

# Annex 10 b to SeGI Scientific Report

Case Study Report | Germany (Ruhr region)

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## **1. Introduction to the case-study report**

### **1.1 Description (characterisation) of country**

The Federal Republic of Germany has to be described as a welfare state. It can be concluded that the provision of each citizen with important and basic services is also under this premise. The German constitution includes the principle of equal living conditions which is a central component of legitimacy of the German welfare state.

The territorial guarantee for services of general interest has followed the general outline of a spacious well-balanced organisation with equal living conditions in all subspaces. To ensure the societies welfare the state has the duty to offer provision which is not covered adequately by private stakeholders.

But there has been a paradigm shift already occurred away from the “caring” welfare state of the 1950s to the 1970s to the “guaranteeing” welfare state. The state takes care no longer primarily for the reduction of social inequality and the extension of public services, but pulls itself back from the provision of services and ensures that formerly state services are now provided by other private suppliers. It is obvious that the state is no longer providing the services alone but plans, authorises and controls the provision by private suppliers (Stielike 2010).

As Germany is facing challenges like a shrinking and ageing society and empty public coffers the public administration has to decide on how services of general interest are created and financed in the future (Neu 2009).

Homogenous and equivalent living conditions in every region, determined in the German constitution, are concretised in the Regional Planning Act. This Act is formulated at federal level; the differentiation and realisation are occurred by the sixteen federal states and the municipalities (Adam 2009). In each region the infrastructure with educational, recreational and social facilities should be given, according to their number of inhabitants, in a comparable (not necessarily identical) extent and equivalent (not necessarily equal) quality. The most important instrument for the organisation and coordination of services of general interest are the regional development plans which include devices for the regional and local administration units. The basis for all regional planning intentions is the Central-Place-Theory by Walter Christaller which is set in the German Regional Planning Act.

Through a system of central places the provision of the population and the economy with private services, jobs and with a bunch of services like schools, hospitals, cultural institutions, public transport and supply and waste infrastructure is ensured. Since the 1960s a four level hierarchical system of central places exists in Germany which are provided with different hierarchically graded services. The basic structure consists of high-order centres (the highest level of provision), the middle-order centres, the low-order centres and the small centres with the lowest provision of services. The determination for a municipality as a central place does not only dictate the provision of population in this centre but also the service area for the communities in the surrounding, which must be supplied as well.

The high-order centres offer the broadest provision with services. Whereas low-order and small centres simply offer the everyday basic services and consequently have the smallest zone of influence. The facilities of the municipalities on the different levels are regulated in

the so-called equipment catalogue of planning in the sixteen federal states. These catalogues has changed over time; some services were cancelled others were accepted. But the catalogues determine the requirement for a minimum of facilities which have to be provided in the municipalities. Because of the shrinking society and changes in the ageing structure the capacities of services will be undercut frequently in the future. The approach “protecting services of general interest” demands a more flexible adaptation of the central place theory to the changing spatial demand structures. In Eastern Germany there is already a thinning process of the central places existing. As a result of this strategy the number of central places is reduced, so parts of the population have a longer distance to the remaining centres.

It is obvious that the demographic change will have tremendous impacts on the provision and distribution of services of general interest in Germany which will require a flexible adaptation of the existing planning strategies.

## 1.2 Description of the selected region

As the German case study for the SeGI-project the Ruhr region in North Rhine-Westphalia, the most populous federal state in the country, were selected.

With 4435 km<sup>2</sup> and 5.15 million inhabitants it is the largest urban agglomeration in Germany and the northern part of the European metropolitan region Rhine-Ruhr. 1161 inhabitants live on one square kilometre, which is by far higher than the German average (230 inhabitants per square kilometre). The northern and western part of the region is characterised rather rural. The big cities are mainly located between the rivers Ruhr and Emscher in the southern and eastern part of the area.

### Ruhr region



Datenbasis: Laufende Raumbearbeitung des BBSR  
Geometrische Grundlage: BKG, Kreise, 31.12.2009

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Location of the Ruhr region in North Rhine-Westphalia (BBSR, 2011)

The Ruhr region is an association by purpose (Zweckverband) of 11 cities and 4 counties with 42 municipalities. This association coordinates the regional planning in the region, but the government is still in responsibility of the cities and counties themselves.



### Germany Case Study Ruhr region

- Cities
- Kreis Wesel
- Kreis Recklinghausen
- Kreis Unna
- Ennepe-Ruhr-Kreis

Cities and communities of the Ruhr region (BBSR, 2012)

The time of prosperity of the Ruhr area was in period of the early industrialisation in the 18<sup>th</sup> to the beginning of the 20<sup>th</sup> century and the area was the most important industrial region in Germany. It is still characterised by the mining era and industry. The crisis of the region started in 1957 with the coal crisis. From that time the region is in an ongoing structural change. The Ruhr region endeavours to become a region based on services which is not yet definitively successful.

With high amounts of subsidies the state and North Rhine-Westphalia tried to mitigate the effects of this structural break. But many companies left the region even if some bigger companies were successful in establishing new industries and keep or create new jobs. But all in all the big job loss of the declining and ending mining industry could not be compensated. The industrial sector still loses more jobs than the tertiary sector is able to create. In average the area shows an unemployment rate which is at the top compared to other areas in Western Germany. Not one other agglomeration in the country has lost so many jobs like the Ruhr region in the last thirty years. Between 1997 and 2006 almost 17% of all workplaces liable for social insurance were abolished.

Development of population and jobs 1995 to 2009 in ruhr region

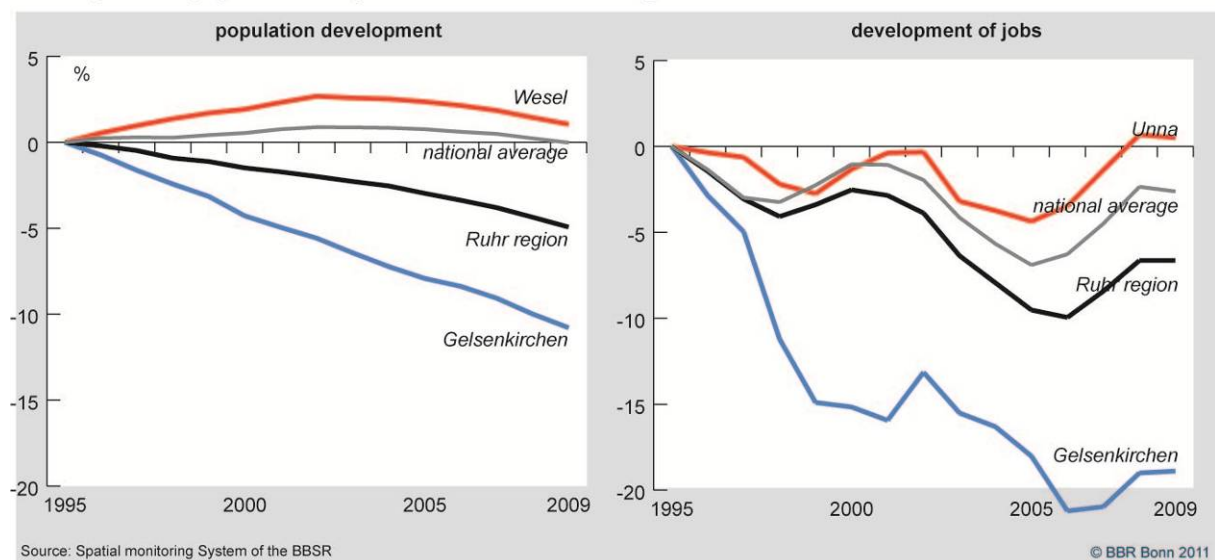


Figure 1: Development of population and jobs 1995 to 2009 in Ruhr region (BBSR, 2011)

The figure shows the development of population and jobs in the Ruhr region from 1995 to 2009 in comparison to the national average. The Ruhr region not only lost jobs in the last years but consequently also inhabitants. Between 2005 and 2009 a slightly positive development can be figured out, but not only in the Ruhr region, it is rather a national trend. New population outlooks predict a very intense decline of the population in the area. To the year 2030 the population will be decreased by 7.7%. Only the age groups 65 to 80 and 80 and more will be increasing with 16.6% and even 28.5%. The total population will decline from 5.15 million people in 2011 to 4.75 million people in 2030. So this will have extreme effects on the provision with services of general interest not only because of less people but also because of a different ageing structure.

### **1.3 Overview of the case-study report**

The first part of this report is a national analysis of services of general interest. First the welfare regime of Germany will be described to give a political and social background on the organisation of services. In a second step an overview is given of all services provided in the country. This chapter is divided in economic services of general interest and in social services of general interest.

The chapter of the national analysis will close with an analysis about the national context with the focus on future challenges and impacts on the provision with services of general interest.

The main part of this report deals with the situation of services of general interest in the Ruhr region. Similar to the national analysis the chapter is divided into economic SGIs and social SGIs. Some services are analysed more deeply e.g. sewage system, broadband, secondary and tertiary education and hospitals.

The maps will show the current situation of SGIs in the Ruhr region. Additionally the results of the realised questionnaire survey in the municipalities will be integrated in the chapters.

In chapter 3.3 a summary of the general results of the survey about the presence, accessibility and quality of services in the municipalities is presented.

Chapter 3.4 deals with financial influences on the Ruhr region. Which financial programmes, national and European, could affect the provision with SGIs?

In the next chapter a conclusion of the regional case is given. Furthermore the results from three interviews will be integrated. These interviews were realised at a city council, the public utility company of Dortmund and with one scientist from the technical university of Dortmund.

At the end of this report a conclusion will summarise the main results from the national and regional analysis.



## **2. National analysis of services**

### **2.1 Description of the welfare regime of Germany**

As it is mentioned before in Germany services of general interest are based on the principle of the welfare state. The provision of each citizen with important and basic goods is seen as constitutive for the society. To ensure the societies welfare the state has the duty to offer provision which is not covered adequately by private stakeholders. The state can provide the services by itself or can guarantee an adequate provision by private suppliers.

It is anchored in the German constitution to enable each citizen the participation to social achievements, the so-called social state principle. In the formulation of the constitution it was consciously disclaimed to codify social rights explicitly and to accept them as enforceable official rights. The German constitution does not say how the state has to proceed at the arrangement of social security and which benefit level the social security has to be reached. As a result it is relatively open how the social state principle has, should or can be implemented. In article number 79 it is legally determined that the social state principle is not to be abolished.

The German welfare state can be divided into three categories: the welfare principle, the provision activities and the insurance activities.

The welfare principle covers state assistance for needy citizens as housing subsidies and social benefits. Provision activities contain state benefits for citizens who adduce special benefits for the society like compensation payments for the bereaved of war victims or child benefits. Insurance activities conduce to the prevention of the loss of income due to age, unemployment, disablement, illness or maternity (BpB 2012).

The Social Security Code concretises the constitutional social state principle a bit. It mentions the right of education and work advancement, the right of access to social insurance, the right of rent subsidies and for example the right of social benefits. But again it is not said how it should be looked like or organised it is more a guideline for developing political programmes. The scope of interpretation is wide (Berner 2009).

Maybe because of this interpretation range some structural changes occurred in the last years especially liberalisation processes in various service categories can be figured out. The ICT sector for instance was formerly organised by a state-owned institution. The company was privatised but is still the biggest ICT-provider in Germany. The same happened with the postal sector when the state-owned Deutsche Post AG was privatised in 1995. A lot of new firms, many foreign companies among them, showed up on the German market, so a competitive environment was established. Particularly services of the technical infrastructure were privatised in the recent years. Public authorities have transferred their waste management for instance to economic enterprises of the municipalities which means that they are outsourced of the local budget but still belong to the public administration and companies. So it is not a complete privatisation but differs in the legal form from the public-law authorities.

## **2.2 Overview of all services of general interest in the country**

The following two parts of this report will give an overview of services of general interest in Germany divided into economic services and social services.

The economic services of general interest can also be described as technical infrastructure as they include the provision with gas and electricity as well as water, waste and sewage management systems. In addition the public transport system and postal and ICT services are integrated in this kind of infrastructures.

The second part is about the organisation and provision of social services in Germany. These include the educational system, differentiated to the various level of education, the labour market services and also the public administration and defence. Furthermore an overview will be given on cultural and recreational services, the care service with its differentiation into healthcare, child and social care as well as social housing and compulsory social security.

The conclusion of this part will be an analysis of the national context regarding current trends and impacts on the provision and organisation of services of general interest in Germany.

### **2.2.1 Economic services of general interest**

#### **Gas, water, waste and sewage**

Germany is poor of natural resources so it is dependent on imports. In the year 2007

Germany's gas demand was fulfilled with exports by 85%. The gas is mainly delivered from Russia (37%), Norway (28%) and the Netherlands (20%) exclusively by pipelines.

Natural gas has a demand for primary energy by 23% and is the second important part of the German energy mix after mineral oil. In the sector of private households gas has a current rate of 40% and is therefore the most important energy source on the heat market (Federal Ministry of Economics and Technology 2011). Almost half of the accommodations in Germany are provided with gas, especially in cities with more than 100 000 inhabitants.

The provision with gas is often arranged by the municipalities with their own energy provider. After the liberalisation of the energy market in 1998 and 2005 the public providers are exposed to the competition. But the number of changes by consumers is still marginal (Libbe, Köhler, and Beckmann 2010).

In 2009 there were 774 active companies with 33 877 employees on the gas market in Germany (Federal Ministry of Economics and Technology 2011).

The institutional framework of water provision is characterised by different administrative units. The federal government is responsible for the framework legislation and has therefore founded the Federal Water Act. The sixteen federal states have to concretise and implement the laws concerning water provision. Historically the municipalities are the operator for water as well as for sewage and it is seen by them as an important part of services of general interest. The local authority has the duty to provide the population and economic facilities adequately with fresh water. Temporarily the local authority can delegate the provision to private stakeholders. But the number of private companies in the water management is very

limited, public local companies are dominating this area. Efforts are being made to create supra-regional cooperation for getting more efficient.

The existing water resources are more than enough for a secure provision of the population. 188 billion cubic metres each year are available in the long-term average. All users extract 38 billion cubic metres which are only 20% of the potential water resources. However there are regional differences regarding water resources. Because of that the withdrawal of water takes place from different sources. Most areas get their water from rivers, seas and dams as well as from ground and spring water. But some regions are dependent on water from other regions which has to be transported in pipelines.

The public net of water provision has an extent of 500 000 kilometres and nearly 99% of the population have access to it.

Regarding the water consumption households in Eastern Germany need 30% less drinking water than households in Western Germany.

Water consumption in households and small business in federal states (2007)

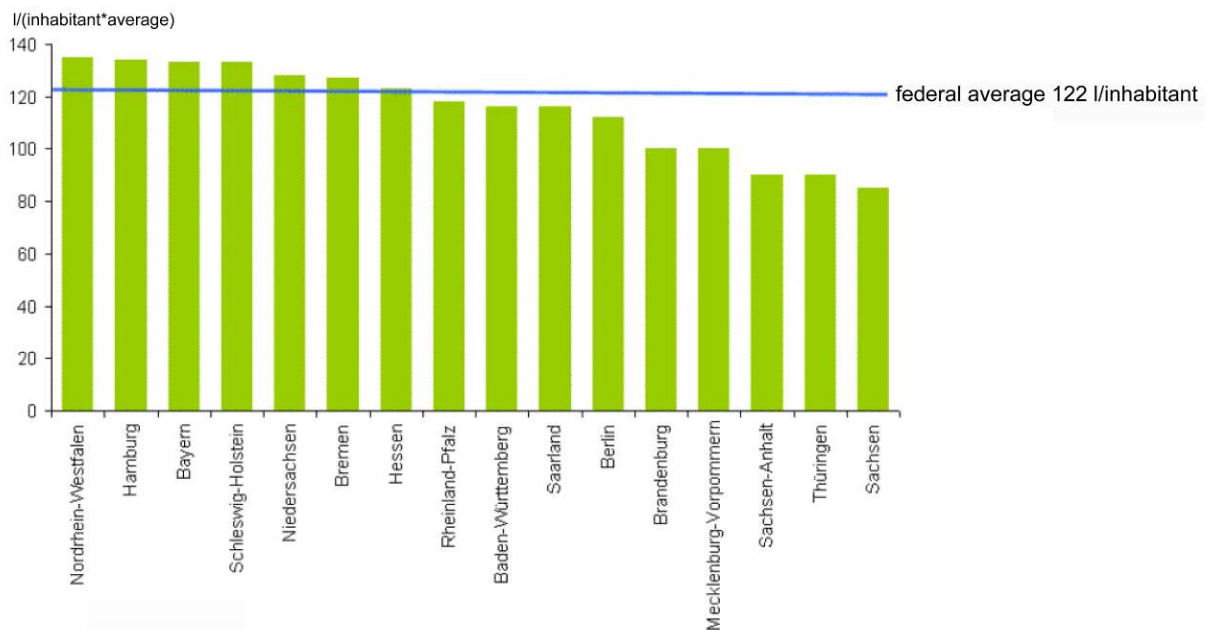
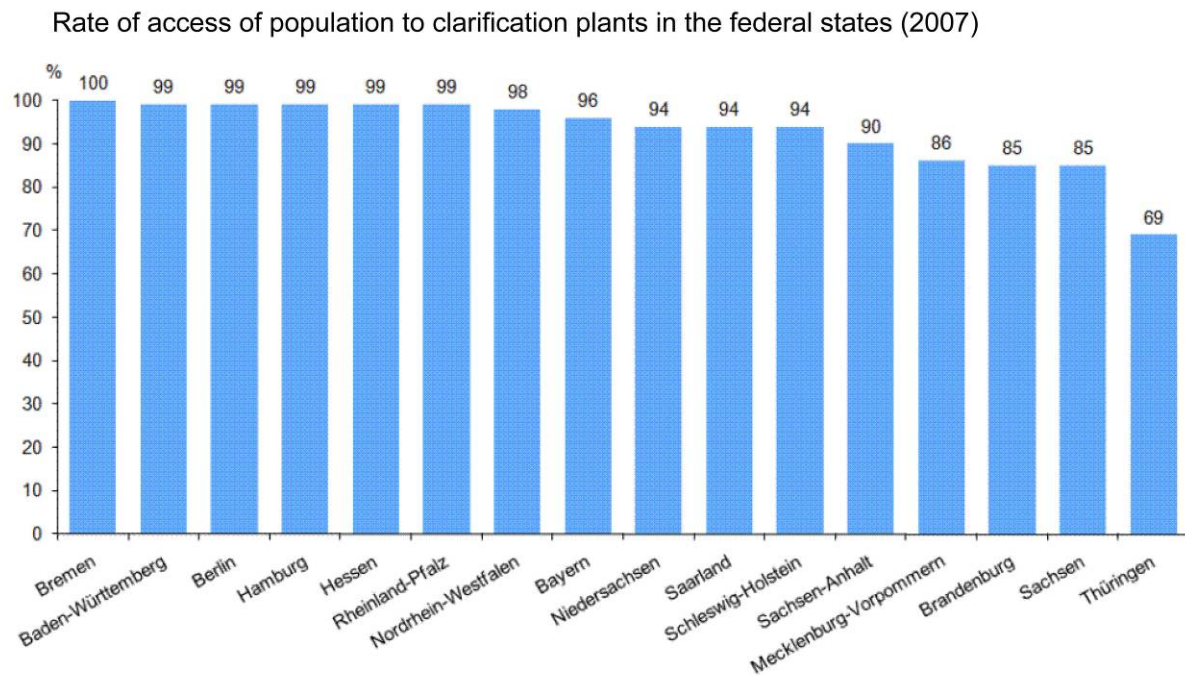


Figure 2: Water consumption in households and small business in federal states, 2007. (National Statistical Office, 2009. Legend translated into English)

The national average of water consumption in Germany is 122 litres per inhabitant and day (blue line in the map above). All five federal states (and Berlin) in Eastern Germany have a less consumption than the states in Western Germany which may due to different use structure and changes in the economic situation (Federal Statistical Office 2009). In urban regions of Eastern Germany and also in parts of the Ruhrgebiet (North Rhine-Westphalia) are negative effects noticeable. Because of the decline in population and water intensive industries the consumption is declining, however the price for the remaining users is increasing because more than 80% of costs for water provision and sewerage are fixed costs which are needed for building and maintenance of the pipelines and the sewerage system. These costs are allocated to the users.

Similar to the water management the federal government is responsible for creating framework legislation for the sewerage system. The sewage disposal is a sovereign business and a municipal duty. Institutionally the sewage disposal is separated from water provision and the number of private providers is very marginal.

96% of the German population is connected to a public sewerage system. The map below shows how many inhabitants are connected to clarification plants in the sixteen federal states (Federal Statistical Office 2007).

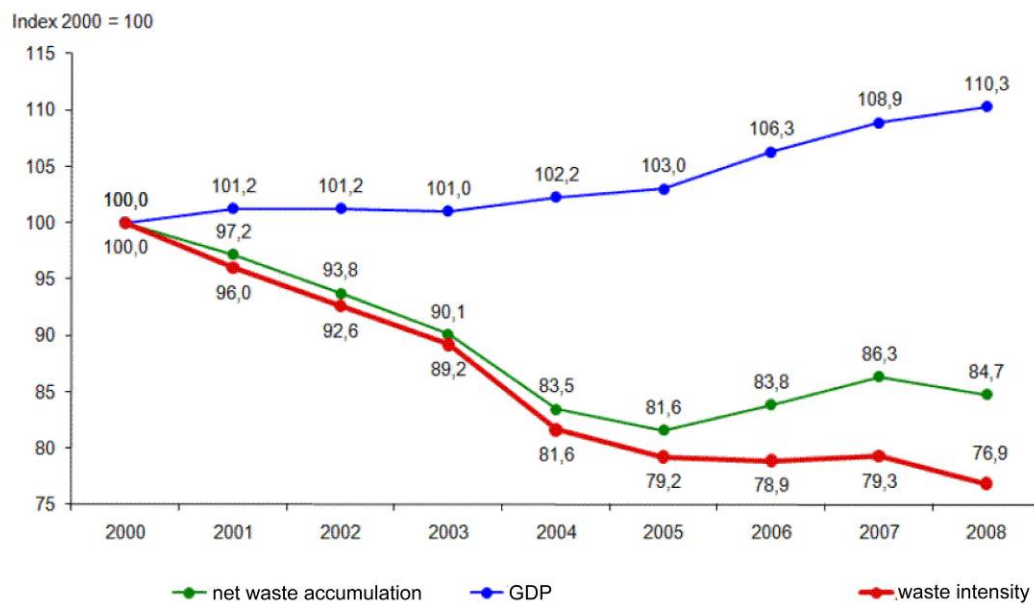


Source: National Statistical Office, 2007

Figure 3: Rate of access of population to clarification plants in the federal states, 2007. (National Statistical Office, 2007. Legend translated into English)

A strong isolation of waste accumulation and economic growth is aspired by the federal government. The map below shows that even if the gross domestic product is increasing the intensity of waste (total waste accumulation measured by the development of the gross domestic product) was decreasing in the last years (blue line: gross domestic product, green line: net waste accumulation, red line: waste intensity). Basis for the German waste law is the Closed Substance Cycle and Waste Management Act. Waste must be prevented as far as possible, and in particular the volume and level of harm waste can cause and be recycled or used to recover energy or materials.

### Isolation of waste accumulation and economic performance, waste intensity



Source: National Statistical Office, Federal Environmental Agency

Figure 4: Isolation of waste accumulation and economic performance, waste intensity. (National Statistical Office, 2011. Legend translated into English)

Germany's waste volume totals about 380 million tonnes per year. At 60%, building and demolition material account for the majority of this volume. In 2002, household waste accounted for about 14% and the share of waste requiring special monitoring, known as "special waste," totalled about 5% (Federal Environment Agency 2011). In 1999 each person produced 441 kilogrammes of domestic waste per year. In 2008 there were 522 kilogrammes per inhabitant (this may due to different statistical methods).

The German waste management is an important economic sector and produces annually 50 billion € with 200 000 employees.

### Electricity

With the liberalisation of the energy market in Germany in 1998 the market structure of electricity supply has changed. The electricity industry has now pluralistic structures. There are 1 100 companies operating in power generation, carrier, distribution, trade and marketing. In the year 2007 the industry employs 122 000 employees (Federal Ministry of Economics and Technology 2011).

Competition between the companies does not really exist in the case of power generation. Four companies (E.ON, RWE, Vattenfall and EnBW) have divided the market into four regions where they provide 80% of power generation. Almost 81% of power generation is closed for other providers. So the power generation of nuclear power and brown coal is lying at the four companies (Libbe, Köhler, and Beckmann 2010).

The German power generation is build up on three pillars: brown coal (24%), black coal (22%) and nuclear power (22%). Natural gas has a rate of 12% (2007). Since the 1990s the

German government brings forward the power generation from renewable energies. Because of the Renewable Energy Act the rate of these energy sources (especially wind power) is increased to 14% in the year 2007.

The German power consumption is currently 540 TWh (terra watt-hour) per year. The biggest power consumer is the industry sector with currently 256 TWh per year followed by the 39 million private households which consume 141 TWh.

### **Public transport**

Public transport is seen by the federal government as an important element for services of general interest and sustainable mobility. 27 million people use the different types (subway, bus) of public transport every day by what 19 million car drives per day can be saved. The federal government supports the development and maintenance with 8.5 billion € per year. The legal basis for public transport is on the one hand the Passenger Transport Law, on the other hand laws concerning public transport in the sixteen federal states. Only a few federal states define the provision of public transport legally as a duty, in the majority of cases public transport is an optional business. Nevertheless many municipalities are the owner of their public transport company especially in urban areas. Private companies run as subcontractors several routes regionally bordered.

For the organisation of the public transport the municipalities have freedom referred to their financial condition and the political will. In contrast to this the pupils transport has to be guaranteed.

The price structure is regionally very specific and complex. The infrastructure and the going concern has to be part-financed by the federal government, the federal states and the municipalities.

The local transportation net follows the Central Place Theory which means the offer is organised hierarchically. There is a big gap between the centre and the periphery especially in urban areas regarding density of net and frequency in which the means of transport operates. The local transport system is more concentrating on the centre than on the periphery and the connection between peripheral regions.

