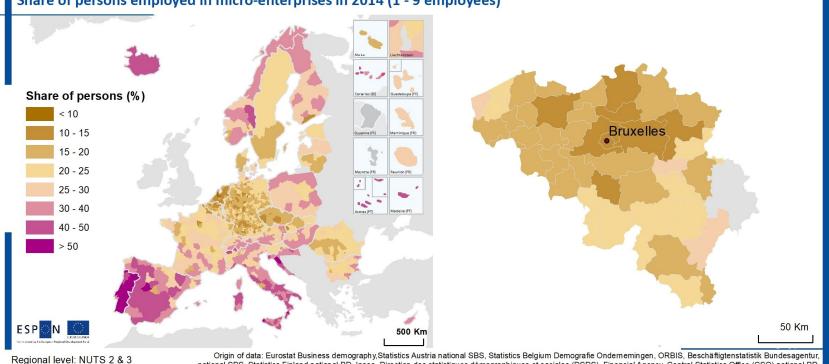
Statistics Portugal Integrated Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz,

Share of persons employed in small and medium enterprises enterprises in 2014 (10 - 249 employees)

SMEs represent 99% of all businesses in Europe and play a crucial role in economic growth, innovation, job creation and social integration. Europe's remote areas (Nordic countries) as well as rural and peripheral regions in Germany, Lithuania, Switzerland and Poland tend to employ more people in SMEs than in urban areas. The opposite is the case in Finland, Italy, France and Portugal. In Belgium, the number of SMEs has continuously increased since 2009, reaching 99.9% of the total number of companies. They play an important role in Belgium's information and communication

sector. Although this sector is mainly located in Brussels capital, more people are employed by larger companies there. According to the Small Business Act for Europe, Belgium is most successful in giving access to finance and promoting the upgrading of skills and innovation. Nevertheless, it needs to improve in providing public administrations responsive to SMEs' needs; creating an environment in which entrepreneurship is rewarded; facilitating SMEs' participation in public procurement; and better using State aid possibilities.

Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)

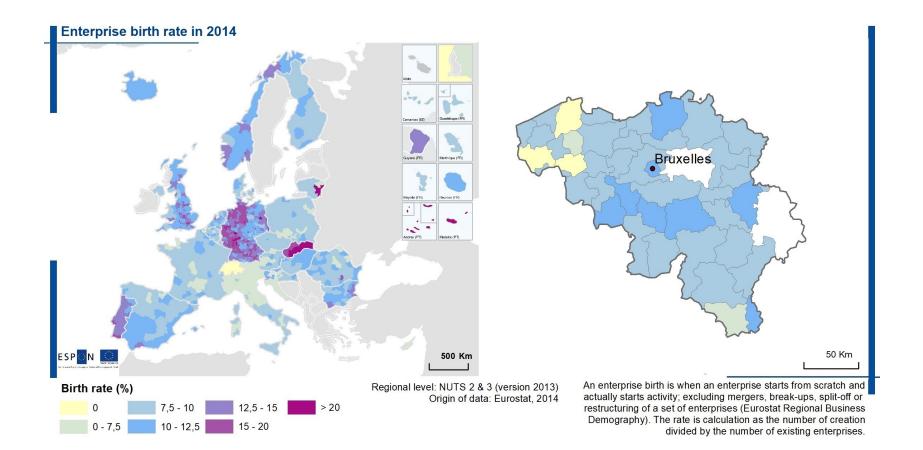


Share of persons employed in micro-enterprises in 2014 (1 - 9 employees)

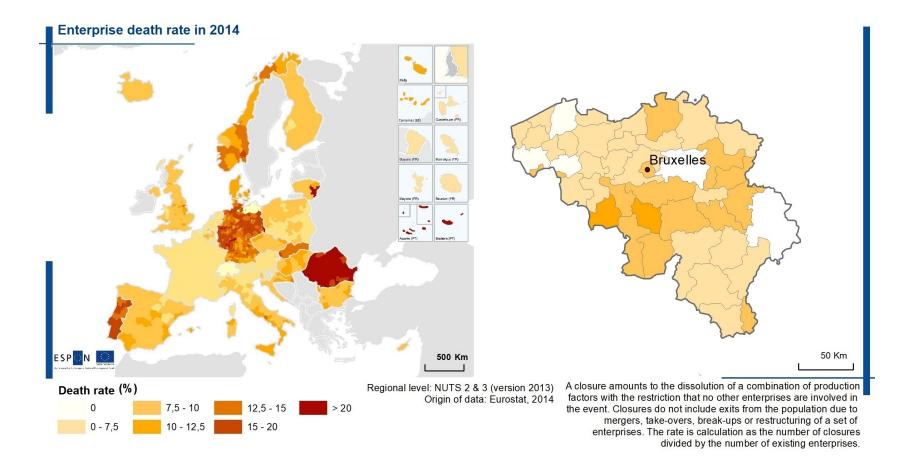
Orgin of data: Eurostat Business demography.Statistics Austria national SBS, Statistics Belgium Demographiques et sociales (DSDS), Financial Agency, Central Statistics Office (CSO) national BD, Statistics Iceland national BD, Amt für Statistik Fürstentum Liechtenstein - Beschäftigungsstatistik, Statistics Sweden Business Accounts System, National Statistics Institute Romania national SBS, Statistics Sweden Business Register, Bundesamt für Statistik Schweiz, Small Enterprises' Institute of the Hellenic Confederation of Professionals, Craftsmen and Merchants (IME GSEVEE)

Regional level: NUTS 2 & 3 Source: ESPON SME, 2018

Micro-enterprises are among the fastest growing companies in Europe. With the exception of Norway, a division is visible in Europe between north and south, with the south containing predominantly more microenterprises. Croatia, the Czech Republic, Latvia and Estonia have experienced micro-enterprise increases since 2008, while Italy, Spain, the Netherlands and Romania have witnessed decreases. Although in Belgium 94% of all enterprises are micro-enterprises, they only account for 34% of total employment. Due to the scarcity on the labour market, business managers are often unable to find suitable employees for the job. More and more functions within companies are being outsourced, however, asking people to work autonomously and flexibly as a freelancer in their field. In 2016, the Belgian government introduced the category of microenterprise by incorporating European Directive 2013/34/EU into national legislation (Small Business Act for Europe). Since then, micro-enterprises benefit from specific measures to reduce the administrative burden. Today, Belgium's amount of self-employed has increased to more than 1 million.



Enterprise birth rates are calculated as the number of enterprise births in one year divided by the total number of active enterprises in the same year. Often higher birth rates are connected to economically wellperforming regions and capital regions, but also touristic regions are dynamic (see Southern Spain). Latvia, Portugal, Slovakia, Germany, the UK, Norway and Slovakia show above average birth rates. On the other hand, in several countries only a minority of regions show birth rates of 15% or higher. Belgium is one of these countries, but also corresponds to the European average (around 10%). In Belgium, often potential entrepreneurs fear failure, because the social safety net for entrepreneurs is not as big as for employees. Moreover, young people are often educated for a job in the business world, but not for entrepreneurship. Another inhibitor on the enterprise birth rate is that entrepreneurs are often hindered with administrative rules and a high taxation on labour. Belgium's policy focuses more on interests in relation to employment than on easing the way for innovative companies to take over outdated activities.



Death rates of enterprises depict the number of enterprise deaths in one year divided by the total number of active enterprises in the same year. Death rates are higher in predominantly urban areas. Yet net more enterprises are born in predominantly urban or intermediate regions than in predominantly rural areas. Frequently, high birth rates coincide with high death rates as can be seen in regions in Estonia, Latvia, Lithuania, Romania, and Slovakia, with death rates above 15%, as well as in Portugal and Western Germany. However, there are some regions with death rates

above 10% which could not compensate this loss by high birth rates in the same year (e.g. in Estonia and Romania). In Belgium, too, the regional enterprise death rates show a similar pattern as the birth rates. This is related to the dominating presence of large, established firms, which do not leave sufficient space for newcomers. Young firms that have been active for less than four years are much more dependent on bank loans than older companies, which makes them vulnerable to downturns. Hence, half of the new enterprises are no longer active five years after their birth.

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