Planning instrument on the local level is the Local Traffic Plan which contains aspects like stations, frequency and provisions (Libbe, Köhler, and Beckmann 2010).

### **Postal services**

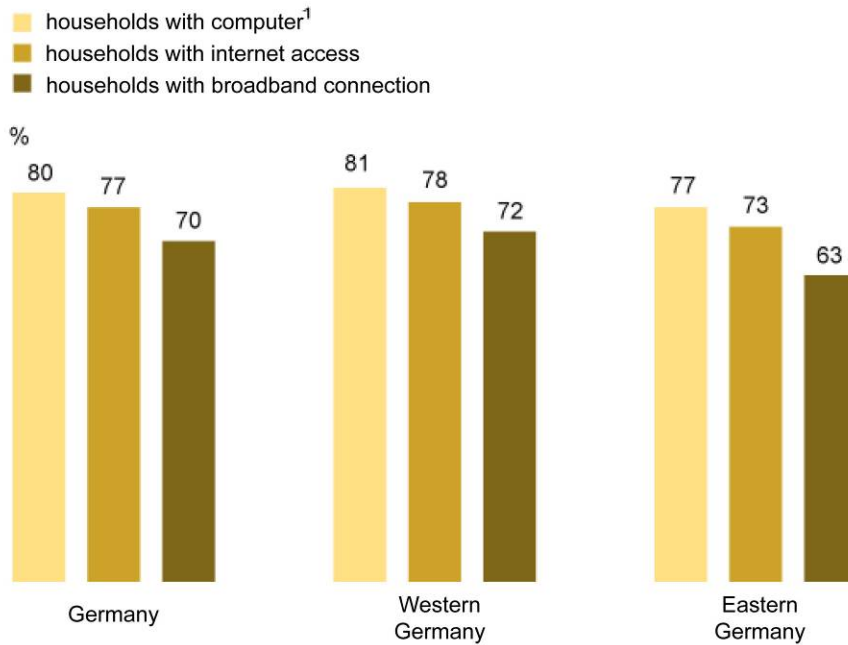
8 800 post and express mail services are operating in Germany with 433 200 employees and a sales volume of 25.4 billion € (2009). The Deutsche Post AG is by far the biggest company with 170 000 employees in 2010. The former state-owned company was privatised in 1995 (Federal Statistical Office 2011).

### **Electronic communications and ICT**

Even after liberalisation of the telecoms market, the former monopoly company, Deutsche Telekom AG, will be able to stay dominant for a long time. In 2010 176 400 employees are

employed in the telecommunication sector, 123 200 of them are employed by Deutsche Telekom AG which clearly shows the important position of the formerly state-owned company.

### Information and communication technology in private households, 2010



<sup>1</sup> fixed computer, laptop, notebook, netbook, PDA

© Statistisches Bundesamt, Wiesbaden 2011

Figure 5: Information and communication technology in private households, 2010. (National Statistical Office, 2011. Legend translated into English)

The figure shows that 80% of private households in Germany have their own computer (Western Germany 81%, Eastern Germany and Berlin 77%). 77% have access to the internet and 70% a broadband connection (Federal Statistical Office 2011).



## 2.2.2 Social services of general interest

### Education

According to the German constitution the whole public and private school system is under federal supervision. But the organisation of the public school system is under the responsibility of the federal states.

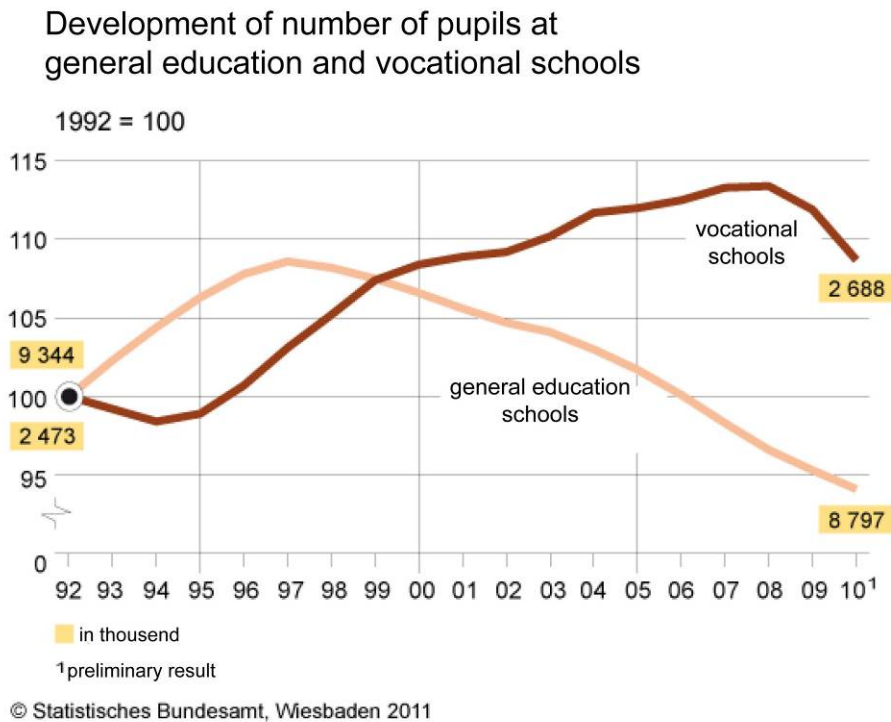


Figure 6: Development of number of pupils at general education and vocational schools. (National Statistical Office, 2011. Legend translated into English)

Compared to the year 1992 Germany has currently less pupils in comprehensive schools (light line). The situation in vocational schools is different, they have a little more pupils nowadays (dark line). For each child in Germany persists compulsory education in a public or private school for nine or ten years. The age by school enrolment is between five and eight years.

Germany invested in a pupil's education at comprehensive schools 5200€ on average in 2006. The biggest expenditure is generated by labour costs (80%). Labour costs are financed by the particular federal state.

The secondary school system is tripartite so there are three different types of secondary schools. The "Gymnasium" is offering the highest educational level which one can get the admission to visit a university. Having a degree of "Hauptschule" or "Realschule" one is allowed to start a vocational training.

There are currently 418 colleges (universities, art colleges, universities of applied science, educational and theological colleges) in Germany with 210 000 employees and 2.2 million students (Federal Statistical Office 2011). The organisation and planning of the college system is in the responsibility of the federal states.



## Labour Market Services

Labour market services are publicly organised by the “Bundesagentur für Arbeit” and “jobcenter”. These institutions are the contact points for unemployed persons and welfare recipients. They give advice and support for the placement and for the financial support coming from the state. The Federal Employment Office is managed in self-administration and has 178 agencies and 610 offices. The jobcentres are located in the municipalities. Private placement officers are active as well and some of them get financial support from the Federal Employment Office.

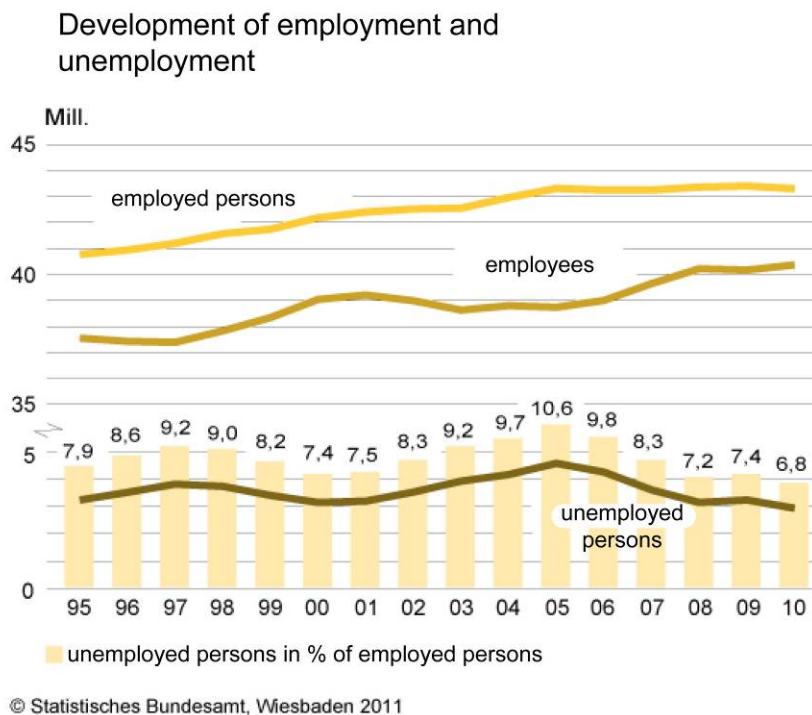


Figure 7: Development of employment and unemployment. (National Statistical Office, 2011. Legend translated into English)

The map above shows the development of employment and unemployment since 1995. The top line represents the number of people who were able to work, the next line represents the actual employees and the deepest line shows the number of unemployed persons. The yellow pillars show the rate of unemployed persons in percent of persons who were actually able to work. As you can see the number of unemployed persons was decreasing since 2005.

## **Public administration and defence**

4.5 million employees were employed in the public service in 2008. 11.9 % of them worked for the federal administration, 50.2% in the federal states and 29.6% were employed in the municipalities. Another 8.3% worked in different social insurance agencies and in the federal employment offices. Article number 87 of the constitution dictates which duties and responsibilities are exclusively federal government ones and are not to be allocated to the federal states. This concerns particularly the sector of defence and foreign affairs.

The federal government is responsible for the legislative process whereas the federal states are in charge of the administrative exertion of the laws. The classical duties of the federal states are education, sciences, culture as well as public policy and security.

The shortest distance between citizens and public authorities is on the local level in the municipalities. The municipal self-administration is defined in the German constitution. But this strong protection of the local administration is diminished through the financial dependency of the federal government and the federal states and the legal involvement of the constitution of the particular federal state.

The duties and responsibilities of the municipalities are divided into optional and compulsory duties. Optional duties like the management of sport facilities, cultural institutions or the local public transport are fulfilled by the municipalities in their own discretion and financial resources. Compulsory duties on the other hand are transferred through national or federal state law respectively directly through national and federal state authorities to the local municipalities. One example for this kind of duty is the sewage system.

## **Cultural and Recreational Services**

Germany has a quite dense net of theatres and opera houses. The sixteen federal states have the responsibility for local cultural institutions especially in financial affairs and in social and regulative matters. The federal government, the federal states and the municipalities had expenditures of 9.6 billion € in 2010. The local communities have the biggest amount with 44.4% followed by the federal states with 43% and the federal government with 12.6% (2007). 45% of the local cultural expenditures are dispensed in cities with more than 200 000 inhabitants. The city of Frankfurt pays 222€ per inhabitant for the going cultural concern followed by Leipzig with 187€ and Düsseldorf with 144€ in 2007. Looking at the different cultural fields more than one third of the expenditures are for theatres and music events (36.3%). Museums have a share of 18.6% and libraries of 14.6% in 2007.

In addition to communal cultural institutions there are also private groups existing. Some of them get a financial support but this was decreasing in the last years due to a difficult financial situation of the communities.

## Care Services

The German health care system is based on three infrastructural pillars: the ambulant treatment by general practitioners and medical specialists, inpatient treatment by hospitals and activities by the national health service.

Because of the federal system the medical provision is quite manifold and complex. Core of the system is the compulsory health insurance complemented by the private health insurance which has only a small share in the market of health insurances.

Germany has a register of all established doctors and doctors who want to found a new surgery need the admission for doing so. With this method one will avoid the existing of regions which have too many surgeries and regions (especially in rural areas) with hardly any doctors.

The provision with general practitioners is to guarantee a nationwide medical provision close to the population.

Currently 2 100 hospitals were run. The organising institution is public (municipalities) and non-profit as well as private. Installation and support are part of the local services of general interest. Private running hospitals have increased their share in the market. In the Eastern federal states the rate of hospital beds in private hospitals predominate. In the last years local hospitals were transformed in private organisations to save expenses.

The rate of expenditure of health care to the gross domestic product is increasing in the last years as the map below shows. 11.6% of the GDP belongs to the health care in 2009.

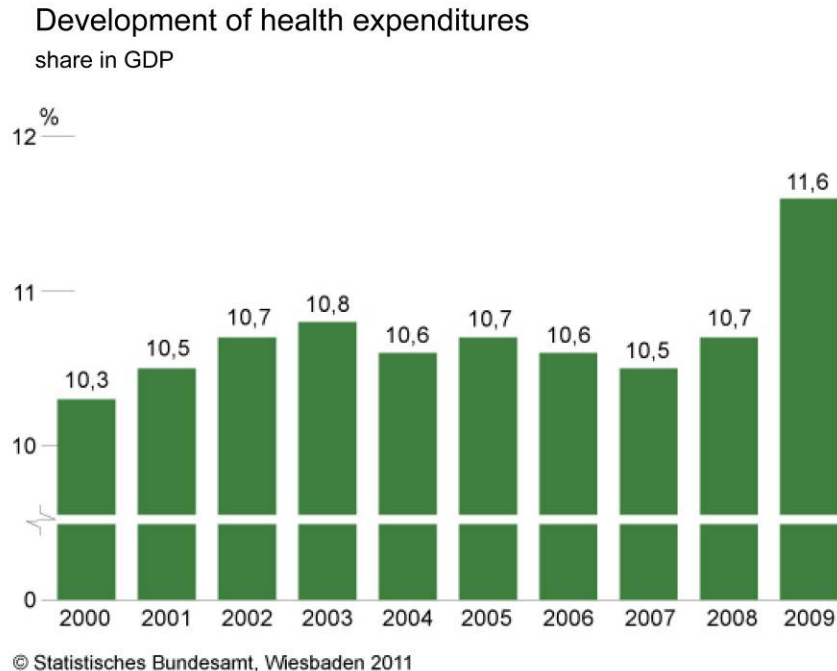


Figure 8: Development of health expenditures (share in GDP). (National Statistical Office, 2011.  
Legend translated into English)

The third pillar is the national health service for which the federal states are responsible and which is located in the communities. The national health services have the responsibility to guarantee the public health on a local level. The services activities are the control of

companies in the area of foods, medicinal products and poisons as well as the control of public institutions under the consideration of health and hygiene.

The care of elder and other people in need of care is offered by private companies and churchly institutions.

### **Social housing**

The good provision of accommodations in Germany is an achievement of the cooperation between market and politics. For the protection of an adequate provision with accommodations it is necessary to implement different supporting instruments of the accommodation politics. In addition to the regulative general framework for the accommodation market are these instruments social coverage of housing, support for creation of residential property and retirement provision and improvement of the ecological balance of housing.

One aspect of the social coverage is the housing subsidy which is given to low-income households to guarantee an adequate and family friendly accommodation. In Western Germany this financial support exists since 1965, in Eastern Germany since 1991.

Households getting social welfare are not allowed to receive housing subsidy because the costs for accommodations are already covered by the welfare.

Another aspect is the promotion of social housing. Private investors and local housing companies provide cheap rented flats for households which have difficulties to get accommodations in the normal market. The implementation of these laws is under the responsibility of the federal states. In this matter the federal states get 518.2 million € of the federal government until 2013.

But recent studies show that in the case of new constructions luxury houses were built. This development is especially seen in bigger cities as Hamburg, Frankfurt and Berlin. The German tenant association warns about housing shortage particularly for low-income groups and families.

### **Compulsory social security**

The social insurance is based on several principles. In addition to the insurance obligation the employer as well as the employee has to pay its share in the social insurance systems. The insurance is also based on the principle of solidarity which means that each insured person has to pay into the insurance independent of the demand of benefits. Persons who have a higher demand on benefits are secured through the other members. The fees act on the income of the insured persons, but the benefits are distributed through a solidly united compensation.

The five most important areas of compulsory social insurance are the health insurance, the unemployment insurance, the pension insurance, the accident insurance and the nursing care insurance.

There are two different kinds of health insurance existing, the compulsory health insurance and the private health insurance. In the compulsory health insurance all insured persons pay the same premium rate according to their income into the health care fund. In the private health insurance the amount of the premium rate is determined individually and adjusts to the criteria of age, gender, pre-existing diseases and the agreed scope of benefits.

The unemployment insurance is mainly financed by the contributions of employers and employees. The most important function is the payment of unemployment benefit in the case of job loss of the insured person.

The pension insurance wants to guarantee a lifelong protection against the risk of reduction in earning capacity, of old age and death. Surviving dependants receive their orphan's and widow pension out of it. The benefits of the pension insurance are dependent of the paid contributions.

The accident insurance differs from the other insurances as it is financed exclusively by the employer. It occurs in case of occupational accidents or diseases and cares for a comprehensive health care provision.

The recent social insurance is the nursing care insurance which was implemented in 1995 to fill in a gap in the caring provision of the citizens. It covers the demand in the case of long-term care. Until 1995 there was no adequate coverage against the high financial risk of long-term care after an accident or in old age. Caring had to be financed by the person who need the care or the families and stressed the health insurance system (BpB 2012).

### 2.3 Analysis of the national context

Several different challenges and developments will confront the provision of services of general interest in Germany in the future.

<b>Social sector</b>	<ul style="list-style-type: none"> <li>• Demographic change</li> <li>• Urban settlement developments</li> <li>• Changing structure and spatial change of private households</li> <li>• Social-spatial polarisation</li> <li>• Changes in society's values</li> </ul>
<b>Economic sector</b>	<ul style="list-style-type: none"> <li>• Limited financial resources of the municipalities</li> <li>• Investment needs</li> <li>• Consideration of follow-up costs</li> </ul>
<b>Ecological sector</b>	<ul style="list-style-type: none"> <li>• Climate change, urban climate</li> <li>• Climate protection and adaptation</li> <li>• Shortage of resources</li> </ul>
<b>Technical sector</b>	<ul style="list-style-type: none"> <li>• Increasing complexity of technical systems</li> </ul>

Table 1: Challenges for municipal infrastructures (Libbe, Köhler, and Beckmann 2010)

The table above shows some of the main challenges which will have effects on the provision of services of general interest. The authors divide the impacts into four different sectors and their events and development which will face services in the future and in some extent

already have influence.

One of the main impacts, it was already mentioned, will be the demographic change which is composed by a decline in population and by ageing of the population. The numbers of citizens as well as the composition of population are fundamental determining factors in the provision of municipal services of general interest and their utilisation.

Several projections estimate a population decline until 2050 up to 69 million inhabitants in Germany (BBSR 2009). The regional population development is characterised by growing and shrinking at once which is caused by demographic processes and through internal migration. In rural and structural weak regions deficit of births and migration of young persons, especially of young women, will lead to a dramatic decline of population. Intra-urban the decline of citizens will be occurring mainly in big residential neighbourhoods of the 1970s and 1980s which are not reconstructed.

An ageing population is the other reason for an obvious population decline in Germany. The average age will be 50 years in 2050. This will lead to a shift in the share of age groups relevant for age specific infrastructures. For example the school-aged population group declines and at the same time the share of aged people increases. Both groups have a high demand for services located in the neighbourhood because of their limited mobility but the services they need extremely differ from each other.

International migration is seen as the only option to gain population in Germany. It is estimated that 11.5 million people will come to the country between 2005 and 2050 (BBSR 2009).

Another effect of the demographic change is the change of number, size and composition of private households. Households are getting smaller and that leads to an increase of private households by 5% until 2025 by a decrease of population at once.

The settlement structure of a country has also big influences to the provision and spreading of services of general interest. Is the settlement structure changing due to population increase or decline (e.g. as a result of new constructions or extensions of settlements) it will have an impact directly to the existing infrastructure because of changes in the demand. The net of infrastructures is significantly wider in rather rural, sparsely populated regions than in urban densely populated regions. So changes in the settlement structure could lead likewise to an improvement or degradation in provision for local citizens. The distance to certain services could become closer or farther. The stock of services has to be protected and at the same time adapted to current settlement processes and developments.

The changes in population density have similar effects as changes in the settlement structure. Decreasing population density means, that the thresholds of capacities are undercut and adaptations have to be made. An increasing population density requires a well-directed extension of services. A special challenge, particularly for on-grid infrastructures and its adequate design, constitutes the spatial neighbouring and simultaneously appearance of growth and shrinking in regions and even in urban quarters.

One of the main impact or rather challenge are the municipal budgets because the public debts are very high. In 2010 the debts of the state, the sixteen federal states and the municipalities were by 2 billion euro. Reasons for this development are reduced earnings

from business taxes as a result of weak economic activities as well as reduced earnings from income taxes by increasing social spending.

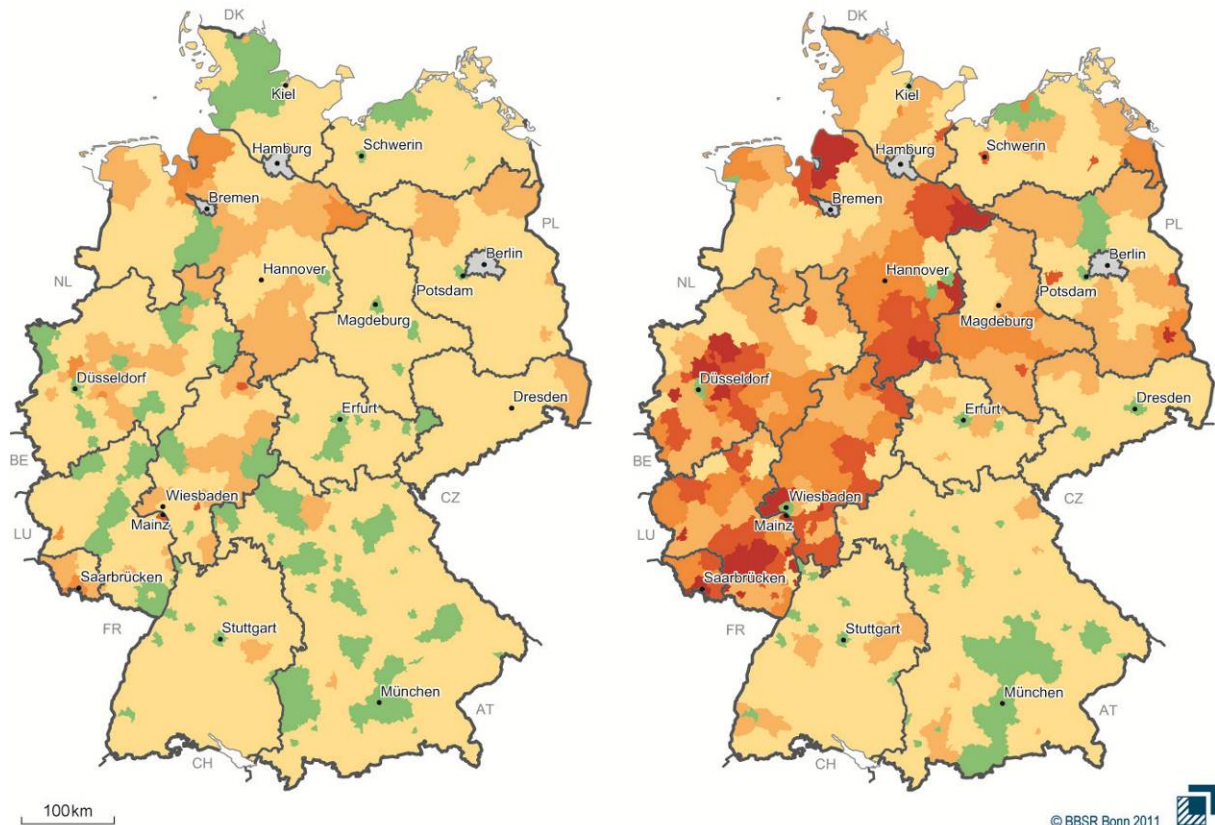
The municipalities are forced to reduce their activities, to privatise certain areas and to cut benefits. To cover short-term liquidity the public administration uses cash credits which actually should be an exception but is now a rule for many cities in Germany to finance running expenses (BBSR 2012). Especially cities in the Ruhr region use these kind of financing. The city of Essen has the highest amount with almost 2 million euro of cash credits in 2010.

The maps below show cash credits in euro per inhabitant in 1998 and 2010. It is obvious that the number of cities which use cash credits as a financing instrument increased in these twelve years. Moreover the credits per inhabitant increased enormously. Particularly in western parts of the country many cities had to use cash credits. The Ruhr region in North Rhine-Westphalia shows one of the highest rates with more than 2000 euro cash credits per capita in certain areas. The southern and south-eastern parts of Germany show a much better financial situation even when the regions with no cash credits decreased.

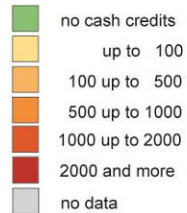
# Spatial distribution of municipal cash credits

1998

2010



## Municipal cash credits in euro per inhabitant



Data source: BBSR, municipal debts statistics

Geometrical data base: BKG/BBSR Kreise, 31.12.2009

Spatial distribution of municipal cash credits in 1998 and 2010. (BBSR, 2011)



### **3. Regional analysis of services of general interest**

In the next part an analysis of services of general interest on the regional scale will be presented.

First an overview is given of economic services of general interest in the Ruhr region. It is structured as the national context above. The following part will analyse three different types of economic services more deeply.

Social services of general interest will be presented in the same way. In both analysis results of the realised survey and in-depth interviews will be included.

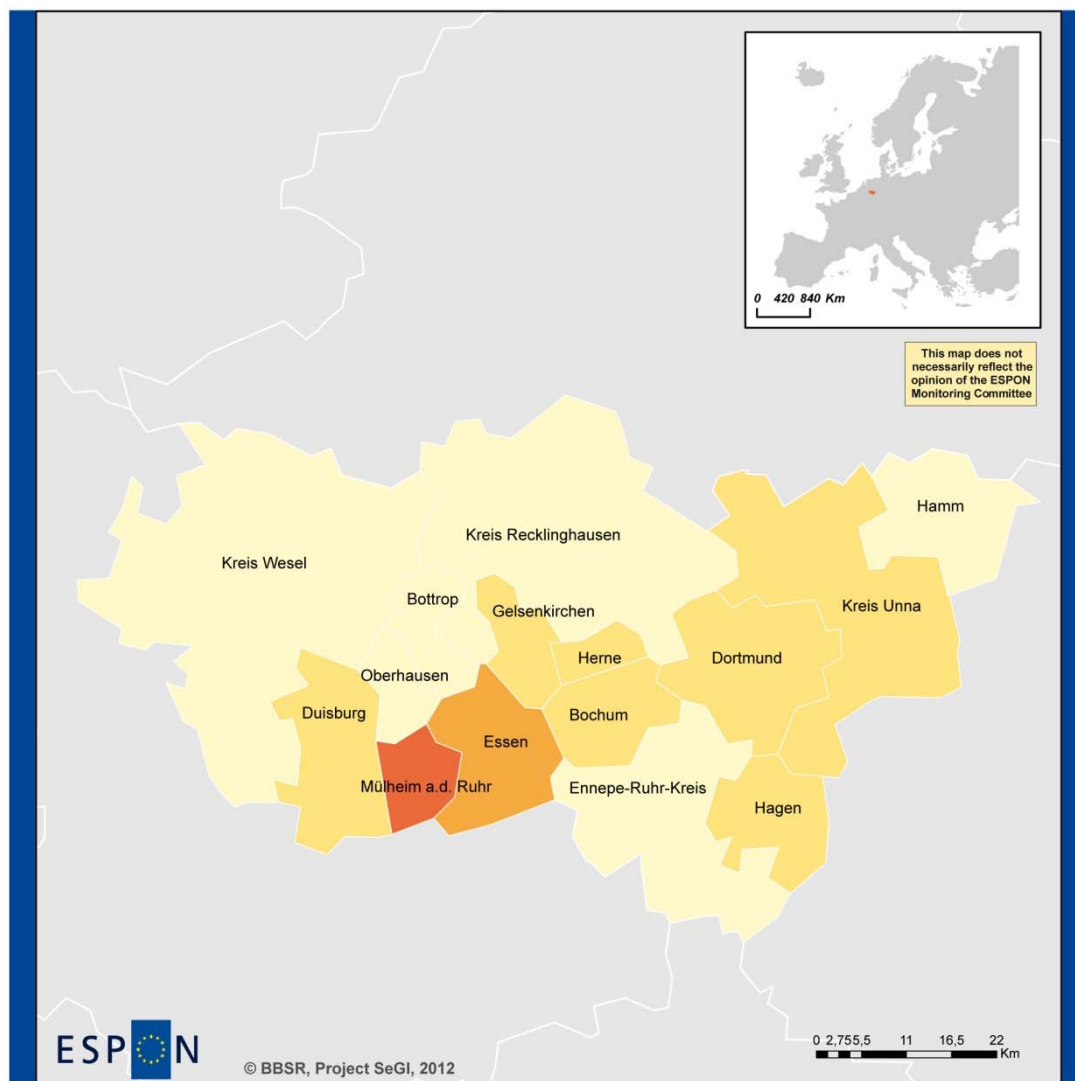
Finally the results of the regional analysis will be set in a political context.

#### **3.1 General outline of economic services of general interest in the Ruhr region** **Energy**

As it was mentioned in the national analysis of services the provision with energy is often arranged by the municipalities with their own energy provider. The so-called public utility companies are mostly sourced out but still belong by the majority to the municipality.

The company RWE is responsible for the power generation and gas supply in North Rhine-Westphalia. The municipalities have a share of almost 17% at RWE of which the public utility company of Dortmund (DSW21) has one of the biggest shares (Interview with DSW21 2012). As the Ruhr region has an important past in power generation due to their coal production there are still workplaces in the energy sector even if a structural change to service oriented jobs occurred in the last decades.

The map below shows the number of persons employed in the energy supply per 10.000 inhabitants. Especially the cities of Essen and Mülheim a.d. Ruhr show a very high share of employees in the energy sector. The company RWE has its headquarter in Essen as well as ThyssenKrupp, Germany's biggest steel company, and E.ON Ruhrgas AG, the biggest supplier of gas in the country.



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### Germany Case Study

#### Employees in energy supply per 10.000 inhabitants

- up to 30
- 31 - 80
- 81 - 160
- 161 and more

Regarding the survey in terms of accessibility to power supply by households and businesses 73% (households) and 82% (businesses) of the municipalities estimate the accessibility as “very good” (Question 1 in the survey, 22 answered this question). The remaining 27% and 18% say the accessibility is “good”. The accessibility to gas supply shows a very similar picture.

It is also said that everybody in the municipalities have access to the electricity network and there is not a special group which have no or a hindered access.

In case of gas supply 59% of the municipalities assess that the gas network is accessible for everybody. As there are also other heating opportunities the number does not mean that the remaining households and business units have disadvantages.

Question six deals with provision, expansion or renovation of infrastructure. 86% say that there is no need for any investment in the electricity network. Only three of the 22 participating municipalities consider a renovation of the network as necessary. One estimates a share of 10% that has to be renovated, one even estimates 20%.

Also the quality of the electricity network is seen as very good and good by almost every municipality (91%).

## **Water**

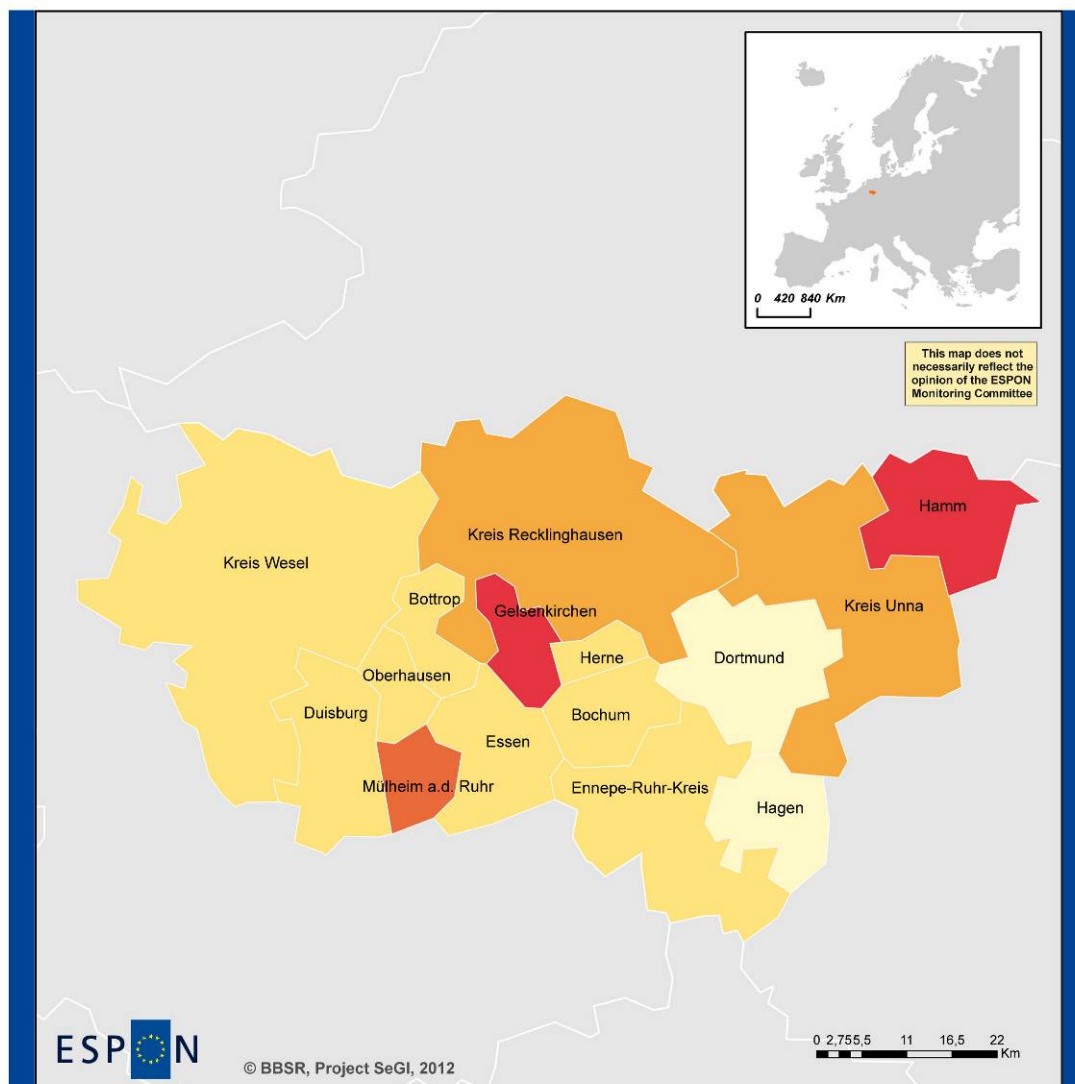
The provision with fresh water is in the responsibility of the local authorities. As in the case of electricity and gas supply water provision is organised by the public utility companies which belong to the municipalities. Some cities and communities have merged their public utility companies or cooperate to become more efficient.

99% of the population in the Ruhr region is connected to the public water supply; the others use their own well.

In North Rhine-Westphalia most fresh water is extracted from ground- and spring water (46%). Near the river Ruhr also artificial groundwater recharge is an important source (22%). Bank filtration has a share of 13% and 19% of water procurement comes from surface water. Nine water dams are located in the Ruhr region.

North Rhine-Westphalia shows the highest rate of water consumption in Germany (135 l/inhabitant in average). But this is due to industrial activities which play an important role in the economy of the most populated federal state.

Regarding the survey all municipalities value the accessibility of households to the local water supply as very good (73%) and good (27%). The accessibility for enterprises is estimated even a bit higher (82% "very good", 18% "good"). So the accessibility to water provision is seen as accessible in general. Only two authorities suppose that the water provision in their community has to be renovated, one estimates the share of renovation by 10% the other one by 20%. The quality of water provision is also mainly seen as very good and good.




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## Germany Case Study

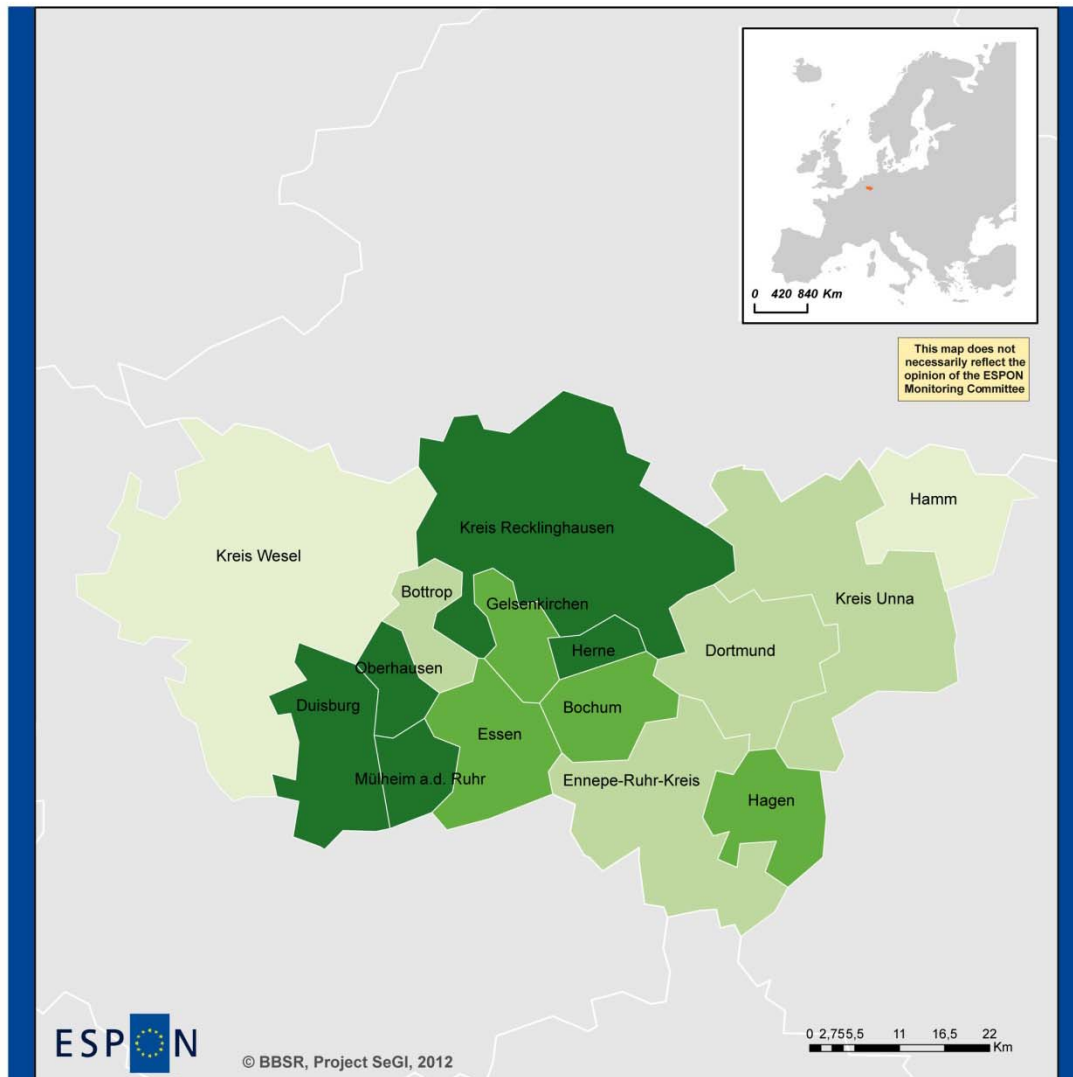
### Employees in water supply per 100.000 inhabitants

- 0
- up to 60
- 61 - 120
- 121 - 200
- 201 and more

## Waste

Like the other mentioned technical infrastructures waste activities are also in the responsibility of the public utility companies. By now many local authorities have transferred their waste management to private companies in the framework of so-called private public partnerships (e.g. the city of Oberhausen). As a result not all waste sites are still in the possession of the municipalities but are operated by private companies.

The map below shows the number of waste sites per 10 square kilometres in the NUTS 3 regions of the Ruhr area.



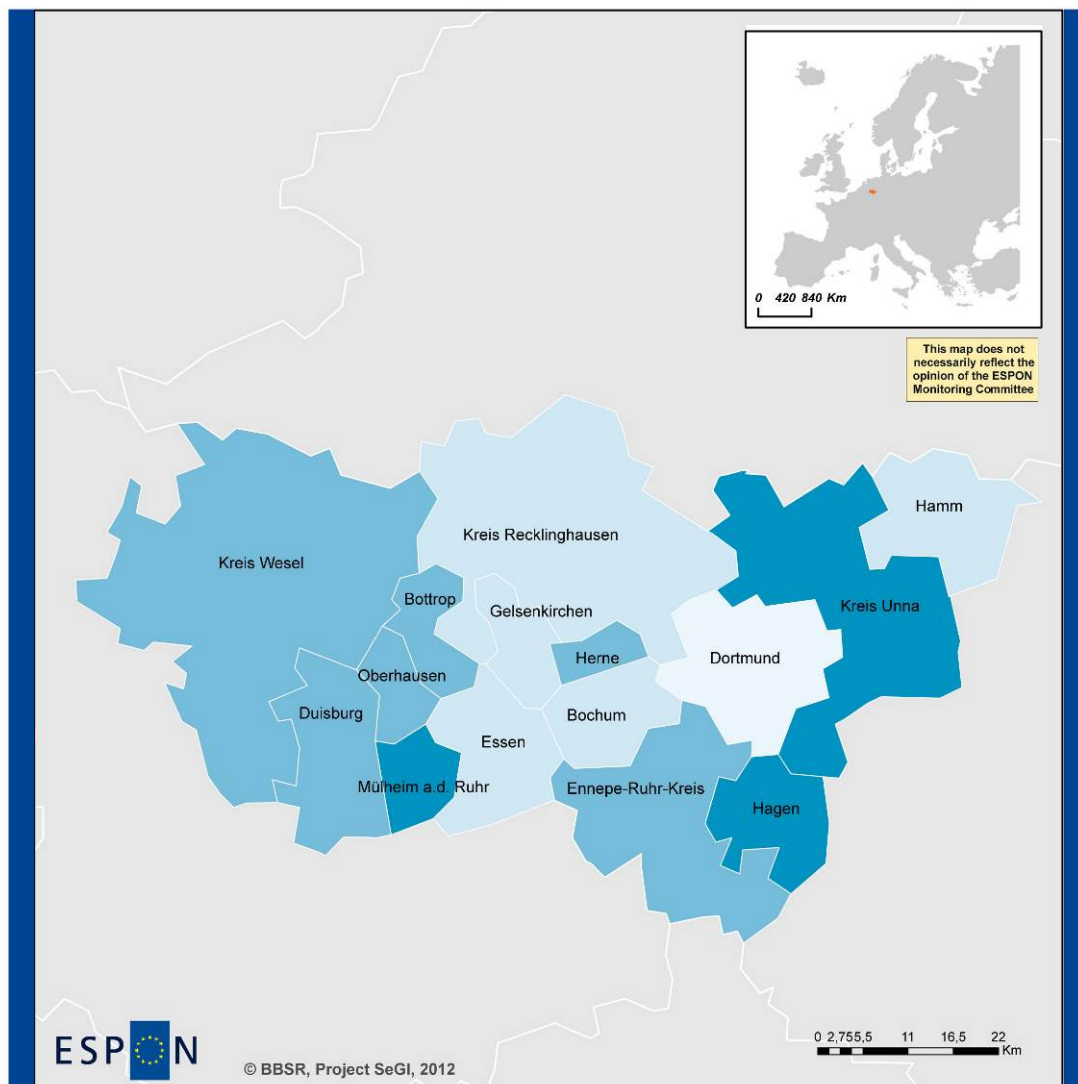
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### Germany Case Study Waste sites per 10 squarekilometres

- up to 50
- 51 - 100
- 101 - 150
- 151 and more

The biggest part of the Ruhr region (Kreis Wesel) has the least number of waste sites per ten square kilometres. Per 100.000 inhabitants seven to eight waste sites are available in this area.



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Local level: NUTS 3  
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### Germany Case Study Waste sites per 100.000 inhabitants

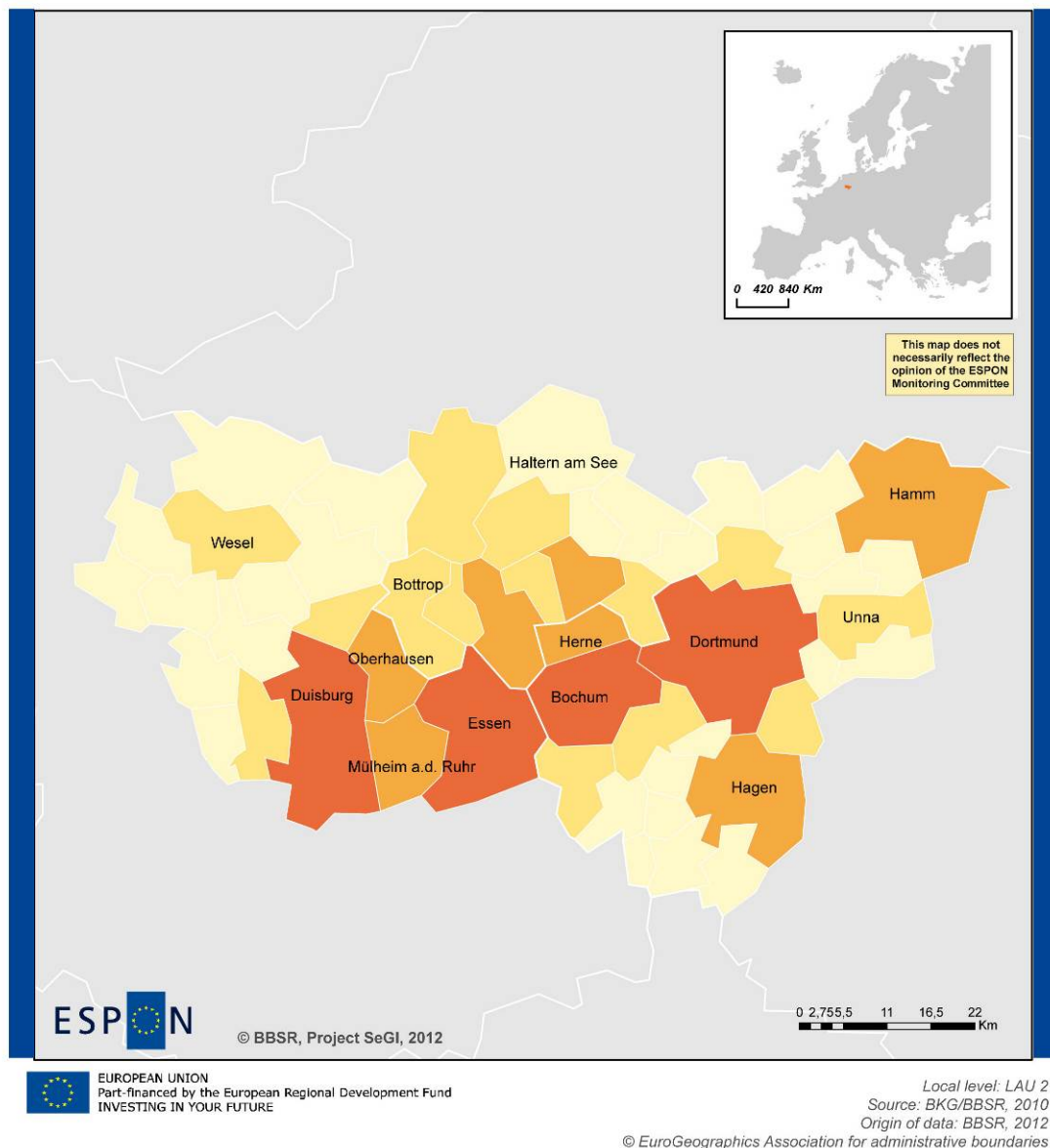
- up to 4
- 5 - 6
- 7 - 8
- 9 and more

The results from the survey are very similar to the other technical infrastructures. All municipalities see the accessibility to the waste management as very good and good. There is not one group highlighted which has no or a hindered access to waste management. Additionally the authorities do not detect any need for action like renovation or extension. The quality is seen as very good and good by each community.

## Postal services

The most important company for postal services is still the former state-owned company Deutsche Post. Especially the delivery of letters is dominated by this company. In express and parcel services also other international operating enterprises emerged after the liberalisation of the postal sector.

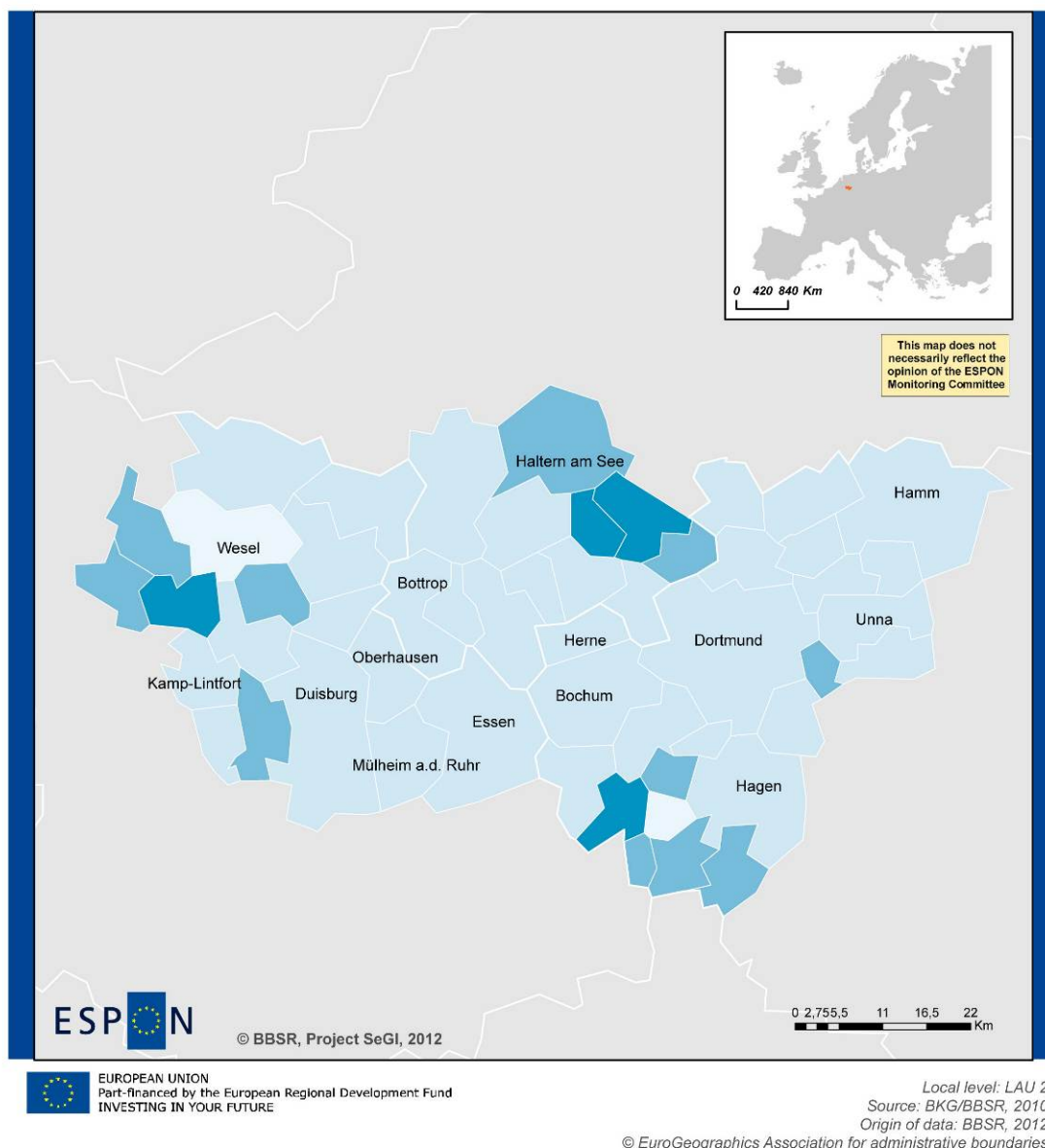
The map below shows the number of post offices in the communities in the Ruhr region.



### Germany Case Study Number of post offices

- up to 9
- 10 - 24
- 25 - 48
- 49 and more

Of course the big cities like Duisburg, Essen, Bochum and Dortmund show the highest number of post offices.



### Germany Case Study Inhabitants per post office

- up to 4000
- 4000 - 7000
- 7000 - 10.000
- 10.000 and more

It seems that the big cities are very well equipped with post offices. In the more rural areas in the northern, southern and western parts of the Ruhr region one post office has to provide for much more people. For example in the communities of Alpen (western Ruhr region), Oer-Erkenschwick and Datteln in the northern part and Sprockhövel in the southern part one post office has to serve over 10.000 inhabitants. The results from the survey shows that some communities are not satisfied with the accessibility as well. Four communities (18%) estimate a bad accessibility to post offices for their citizens. Only 13% think that the accessibility to post offices is very good. After the liberalisation the Deutsche Post closed many agencies in



recent years respectively limited their offer especially in rural areas. There are some small post agencies which do not offer the whole service package of the Deutsche Post. 32% of the communities see difficulties accessing post offices especially for households without a car. 22.7% say that the located post offices are not enough to meet the need of the population.

### **Electronic communication and ICT**

The telecommunication and ICT sector is open for private providers since the liberalisation in the 1990s. The Deutsche Telekom is still the biggest provider but many international companies occurred in this sector in the recent years.

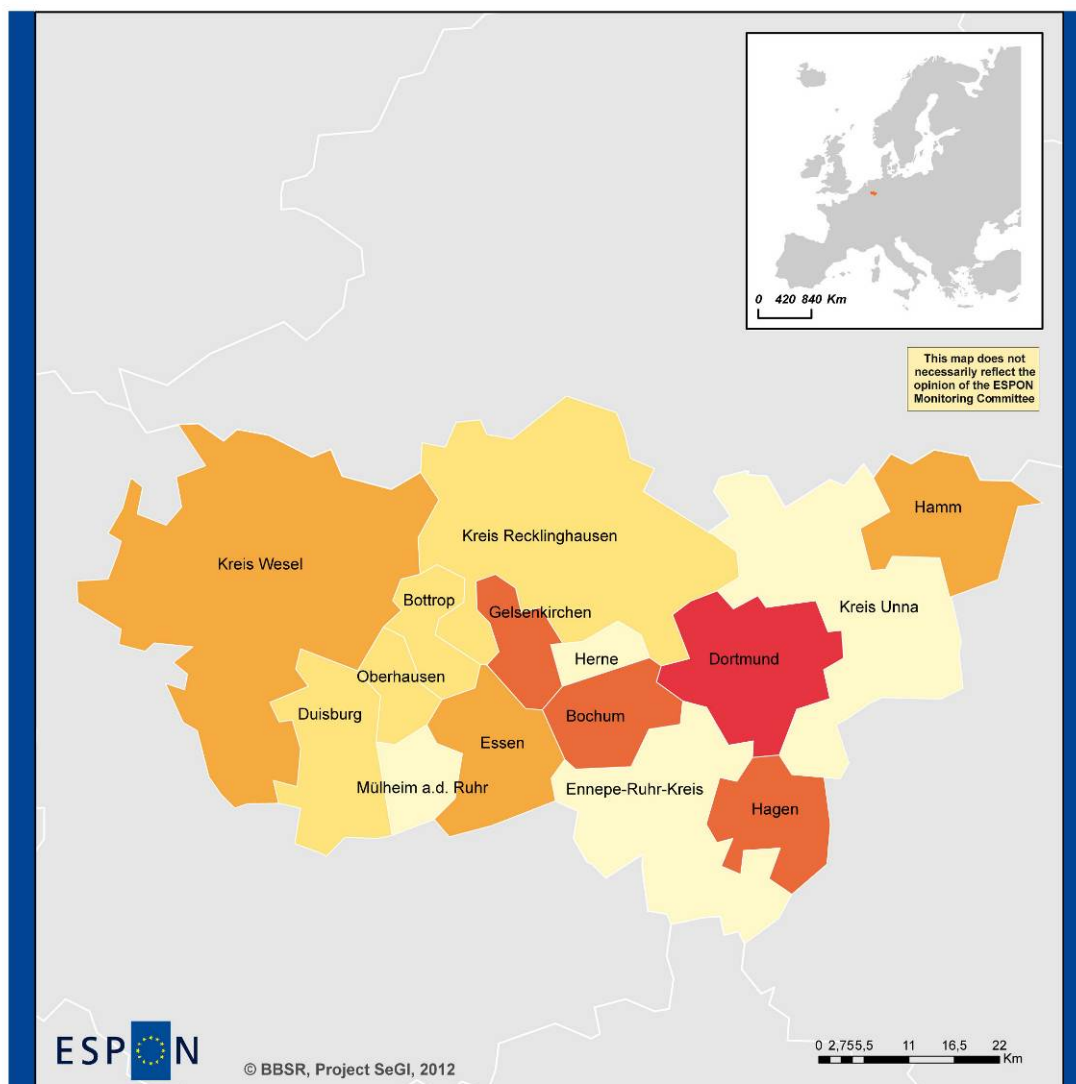
Like the maps below show the cities of Dortmund and Essen show a high rate of employees in the telecommunication and ICT sector.

Especially Dortmund is an important place for the telecommunication sector. Many ICT companies, as the Deutsche Telekom, keep offices in the city. With the company Dokom also a local provider for telecommunication and ICT is available for the inhabitants. The public utility company of Dortmund DSW21 operates this subsidiary company.

The accessibility of the telephone and mobile phone network is seen as very good and good by all municipalities which replied the questionnaire. The networks are assessed as commonly accessible for all population groups in the Ruhr region.

Five municipalities see need for action in the case of the mobile phone net coverage. An expansion of the net coverage is required. Looking at the answers it is obvious that communities in the more rural areas of the Ruhr region would like to see an improvement in the net coverage.

Also the quality of the fixed telephone network and the mobile phone network is seen as very good and good.



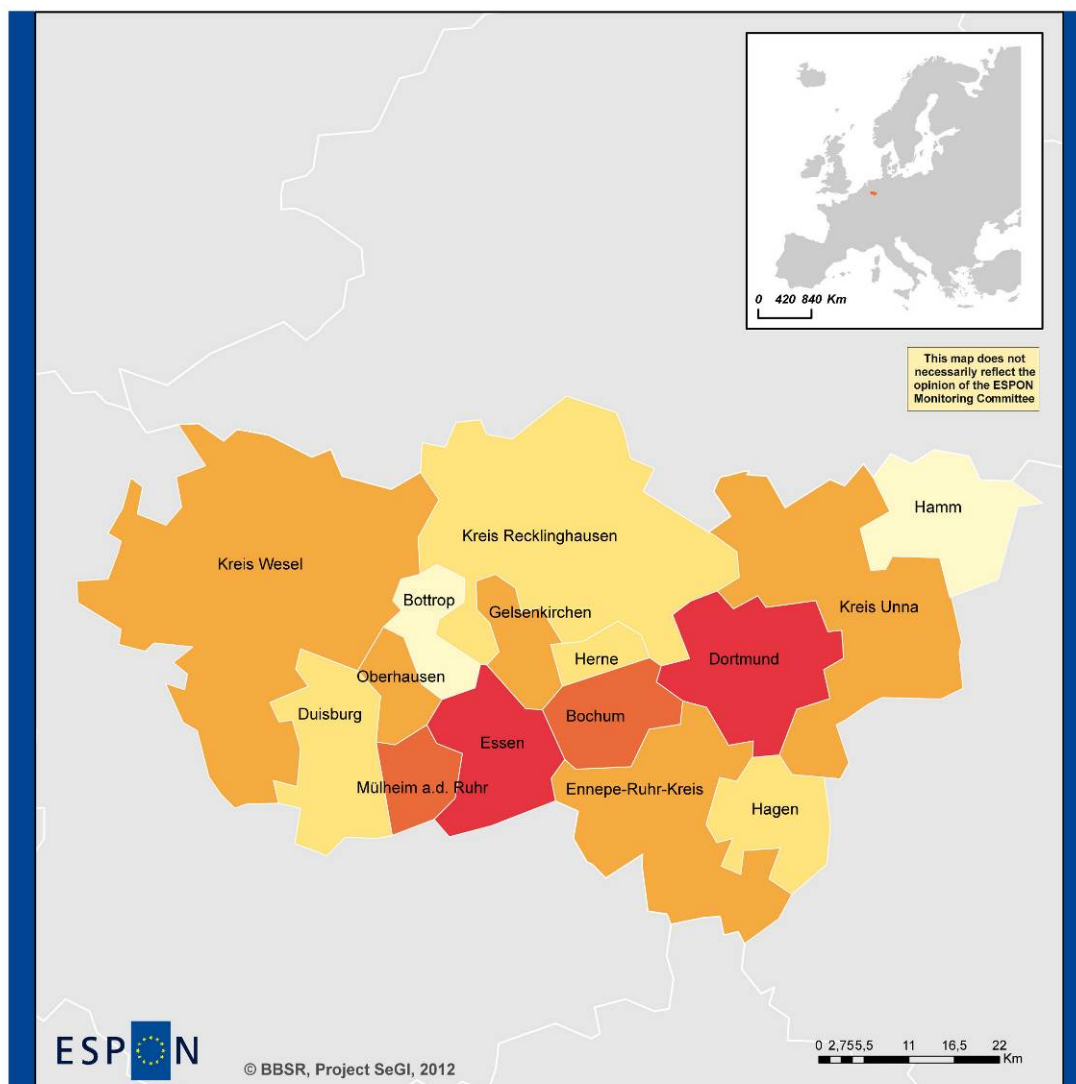

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### Germany Case Study

#### Employees in telecommunication per 100.000 inhabitants

- up to 20
- 21 - 50
- 51 - 80
- 81 - 150
- 150 and more




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### Germany Case Study

#### Employees in ICT per 100.000 inhabitants

- up to 130
- 131 - 250
- 251 - 380
- 381 - 600
- 600 and more

### 3.1.1. Detailed Analysis of selected economic SGIs in the region

#### Sewage system

The sewage system in Germany is developed very well. So the share of population which is connected to the sewage system is nearly 100%. In rural areas especially in the Eastern parts of Germany the share of population connected to canalisation is less than in other parts of the country. But also the Ruhr region has areas where the share does not reach the 100%.

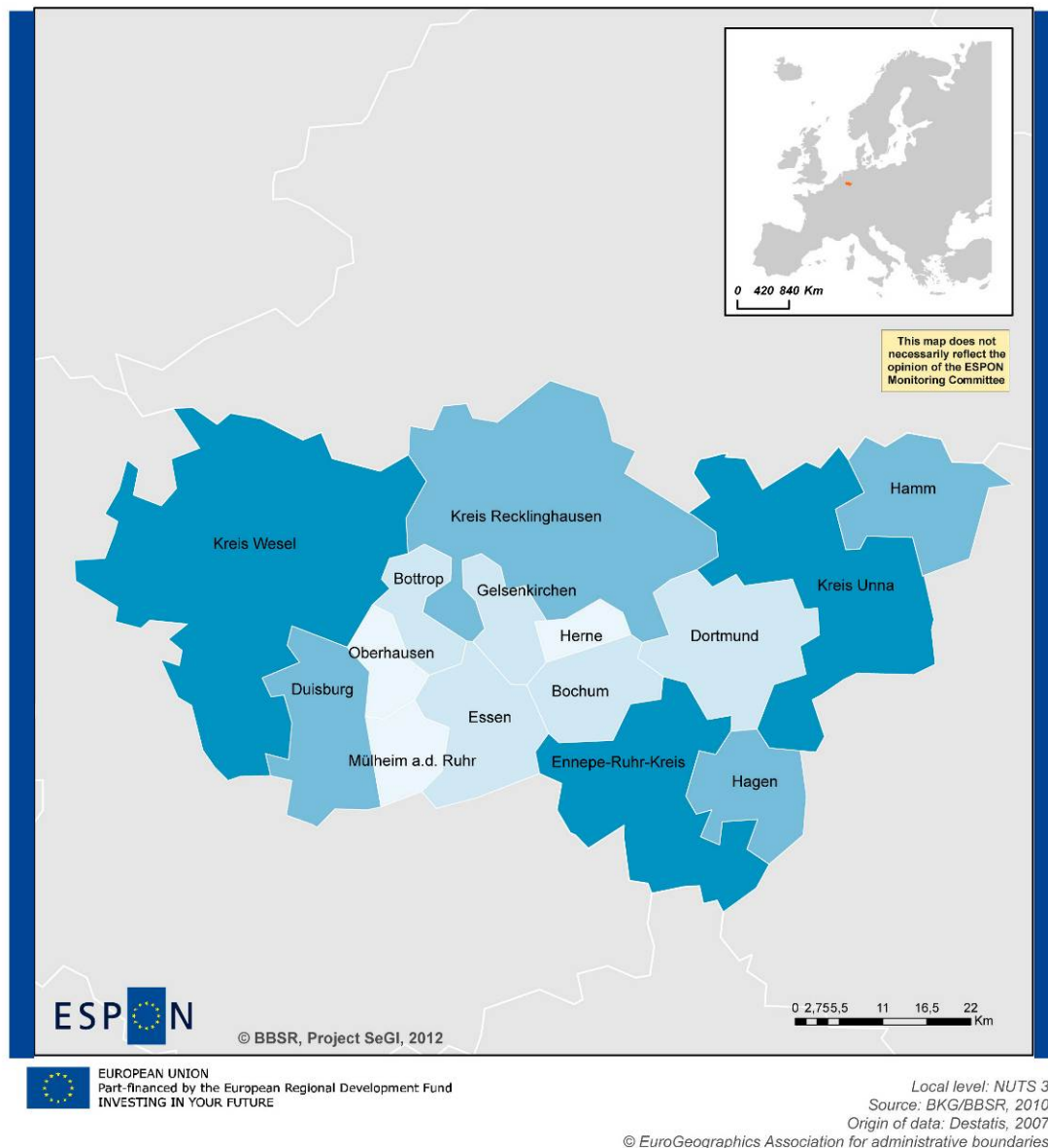


#### Germany Case Study

##### Share of population with access to sewage water system

- 94 - 96%
- 96 - 98%
- 98 - 100%

These are the rural areas in the western and southern parts which are not that industrialised than the other parts. The core of the Ruhr region, where the big agglomerations are located, shows a share of 100%.

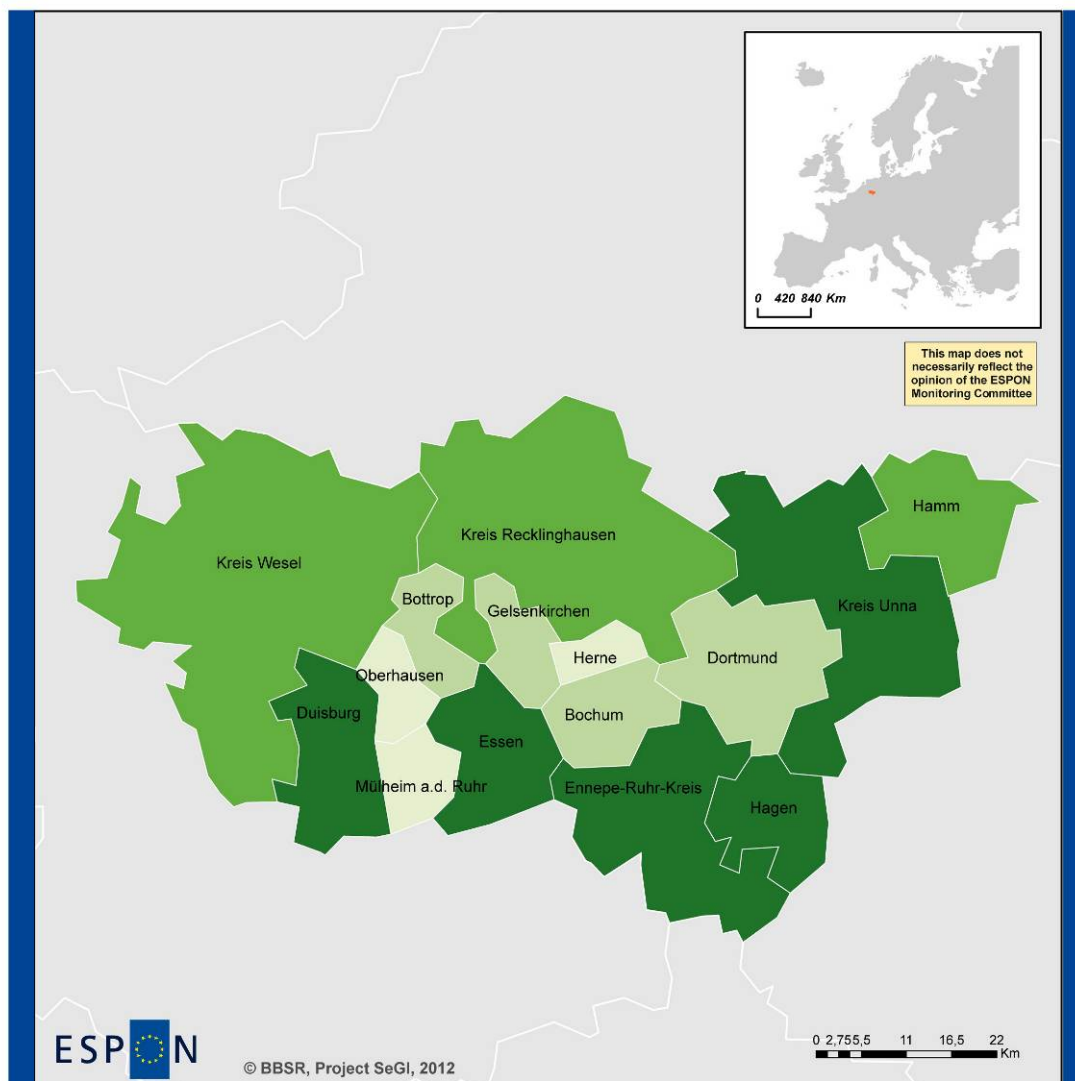


### Germany Case Study

#### Sewage treatment facilities per 100.000 inhabitants

- 0
- 0 - 1
- 1 - 2
- 2 and more

The results of the survey show a similar picture like the other technical infrastructures. The accessibility to the sewage system both for households and businesses is estimated by the communities as very good and good. There are no difficulties to have access to the system and it is commonly accessible for all groups in the Ruhr region. Nevertheless ten of twenty-two communities think that the sewage system has to be renovated. Three communities even estimate that the share of renovation is 50%.







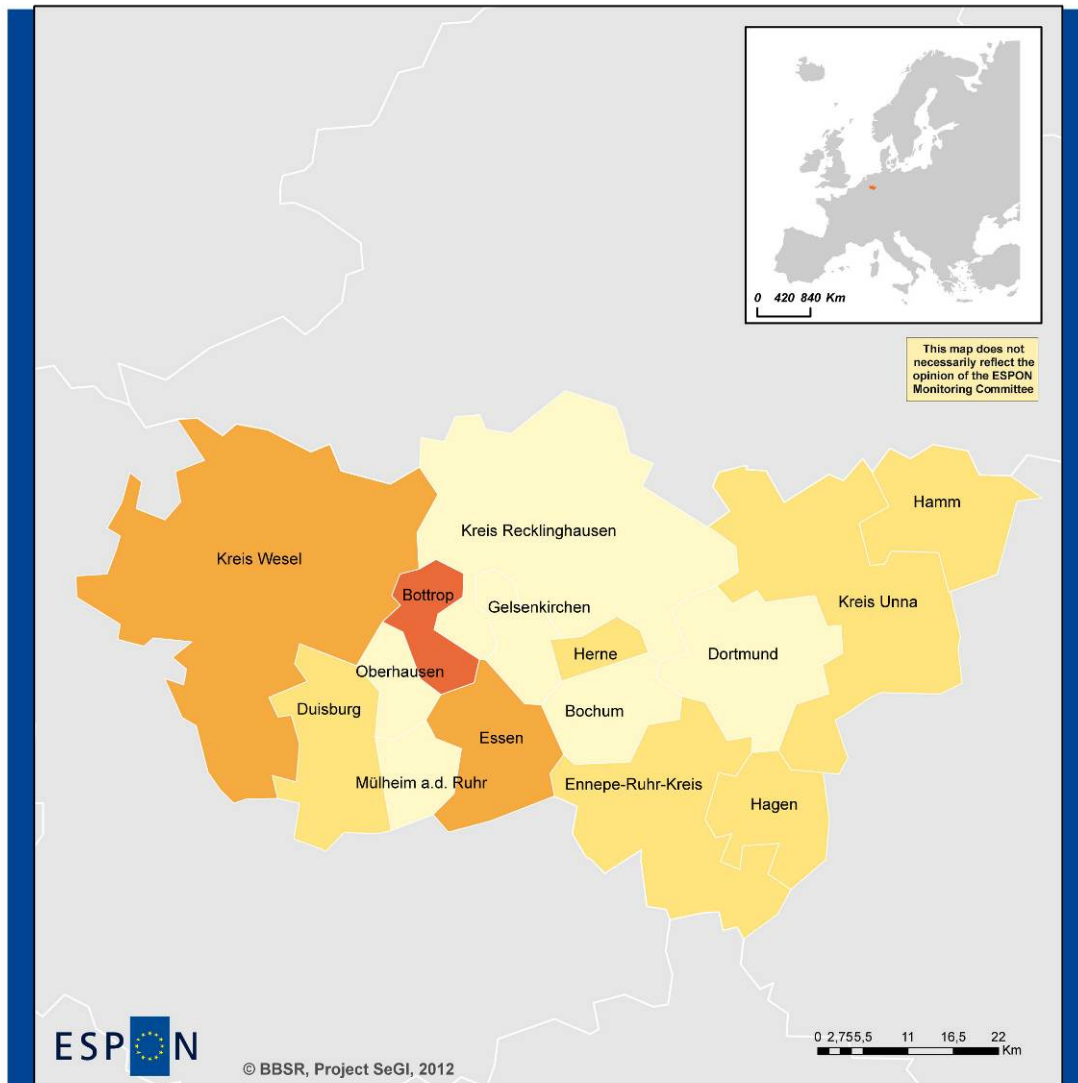

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### Germany Case Study

#### Sewage treatment facilities per 10 squarekilometres

-  0
-  up to 12
-  13 - 18
-  19 and more




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### Germany Case Study

#### Employees in sewage disposal per 100.000 inhabitants

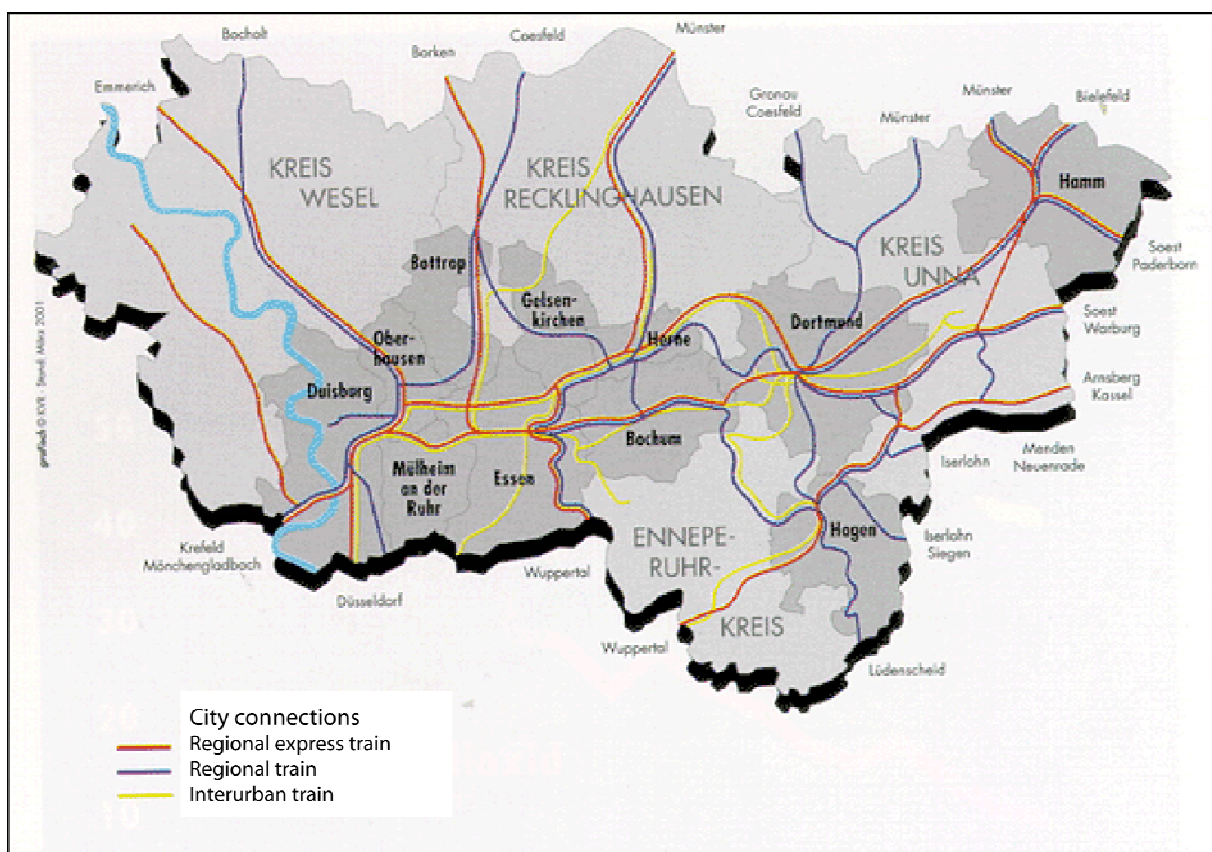
- up to 25
- 26 - 75
- 76 - 140
- 141 and more



## Transport

As the Ruhr region is a densely populated area and the biggest agglomeration in Germany it is suspected that the public transport is fully developed. But in one of the conducted in-depth interviews with the city council of Waltrop it was stated that the public transport system is not sufficient enough for the population. Especially the connections between the cities, to the more rural areas and in the night are assessed as very disappointing. In the survey eight communities for households and nine communities for businesses of overall twenty-one authorities estimate the accessibility to railway stations from acceptable to very bad. 13 communities say the accessibility is good and very good in the case of households (12 in the case of businesses). Persons with disabilities and without cars are seen as the groups with the biggest problems to have access to railway stations. Almost all authorities (21 of 22) think that the railway stations have to be renovated, expanded or reconstructed. But for activities at railway stations the company Deutsche Bahn as the owner is responsible, so the communities do not have any influence on that.

The following map show the regional train routes in the Ruhr area which are operated by the Deutsche Bahn and a few private companies.



Regional train routes (Regionalverband Ruhr <http://www.ruhrgebiet-regionalkunde.de/>, 2012)

The main transport axis lies between Duisburg in the western part and Dortmund in the eastern part of the region. The less densely populated areas in the west, north and south have significantly less train connections.



The graph below expresses the modal split in the Ruhr region. The private car is still the most important instrument for mobility, followed by the local public transport with only 16%. The share of car drivers in the region is higher than the national average (Regionalverband Ruhr <http://www.ruhrgebiet-regionalkunde.de/>, 2012).

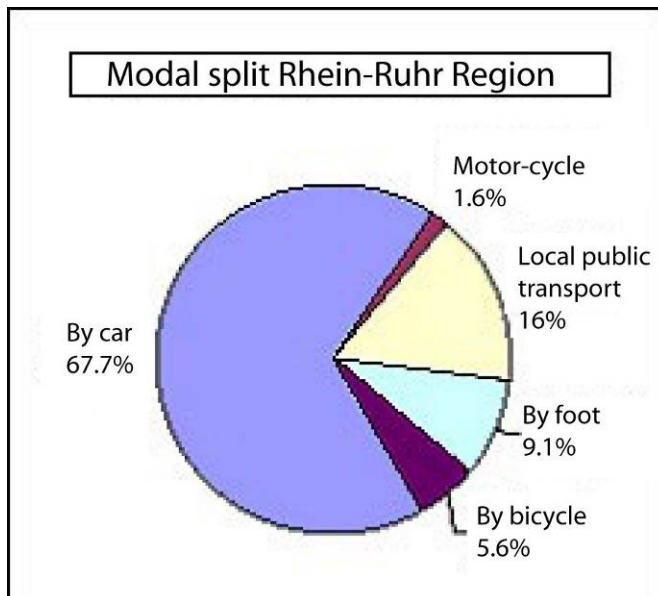


Figure 9: Modal split in the Rhein-Ruhr Region (Bezirksregierung Düsseldorf (<http://www.ruhrgebiet-regionalkunde.de/>, 2012)

Regarding the price system of local public transport it is necessary to have a look at the organisation of the public transport. After a reformation in 1994 the responsibilities for the public transport were newly arranged. The federal states are now responsible for the preparation of a local transport plan which has to be implemented by the communities. To avoid several different price and transport systems the cities and administrative districts (Kreise) unite themselves to so-called transport associations for a common and coordinated realisation of the local public transport. The cities and "Kreise" and in some cases the federal states as well are stockholders of this associations. Nevertheless there are still different transport companies in the different cities and communities but organised in this association. The aims of this union are homogenous prices and ticket range as well as coordinated schedules, schedules information and connections between the different transport companies of the communities.

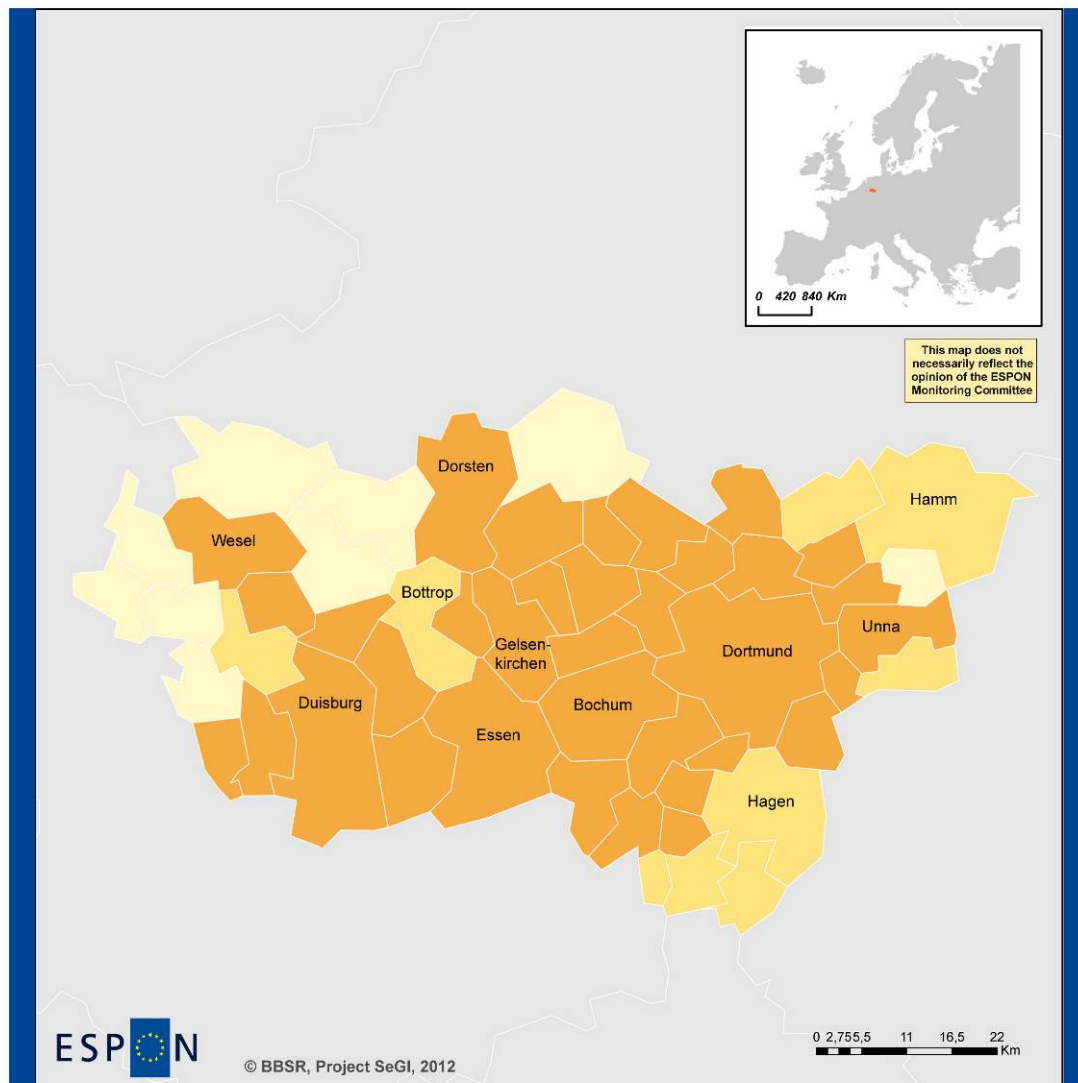
In the space of the Ruhr region three transport associations are located which can cause problems for the clients. For people living at the borders of associations or travelling between different associations the fares are more expensive than for people using the public transport in only one association.

## Broadband

As the main parts of the Ruhr region are very urbanised it is no wonder that the availability of broadband access for households is very high.

The rural areas in the western and northern parts of the Ruhr region show only a rate by less than 96%.

The central Ruhr region with the big cities of Duisburg, Essen, Bochum and Dortmund and their suburban communities show a rate of almost 100%.



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### Germany Case Study

#### Share of households with access to broadband

- 90 - 96%
- 96 - 98%
- 98 - 100%

It can be estimated that the availability of broadband access for companies has similar rates than for households especially in the central Ruhr region.

The results of the survey show that there are communities which are not satisfied with the availability like the dates above suggest. Three of twenty-one communities estimate the availability is bad or even very bad for households (two of twenty-one in the case of businesses). Six communities consider the availability for households as acceptable. For business units even nine communities think that availability is only acceptable. Three communities see difficulties to access broadband connection for households with a small income. The need for an expansion of the broadband system sees more than the half of the communities. Regarding the overall quality of the broadband network the results of the survey are very diverse. Five communities consider the quality as bad and very bad, five as acceptable and 10 as good and very good (two communities do not have an opinion in this matter).

### **3.2. Social services**

#### **Education**

##### **Pre-primary schools**

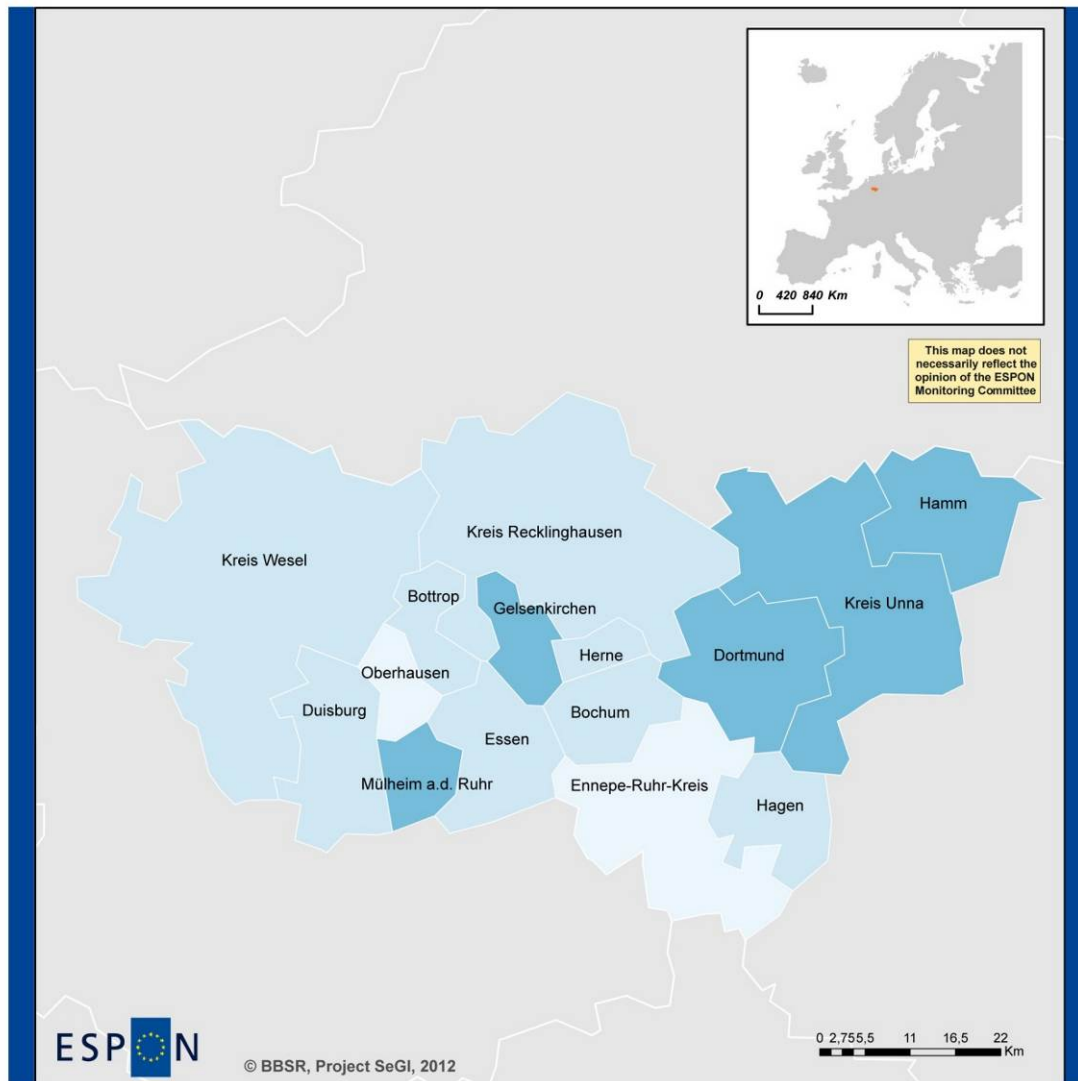
Pre-primary schools are not common in Germany. Traditionally the school system does not provide pre-primary schools even if some schools of that kind occurred in the last years especially in big cities. After kindergarten children visit directly the primary school in the age of six years.

##### **Primary schools**

The first educational institution in Germany is the primary school which has to be visited in the age between six or seven to ten years. The regional planning act envisages a dense net of primary schools to ensure a good provision close to the population.

As the map shows especially the southern part of the Ruhr region and the city of Oberhausen have less pupils per primary school than the western parts. In cities of Dortmund, Mülheim and Gelsenkirchen 211 and more pupils have to be provided per school, which is the highest rate.

The results of the survey show that the target of a dense provision is achieved quite well. The accessibility of primary schools is estimated by twenty-one local authorities as good and very good. One community sees a bad accessibility for their population. Two communities think that households without a car do have difficulties to reach primary schools. It is notable that all twenty-two communities think the availability of primary schools is sufficient for the population.



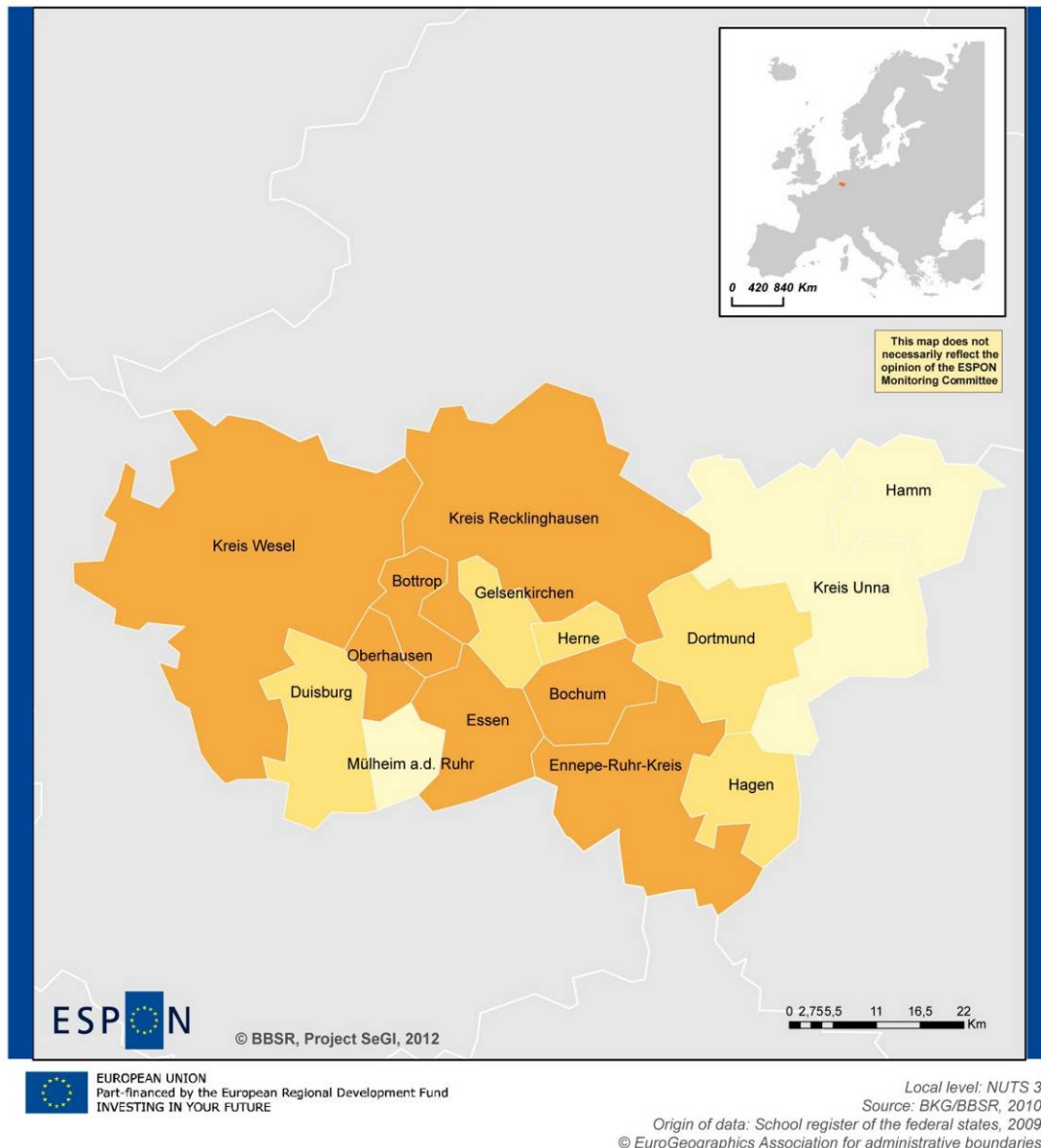

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Local level: NUTS 3  
 Source: BKG/BBSR, 2010  
 Origin of data: School register of the federal states, 2009  
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## Germany Case Study

### Number of persons (age of 6 to under 10 years) per primary school

- up to 180
- 181 - 210
- 211 and more



### Germany Case Study

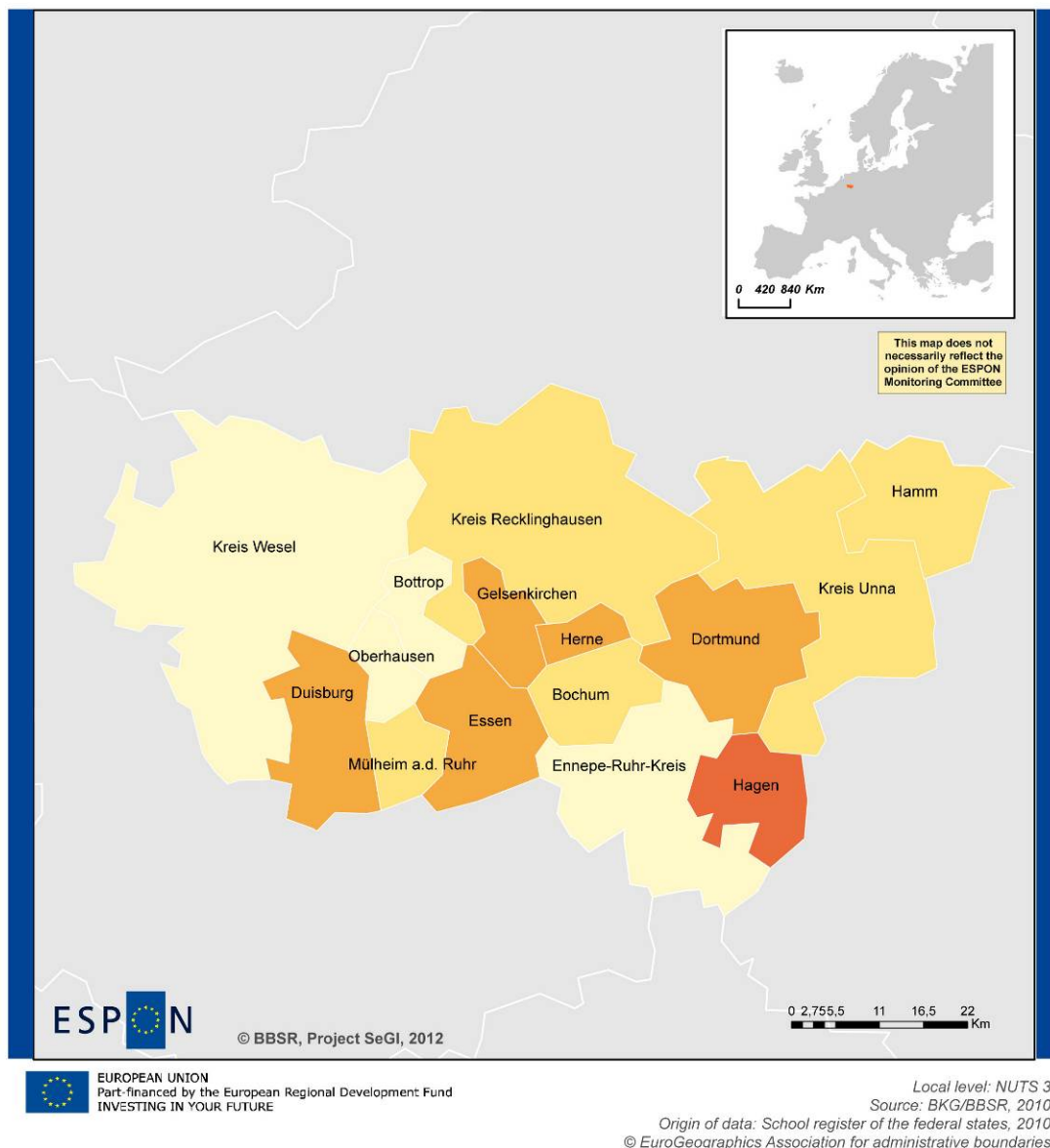
#### Primary schools per 1000 inhabitants in the age of 6 to under 10 years

- up to 4,5
- 4,6 - 5
- 5,1 and more

#### Technical and vocational schools

The German education system after finishing school is based on two different pillars. Access to universities has only those persons with the highest school education which ends with the "Abitur". Without this certificate it is common to make a vocational training in companies or authorities. Beside the practical work a visit of a technical or vocational school is part of the training which finishes with a certificate.

Because of this two pillar system the net of technical and vocational schools is quite dense but nevertheless the more specialised a training is the farther the way to school can be.



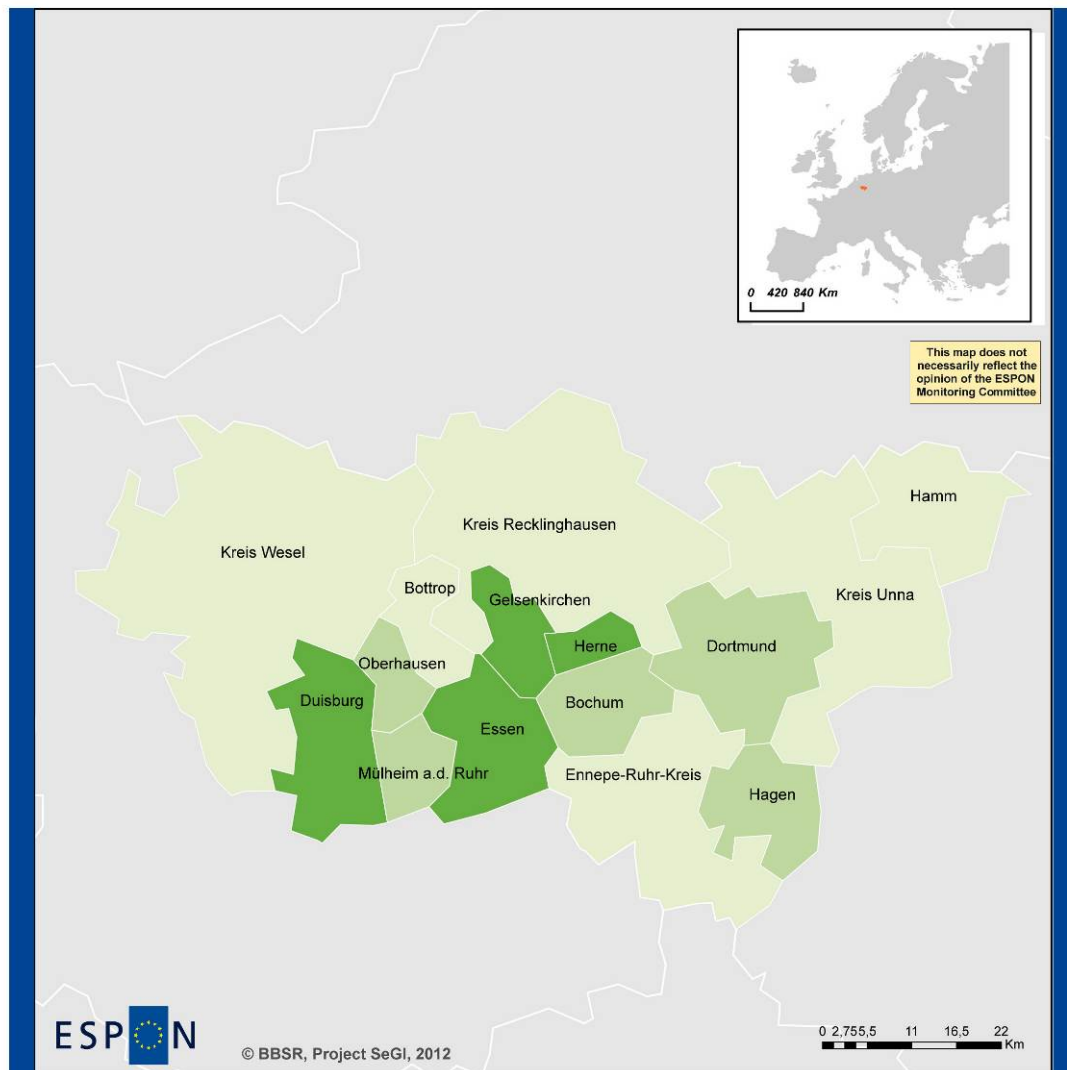
### Germany Case Study

Technical and vocational schools per 100.000 inhabitants in the age of 16 to under 20 years

- up to 55
- 56 - 80
- 81 - 100
- 101 and more

Particularly in rural areas (like Kreis Wesel and Ennepe-Ruhr-Kreis) the school net of specialised school like technical and vocational schools is less dense than in cities. People in rural areas have to accept longer ways to come to their training school. In the survey for the local authorities we also asked about accessibility to vocational schools. Eleven of twenty-two communities answered that the accessibility is acceptable, five said it is good and only three see a very good accessibility for their population. As most communities which replied to the survey are located in more rural areas and are rather small in population the answers do not amaze. The population groups which do have the biggest difficulties to

access vocational schools is, in opinion of the local authorities, persons with disabilities and persons without a car.



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Local level: NUTS 3  
Source: BKG/BBSR, 2010  
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### Germany Case Study

#### Technical and vocational schools per squarekilometre

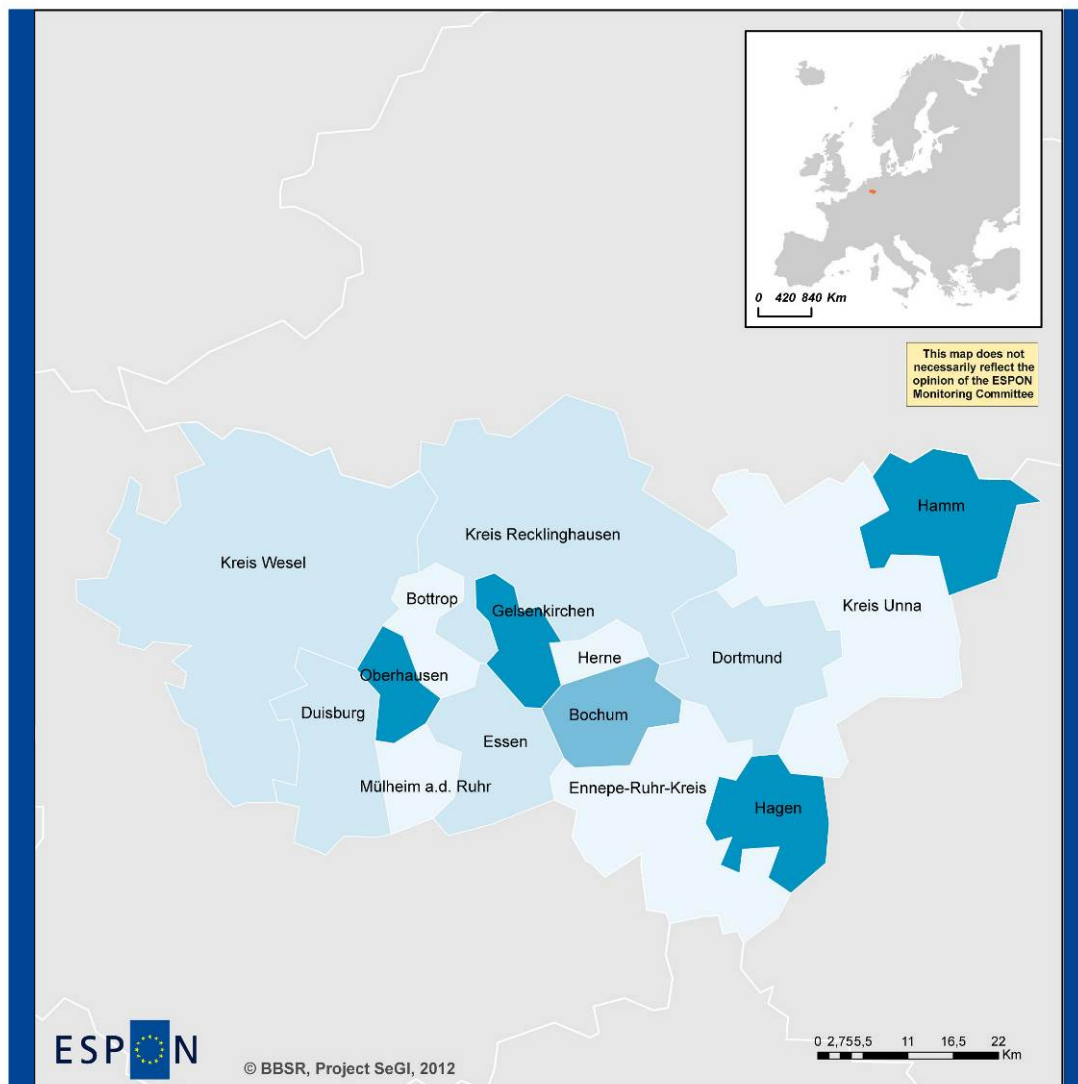
- up to 4
- 4,1 - 8
- 8,1 and more

### Labour Market Services

The public jobs employment agencies are mainly located in the bigger cities. In addition to job placement the agencies are also responsible for consulting services regarding young people and students or for people wanting realign themselves. Some agencies also offer a service for persons looking for a job in foreign countries.



In smaller cities the agencies keep offices with limited services. They concentrate more in the pure job placement than in special consulting services.



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Local level: NUTS 3  
Source: BKG/BBSR, 2010  
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### Germany Case Study

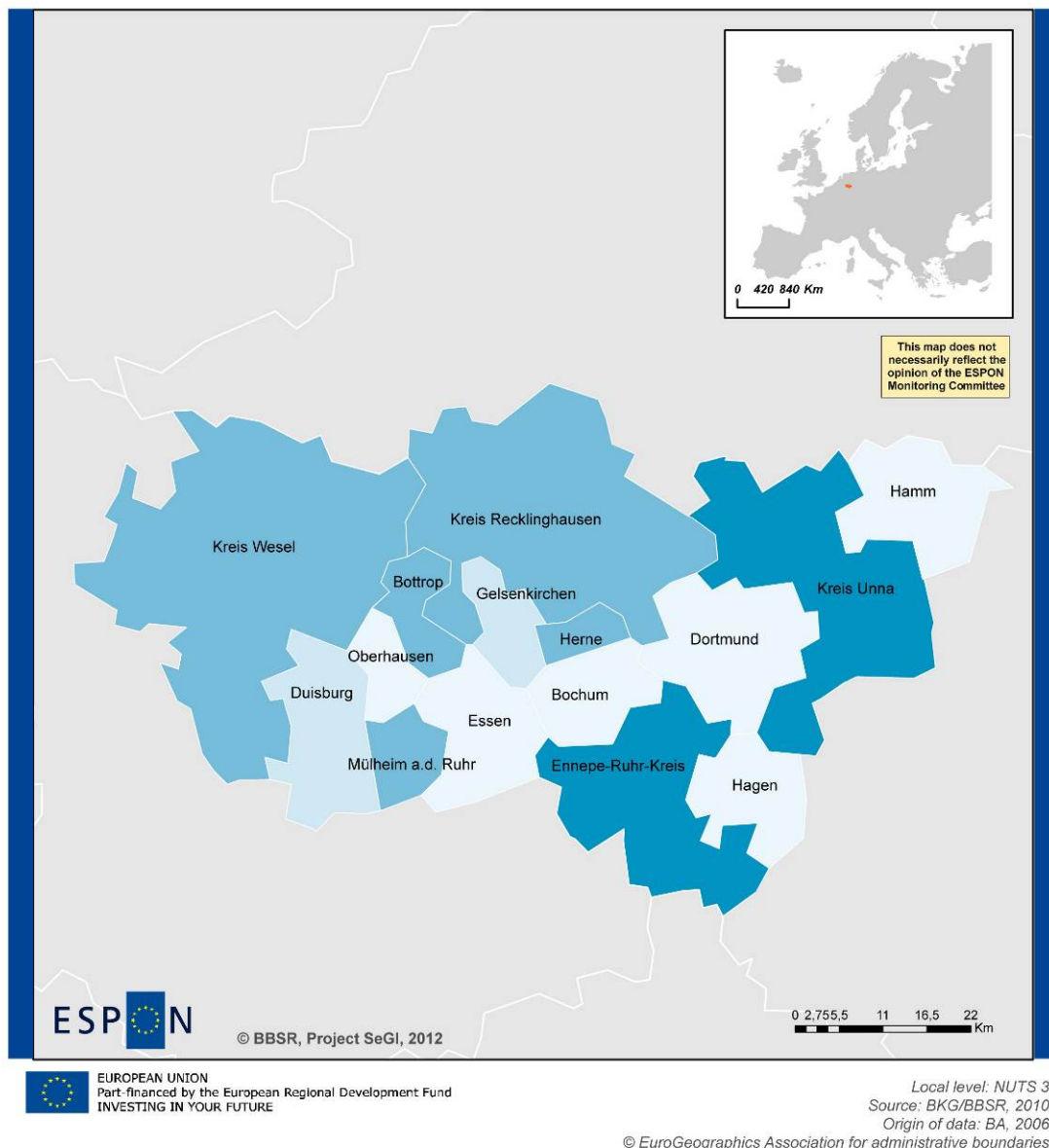
#### Jobs employment agencies per 1.000.000 inhabitants

- 0
- up to 2,5
- 2,6 - 3,5
- 3,6 and more

The map shows that smaller cities and especially the “Kreise” do not have job agencies in the same extent than big cities have.

The “Kreise” show a higher rate of offices which do not exist in cities like Dortmund, Bochum and Essen.





## Germany Case Study

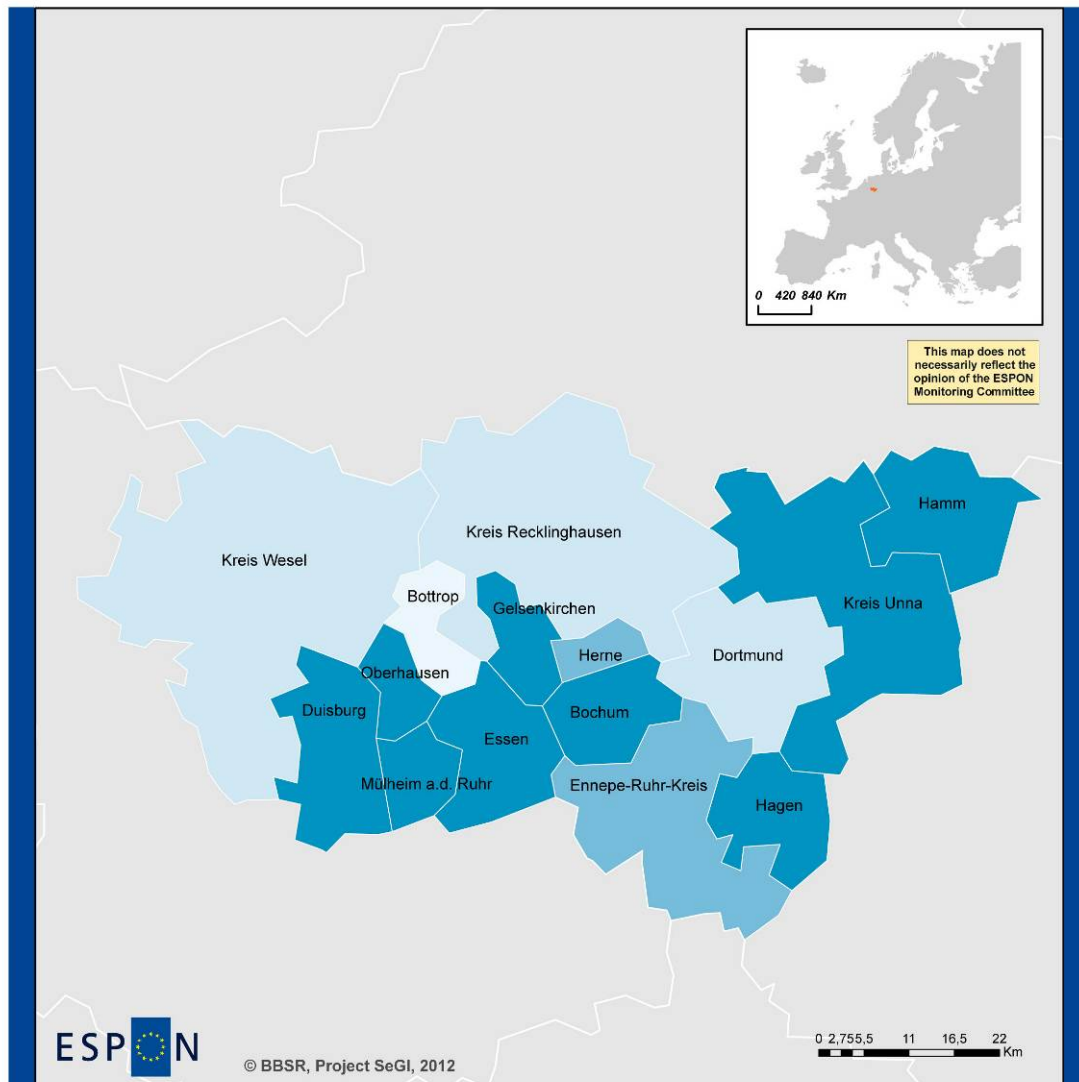
### Offices of the jobs employment agencies per 1.000.000 inhabitants

- 0
- up to 5
- 6 - 10
- 11 and more

## Police

The police system in Germany can be divided into four different units: uniformed police, criminal investigation department, riot police and water police. The maps below illustrate police station of all units per 100.000 inhabitants and per square kilometre.

The big cities in the core of the Ruhr region show a higher rate of police stations than the counties Wesel and Recklinghausen. It is a remarkable that Dortmund show a significant less number of police stations than the other cities.

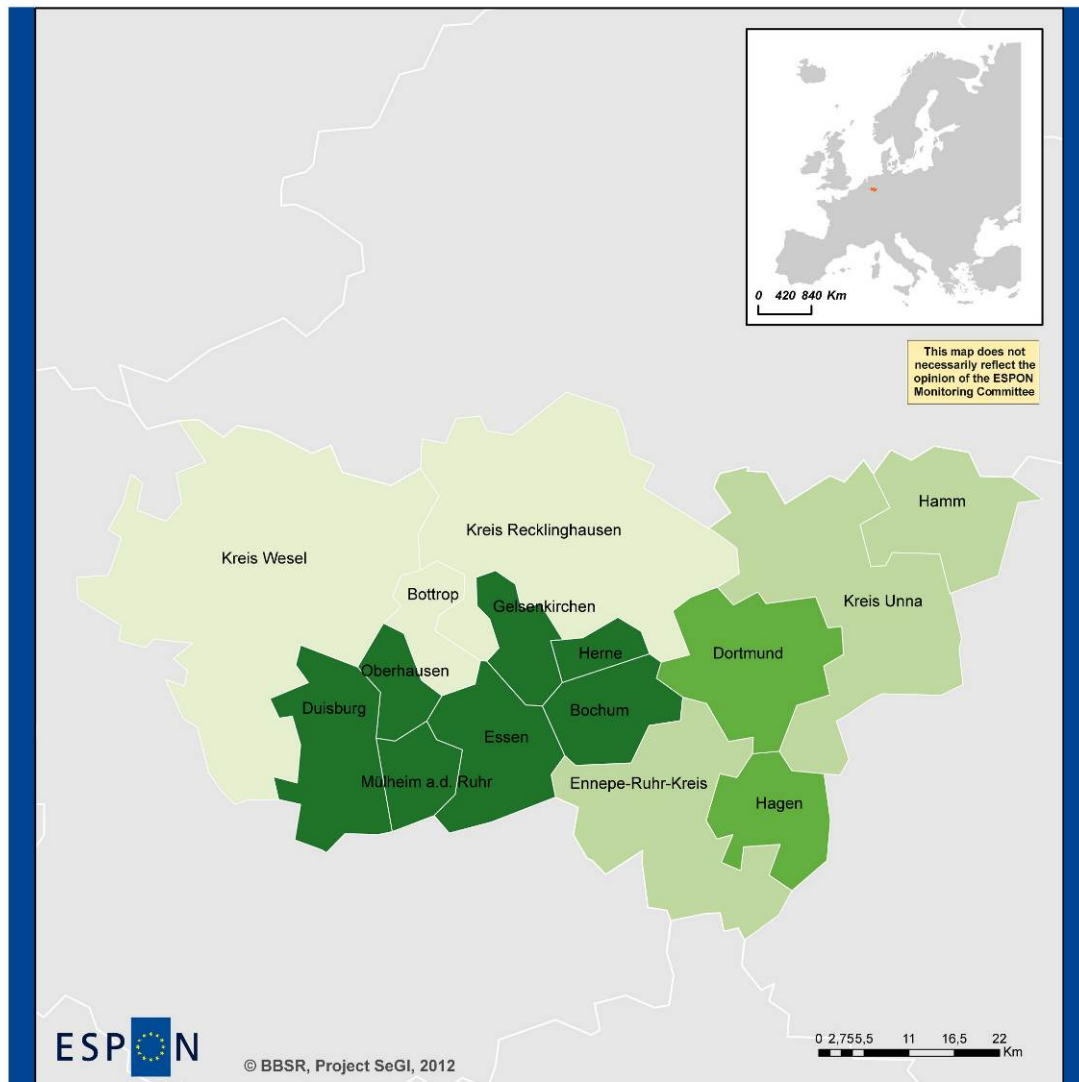


### Germany Case Study

#### Police stations per 100.000 inhabitants

- up to 2
- 2 - 3
- 3 - 4
- 4 and more

It is also obvious that the large administrative districts like Wesel and Recklinghausen have fewer police stations than the urban areas. So inhabitants in these districts have to cover a longer distance.



### Germany Case Study

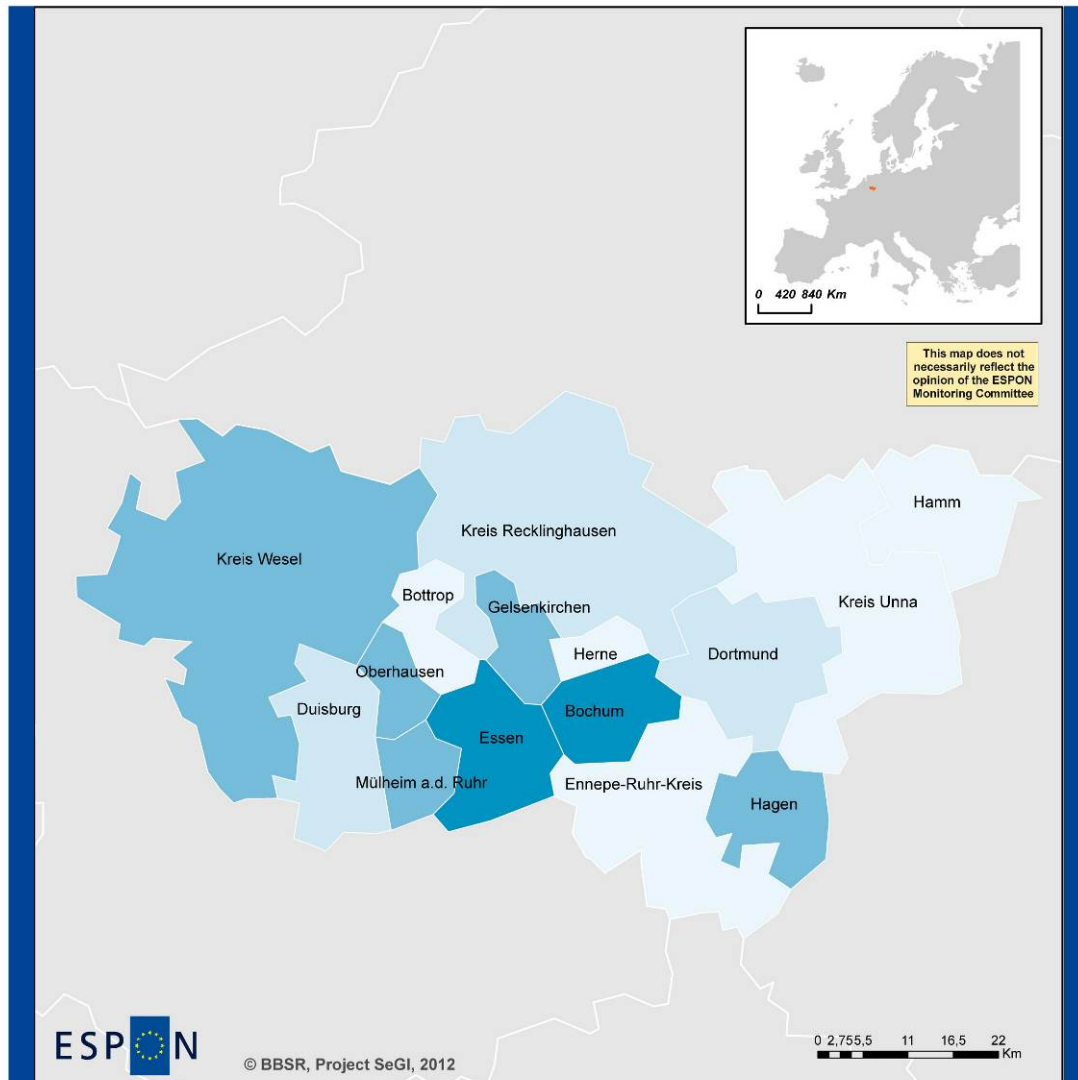
#### Police stations per squarekilometer

- up to 2
- 2 - 5
- 5 - 8
- 8 and more

### Theatres

Particular big cities run a public financed theatre usually with several different venues. In smaller communities where no public theatres existing private run theatres try to fill the gap. As the map below shows in some counties and communities neither a public nor a private theatre exist which means long distances for the local inhabitants. The city of Essen shows a very high rate of theatres. One of the most famous and important universities for music, theatre, dance and art is located in Essen which may lead to a wide range of cultural offers. The city of Bochum has also one of the most important theatres in Germany.

Even though some communities do not have a local theatre the results of the survey show that the accessibility to cultural institutions is estimated as good still by 45.5% and as acceptable by 36.4% of the local authorities. Households without a car are seen as the group with the biggest difficulties to access theatres.



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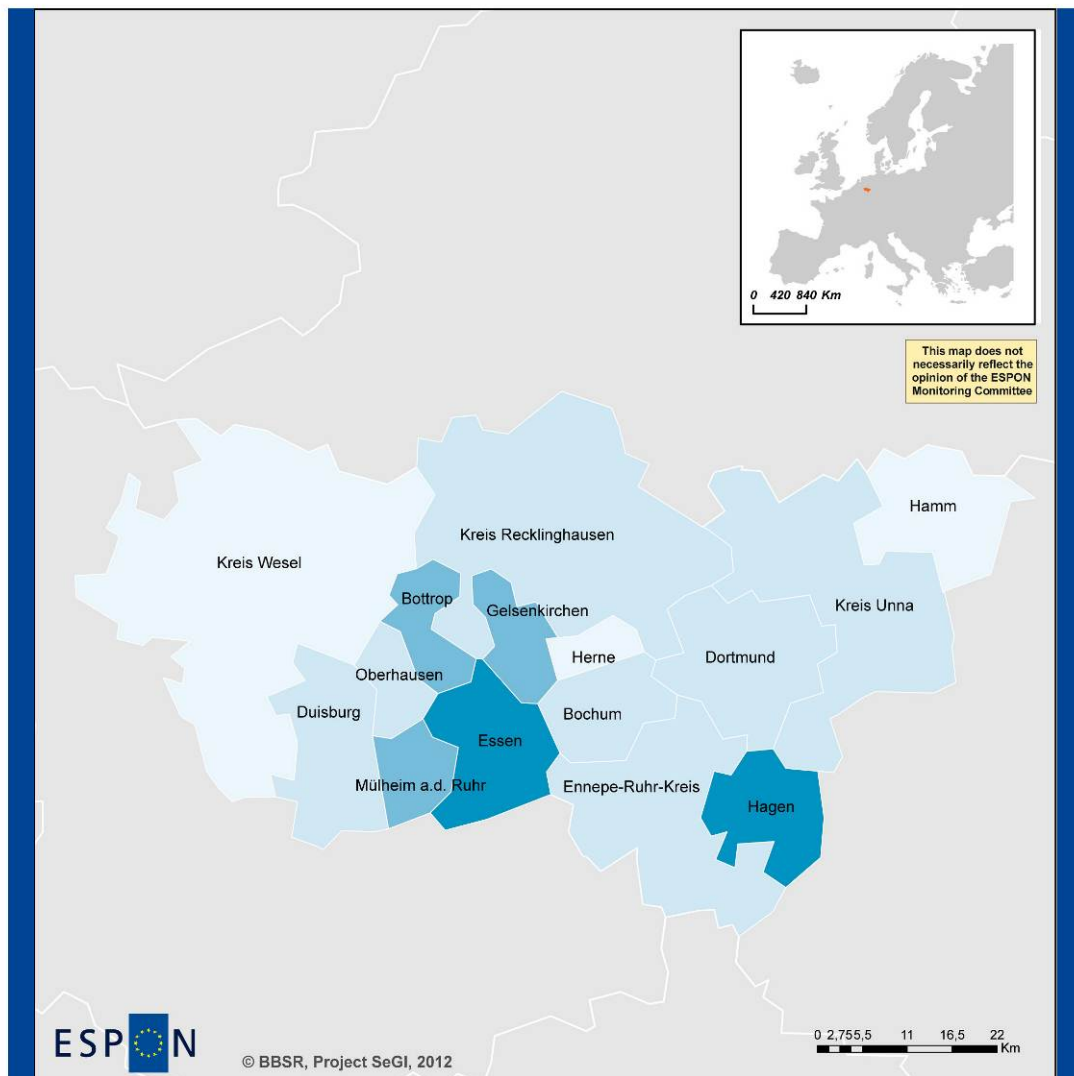
Local level: NUTS 3  
Source: BKG/BBSR, 2010  
Origin of data: Deutscher Bühnenverein, 2007/2008  
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### Germany Case Study Public and private theatres per 1 million inhabitants

- 0
- 1 - 3
- 4 - 7
- 8 and more

## Healthcare – General Practitioners

The distribution of general practitioners is quite similar and balanced in the Ruhr region. Between the areas with the least and the maximum facilities is a difference of seven doctors. It is obvious that the big cities have a denser net of provision than the rural areas.



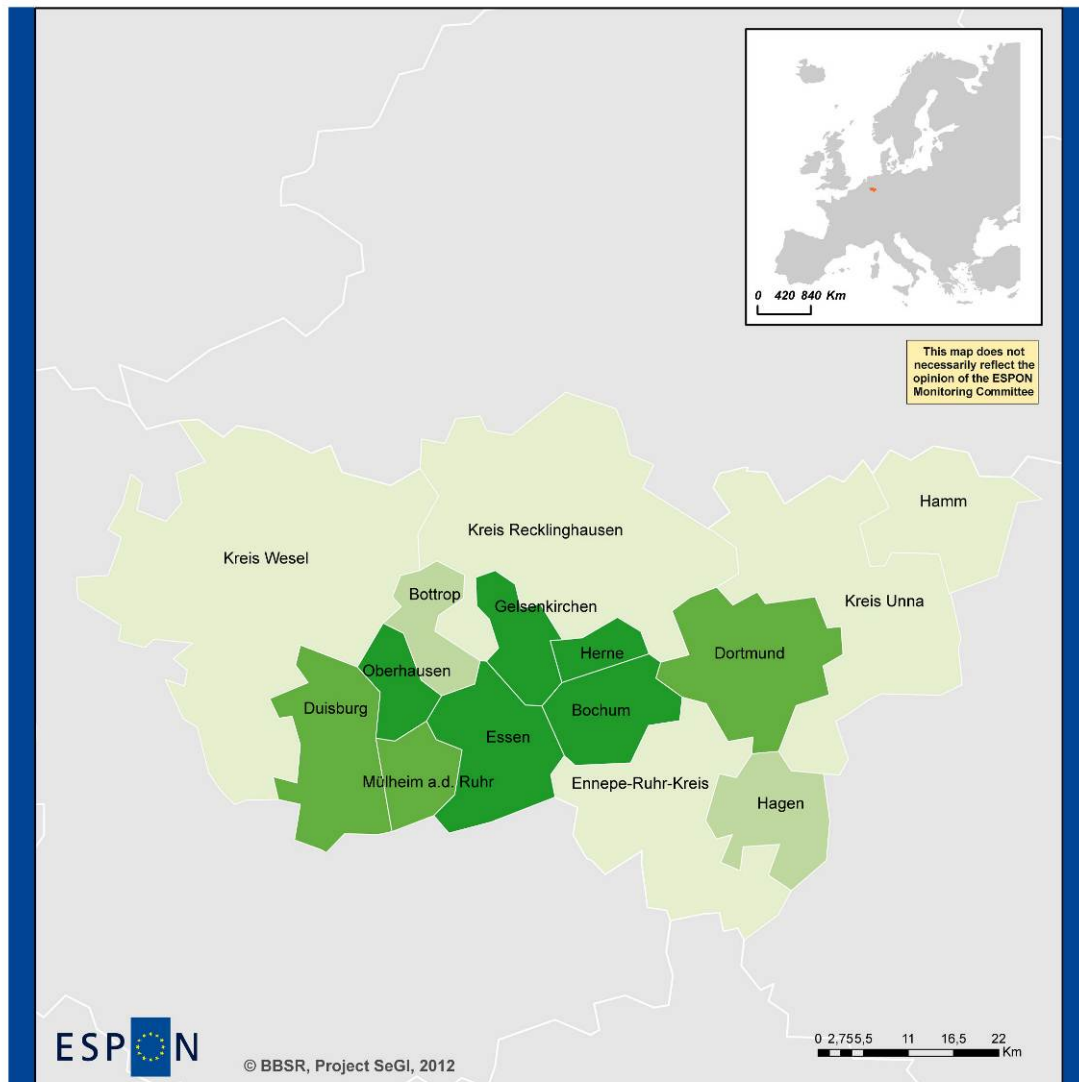
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Local level: NUTS 3  
Source: BKG/BBSR, 2010  
Origin of data: Kassenärztliche Bundesvereinigung, 2010  
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### Germany Case Study General Practitioners per 100.000 inhabitants

- up to 52
- 52 - 55
- 55 - 58
- 58 and more

The accessibility of health centres is seen as good by 63.6% of the authorities. Not one community sees a bad accessibility for the population. 91% think that the number of health centres is enough to meet the needs of the local population.



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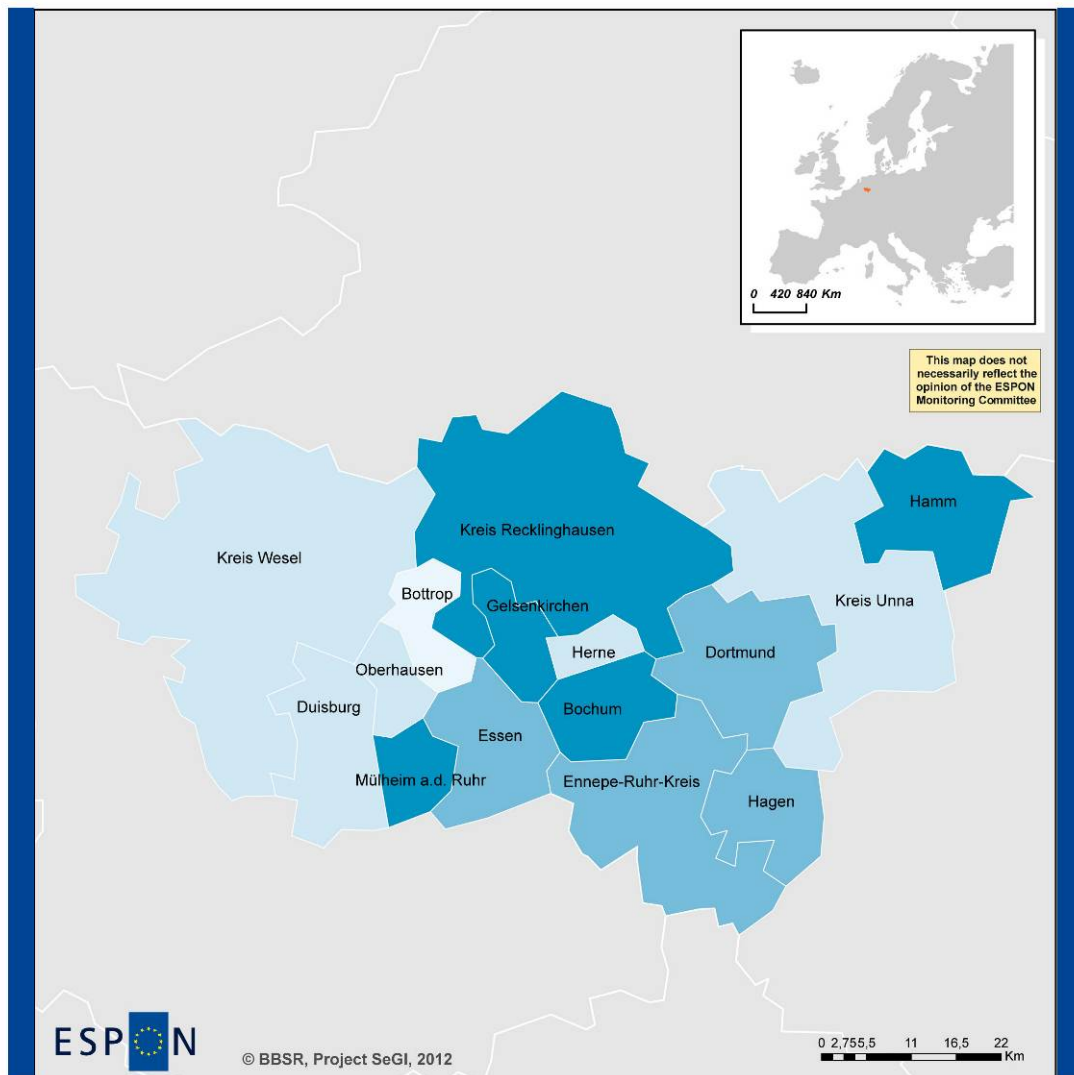
Local level: NUTS 3  
Source: BKG/BBSR, 2010  
Origin of data: Kassenärztliche Bundesvereinigung, 2010  
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### Germany Case Study General Practitioners per squarekilometer

- up to 45
- 45 - 75
- 75 - 125
- 125 and more

### Healthcare – Pharmacies

The net of pharmacies is quite dense in the Ruhr region. Bottrop has the least number of pharmacies per 100.000 inhabitants, but the gap to the communities with the highest number of pharmacies is not so big that an under-supply has to be feared. This is due to the fact that the German land use planning provides an equal provision with pharmacies even in communities with the lowest centrality.



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Local level: NUTS 3  
Source: BKG/BBSR, 2010  
Origin of data: Bundesapothekenregister, 2011  
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### Germany Case Study Pharmacies per 100.000 inhabitants

- up to 23
- 23 - 25
- 25 - 27
- 27 and more

The survey shows that the equal provision is achieved quite well. 68.2% of the communities think that the accessibility is good, 22.7% say it is very good. Not one community is unsatisfied with the accessibility. All twenty-two authorities assess the number of pharmacies as adequate to meet the needs of the local population.



## Child care

In the German Regional Planning Act it is also determined that nurseries have to be provided at the lowest level of centrality. So the map does not show many differences between the provisions of nurseries per 1000 inhabitants in the age to under 6 years. Traditionally children go to nurseries in the age of three years. Because of the changing role of women in the working environment the communities have to offer nurseries for children younger than three years. But this change takes place very slowly so many cities do still have problems offering enough spots for interested families.



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Source: BKG/BBSR, 2010  
Origin of data: Schulverzeichnis der Länder, 2010  
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### Germany Case Study

#### Nurseries per 1.000 inhabitants in the age to under 6 years

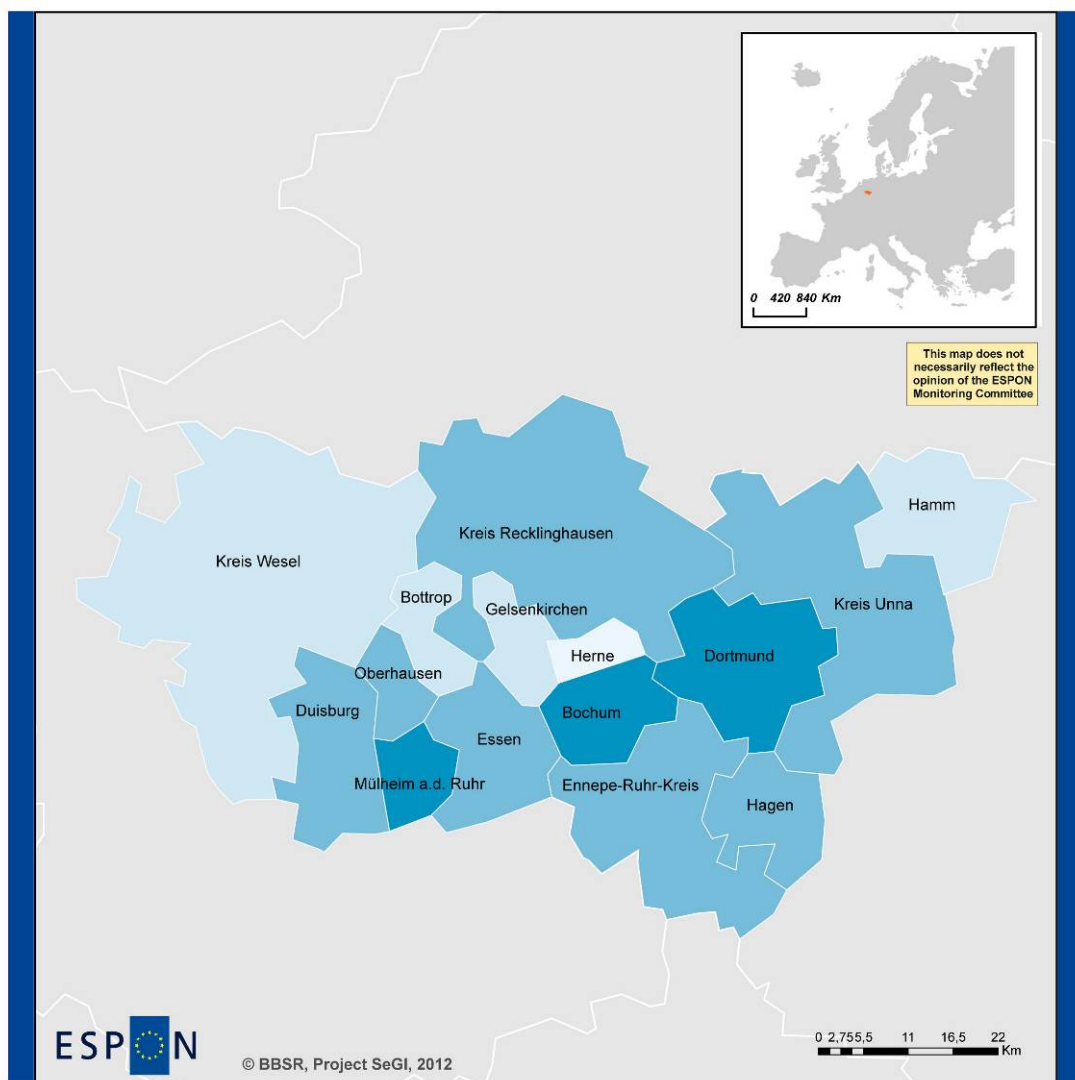
- up to 6
- 6 - 7
- 7 and more



Due to the centrality concept the communities are very satisfied with the accessibility of nurseries. 50% of the authorities estimate the accessibility is very good, the other 50% think it is good. Additionally 81.8% have the opinion that there are enough nurseries to require the needs of the local population.

## Social Care

As an example for social care units for family advice as well as meeting places for children and teenager are presented here.



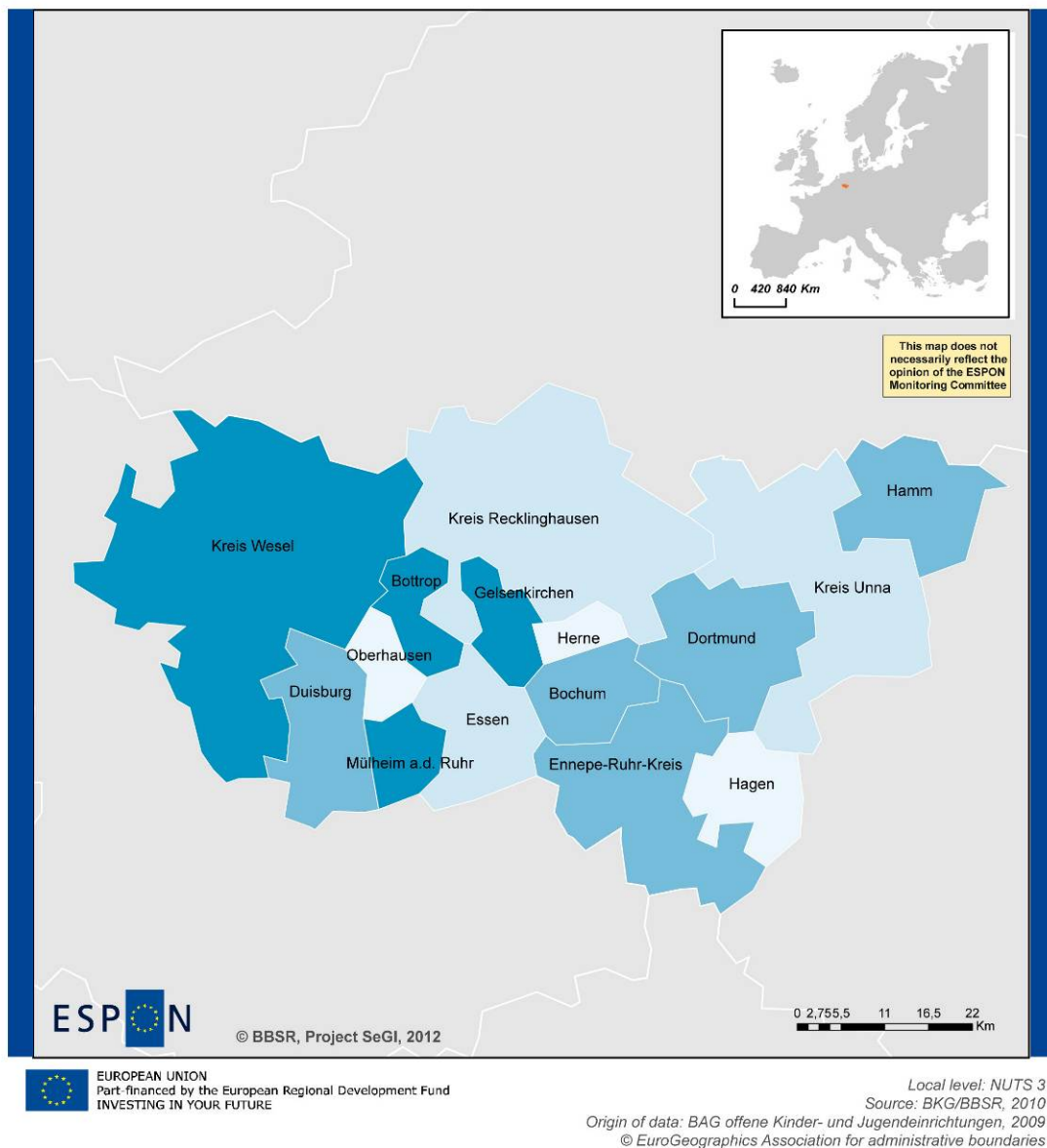
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Local level: NUTS 3  
Source: BKG/BBSR, 2010  
Origin of data: Internetdatenbank der Bundeskonferenz für Erziehungsberatung, 2006  
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## Germany Case Study

### Units of family counseling per 1 million inhabitants

- up to 8
- 8 - 12
- 12 - 16
- 16 and more



### Germany Case Study

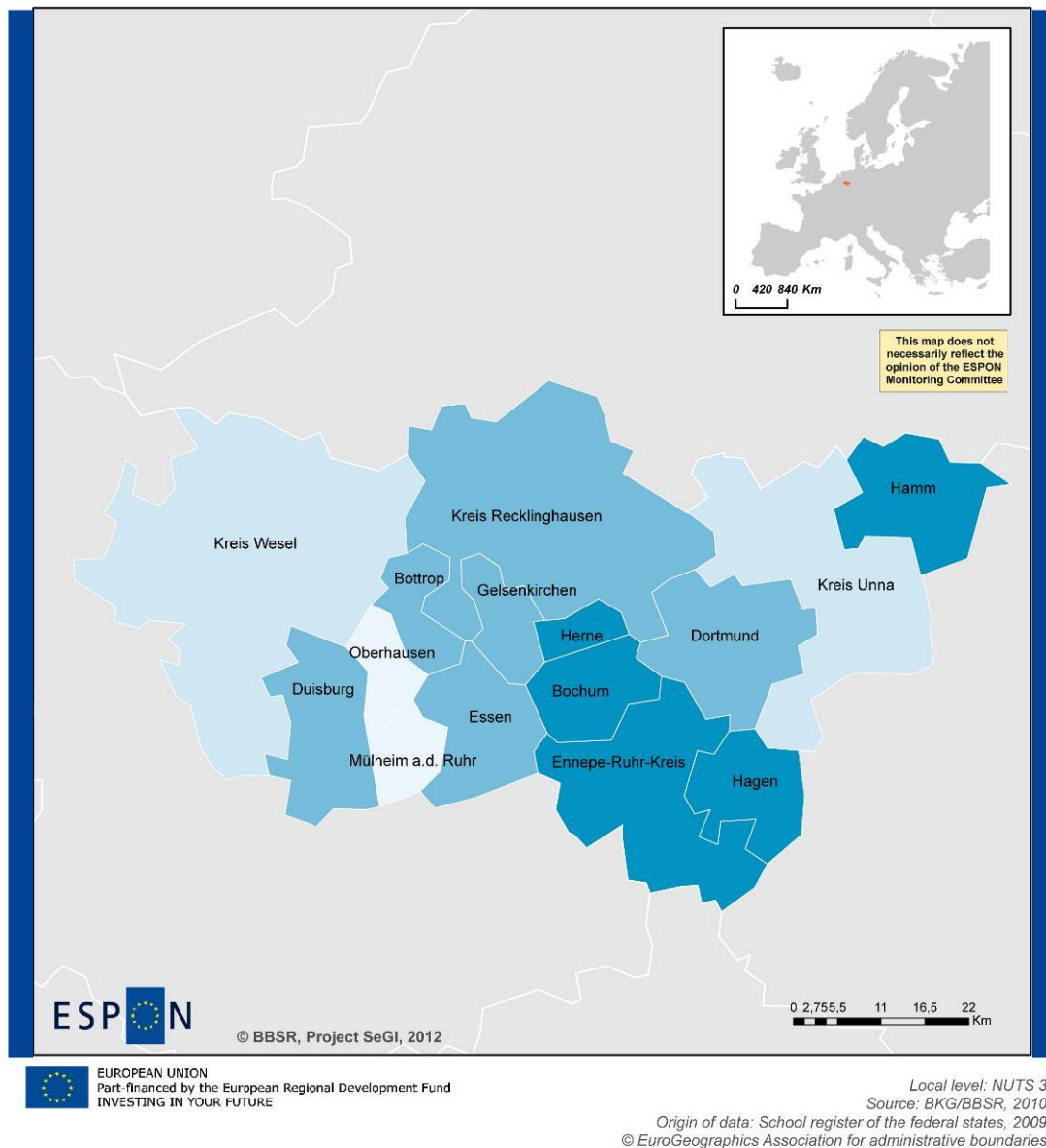
Meeting places for children and teenager per 1 million inhabitants in the age of 6 to under 18 years

- 0
- up to 25
- 25 - 50
- 50 and more

It is remarkable that the cities of Oberhausen, Herne and Hagen do not have any meeting places for children. Due to the tight financial situation in most of the communities in the Ruhr region the authorities have to save money and the social sector is usually concerned first. Private or confessional institutions often try to catch it but also here are many savings apparent.

## Secondary education

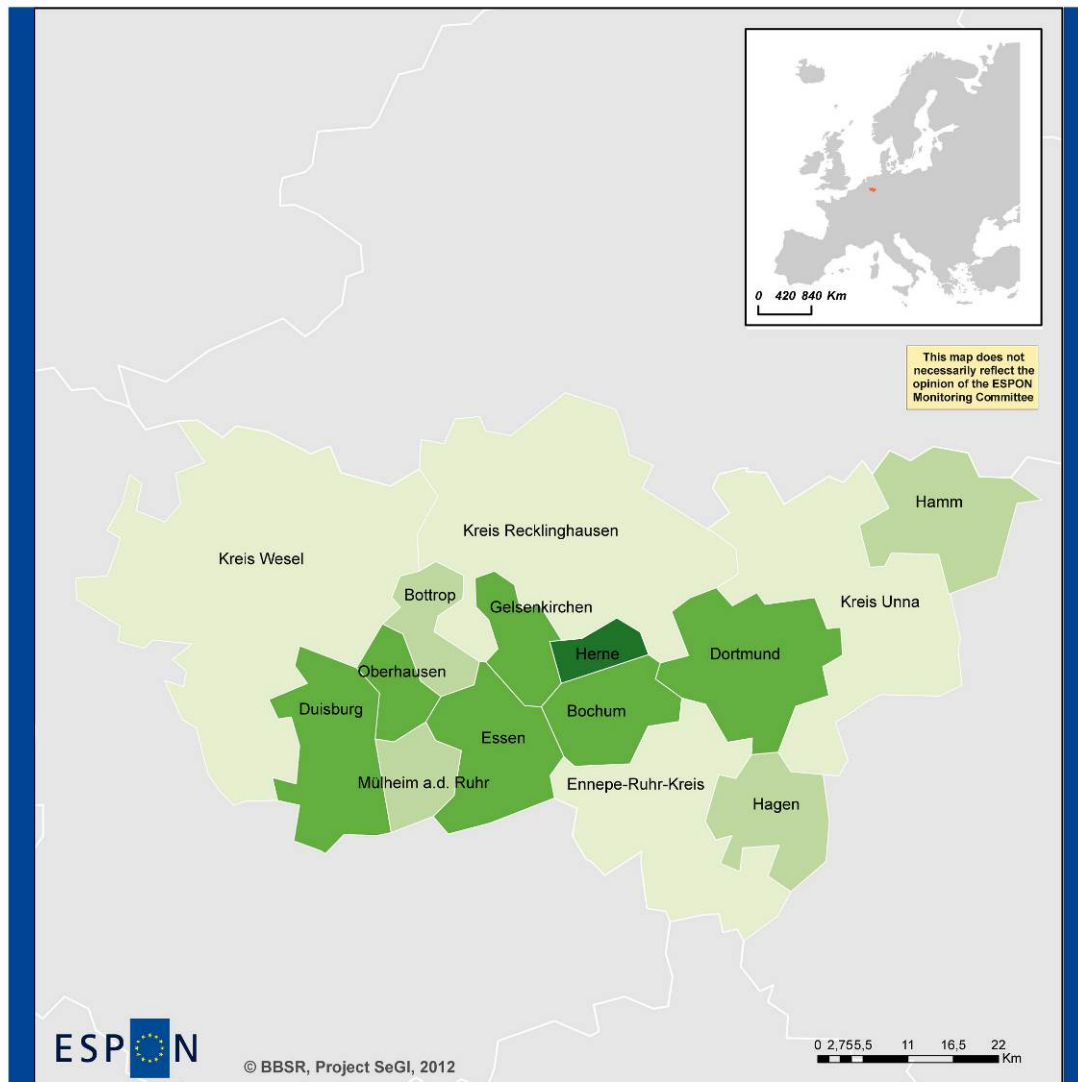
The German school system after the primary school is separated into different kinds of schools. The Haupt-, Realschule and Gymnasium are either a public or a private institution and are visited between the age of 10 to 16 in the Haupt- and Realschule or to 18/19 in the Gymnasium. The grid of secondary schools is not that dense as it is for primary schools.



### Germany Case Study

#### Secondary Schools per 100.000 inhabitants in the age of 10 to under 20 years

- up to 120
- 120 - 135
- 135 - 150
- 150 and more



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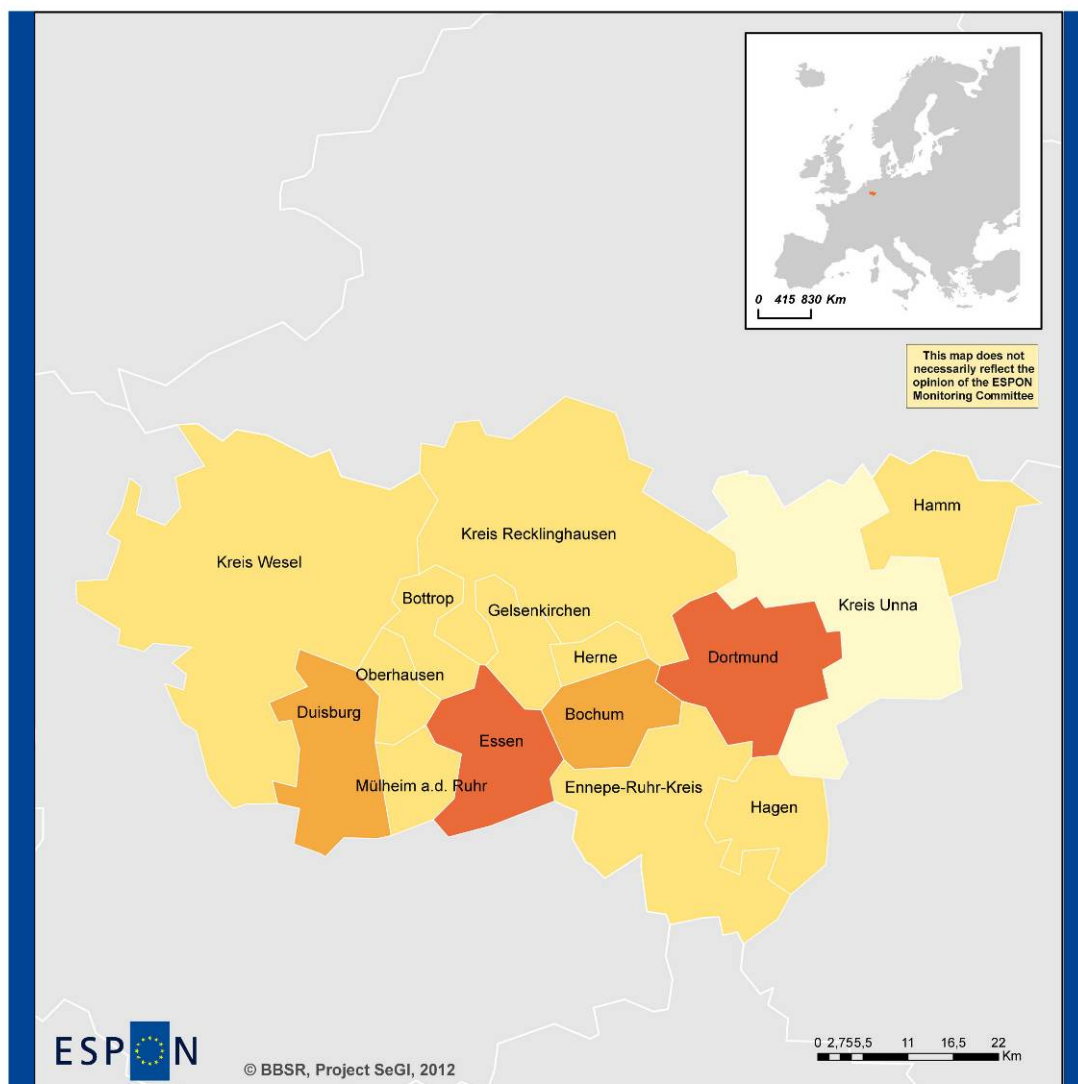
Local level: NUTS 3  
Source: BKG/BBSR, 2010  
Origin of data: School register of the federal states, 2009  
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### Germany Case Study Secondary Schools per squarekilometer

- up to 15
- 15 - 25
- 25 - 40
- 40 and more

Even if the pupils in the more rural areas in the Ruhr region have longer distances to school the results of the survey show that the accessibility is estimated mainly as good (50%). 27.3% of the communities think it is very good but still 22.7% say it is only acceptable. Twenty-one of the communities believe that the availability of secondary schools is sufficient for the local population.

The next map illustrates the number of teachers per 1000 pupils in the areas of the Ruhr region. The Kreis Unna shows the least number of teachers whereas the cities of Dortmund and Essen have the highest number.



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Local level: NUTS 3  
Source: BKG/BBSR, 2010  
Origin of data: BA, 2010

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### Germany Case Study Teachers per 1000 pupils

- up to 26
- 26 - 40
- 40 - 55
- 55 and more

## Tertiary Education

The region Ruhrgebiet has the densest infrastructure of higher education in Europe. The first universities were founded in the 1960s and triggered the structural transformation of this area of steel and coal production to a knowledge metropolis. Today students can choose between six universities (pink squares in the map below), 13 universities of applied sciences and one art college (yellow square). There are over 500 degree programmes. The emphasis is on engineering and natural sciences.



1 Universität Duisburg-Essen (Standort Duisburg), 2 Universität Duisburg-Essen (Standort Essen), 3 Ruhr-Universität Bochum, 4 Privatuniversität Witten-Herdecke, 5 Technische Universität Dortmund, 6 Fernuniversität Hagen, 7 Hochschule Rhein-Waal, 8a Hochschule Ruhr West, Standort Mülheim, 8b Standort Böttrop, 9 Fachhochschule für Öffentliche Verwaltung Gelsenkirchen, 10 Fachhochschule Gelsenkirchen, 11 Hochschule Oekonomie & Management, Essen, 12 EBZ Business School, Bochum, 13 Technische Fachhochschule Georg Agricola, Bochum, 14 Hochschule Bochum, 15 Evangelische Fachhochschule Rheinland-Westfalen-Lippe, Bochum, 16 Fachhochschule Dortmund, 17 International School of Management, Dortmund, 18 SRH Hochschule für Logistik und Wirtschaft, Hamm, 19 Hochschule Hamm-Lippstadt, 20 Folkwang Universität der Künste

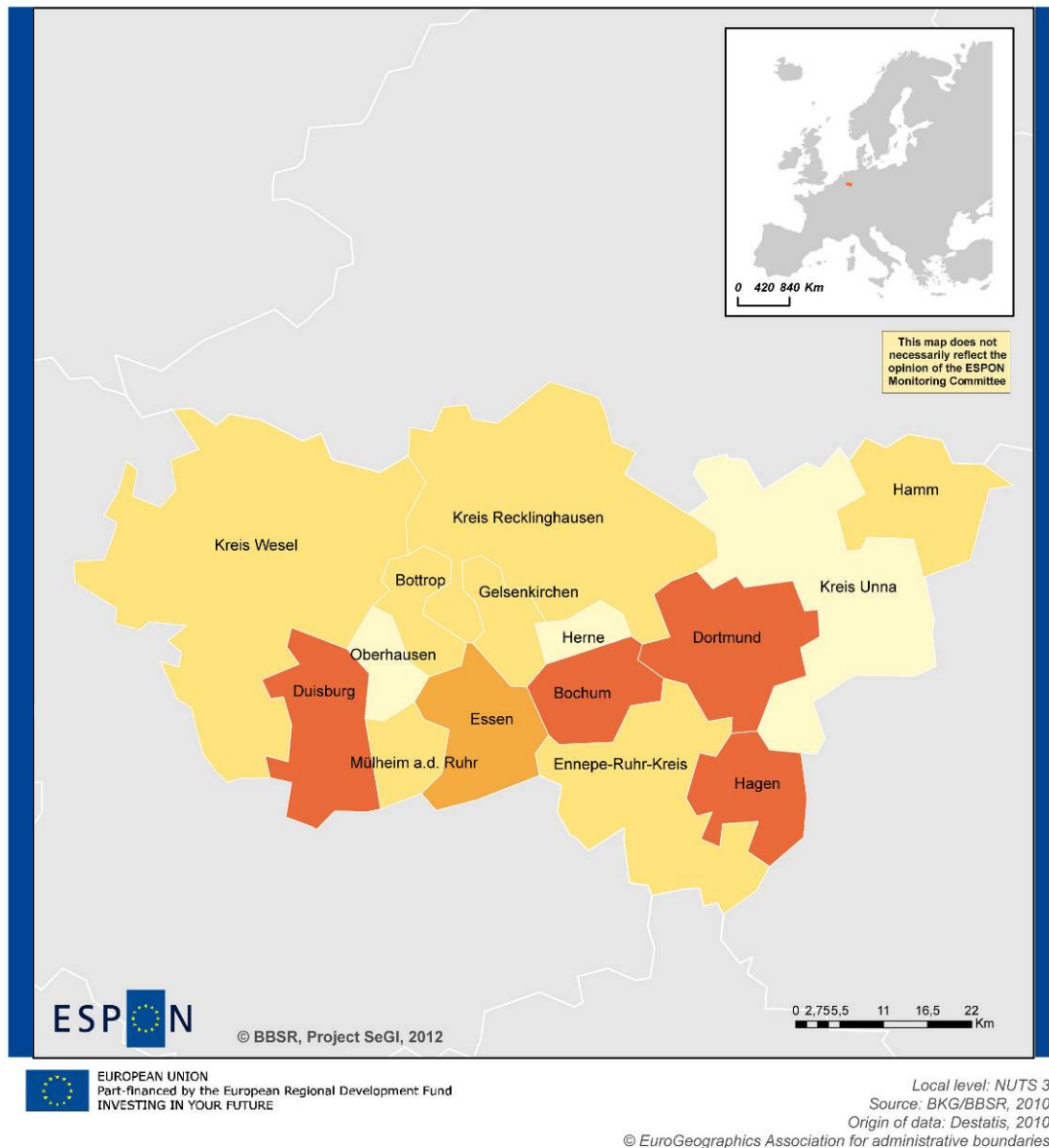
Universities and Universities of Applied Science in the Ruhr region, 2012

<http://www.metropol Ruhr.de/en/start/the-ruhr-regional-association.html>

The Ruhr University Bochum was the first university to be founded in 1962. Since then it has been teaching and researching natural sciences, engineering and humanities. The Universities of Dortmund (1968) and Duisburg and Essen (1972), which today are known as TU Dortmund and University of Duisburg-Essen, came into being almost simultaneously. Three special universities are at home in the Ruhr Metropolis: the only state-maintained Fernuniversität (distance teaching university) in Hagen, the first private German university in Witten-Herdecke and the artist workshop at the Folkwang University in Essen. With approximately 60,000 students, the Fernuniversität is the biggest German university. The Folkwang University focuses on music, theatre, dance and design. The educational institution, which is steeped in tradition, obtained university status in 1963.



In 2009/1010 approximately 178.000 students were registered at a university or university of applied science in the Ruhr region compared to the year 1989/1990 the number of students increased by 31.4%. The number of first-year students has reached the highest level so far with 24.000 students. The share of female students is 45.3% and under the level of the federal state North Rhine-Westphalia with 47%.



### Germany Case Study Number of students

- 0
- up to 5000
- 5000 - 20 000
- 20 000 and more

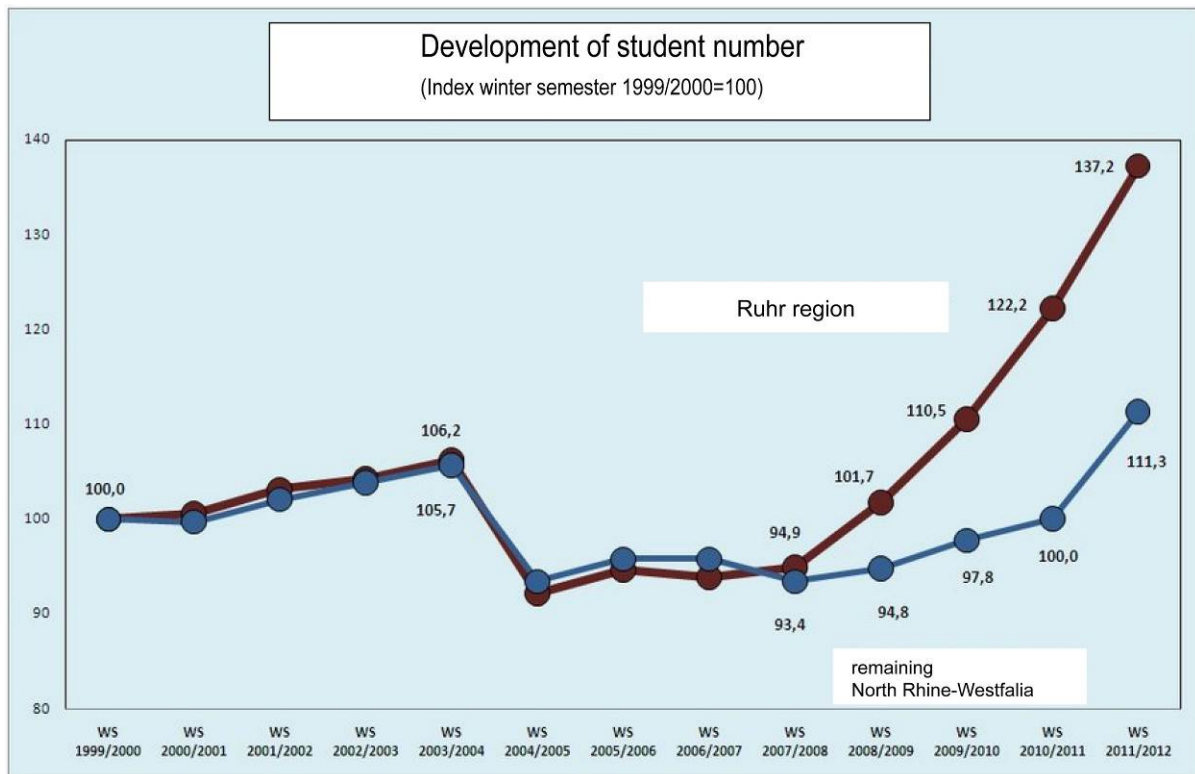


Figure 10: Development of Student number in Ruhr region and North Rhine-Westphalia (The Ruhr Regional Association <http://www.metropol Ruhr.de/en/start/the-ruhr-regional-association.html>, 2012)

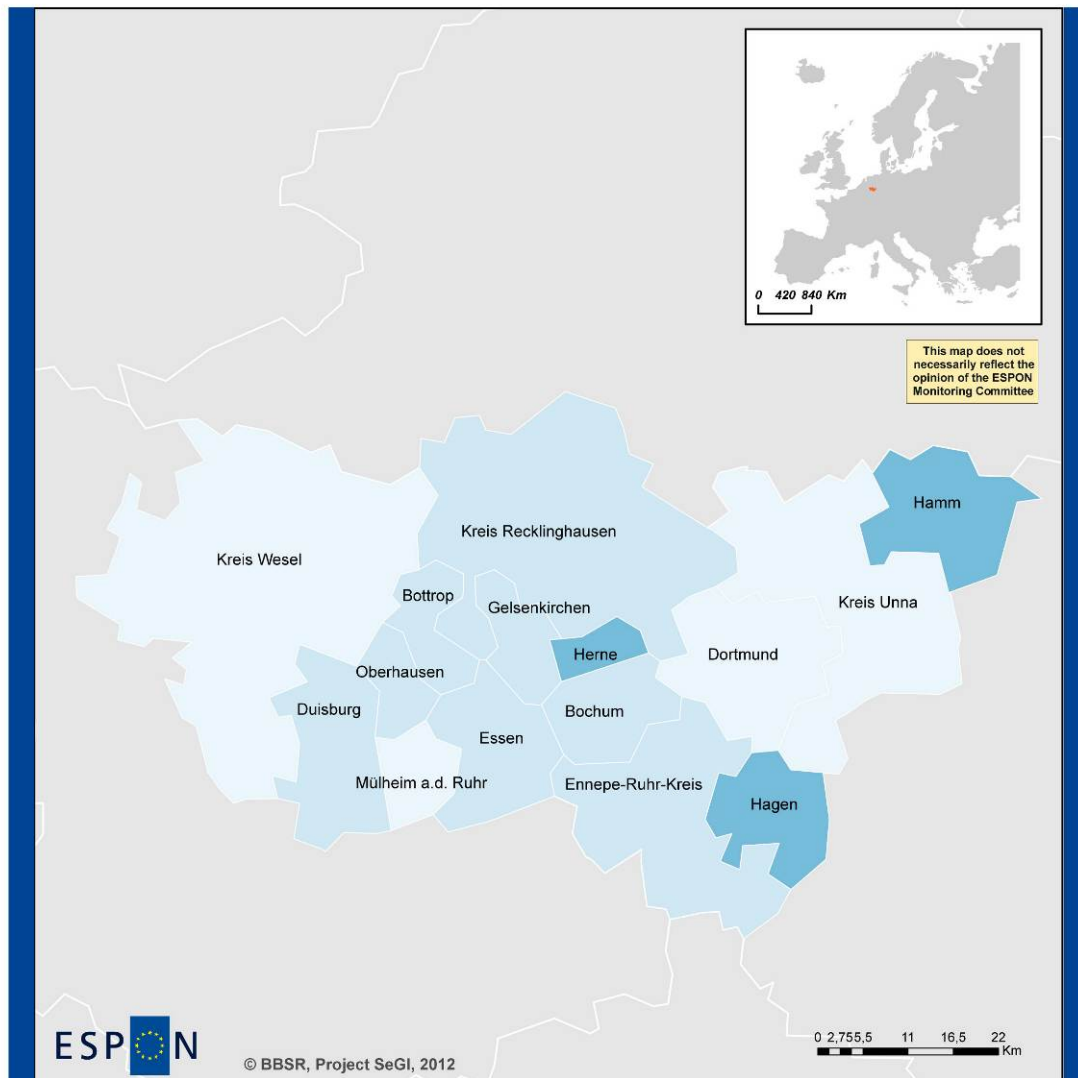
The figure illustrates the development of student's number differentiated between the Ruhr region (red line) and remaining North Rhine-Westphalia since 1999/2000. In the year 2004/05 the number was decreasing enormously but afterwards an upward trend can be identified.

Though the Ruhr region shows a very dense net of universities the accessibility of institutions of the tertiary education is seen by 59.1% of the surveyed authorities as only acceptable. Ten communities see difficulties for persons without a car to reach universities. Of course the more rural areas of Kreis Wesel and Recklinghausen do not have any institution of tertiary education and the population have to accept longer distances or have to move to the relevant city. But nevertheless half of the authorities also stated that the number of universities is sufficient for the population (two authorities think it is not sufficient, nine authorities did not answer the question).



## Healthcare – Hospitals

The distribution of hospitals with basic services seems to be quite balanced. It is noticeable that the city of Dortmund shows a less share of hospitals than other comparable cities.



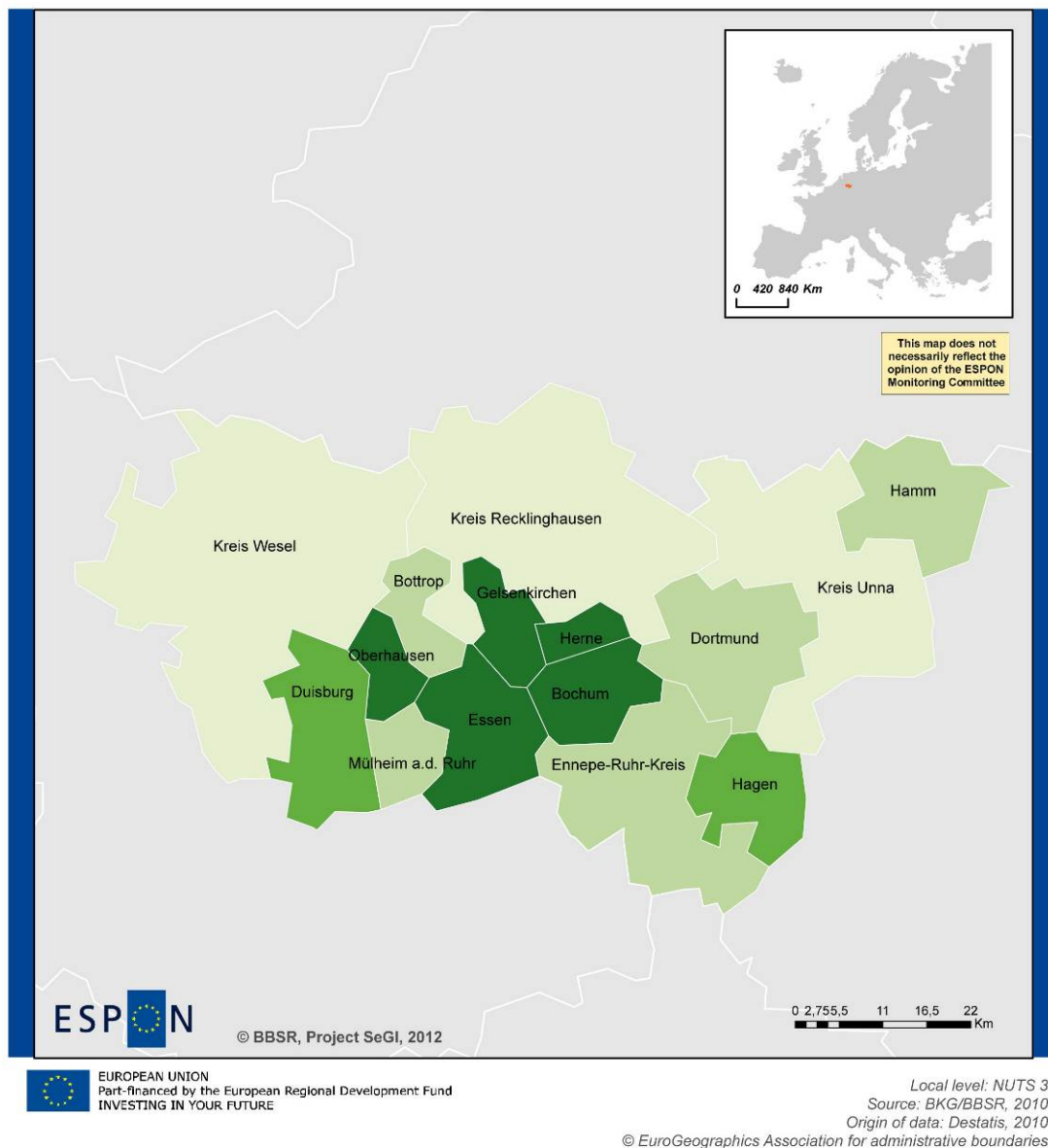
### Germany Case Study

#### Hospitals of basic services per 100.000 inhabitants

- up to 2
- up to 3
- 3 and more

Regarding the results of the survey 27% of the authorities estimate the accessibility to hospitals only as acceptable also 27% as good and 32% as very good. Especially households without cars have problems to reach a hospital, 10 authorities stated. Also elderly and persons with disabilities could have difficulties (five answers).

The availability is estimated by 82% of the communities as enough to meet the needs of the local population.

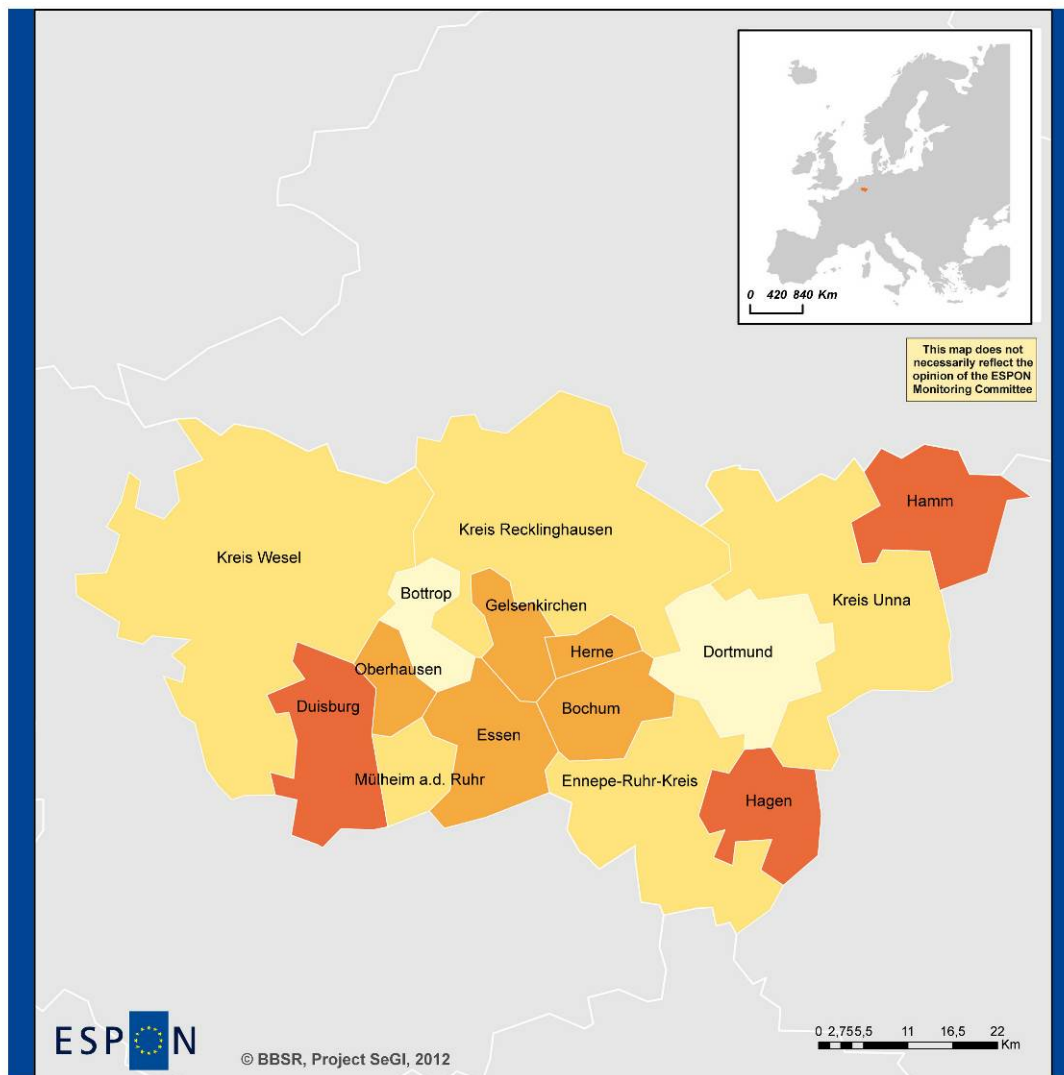


### Germany Case Study

#### Hospitals of basic services per squarekilometer

- up to 2
- 2 - 4
- 4 - 6
- 6 and more

The next map illustrates the number of hospital beds per 10.000 inhabitants. Similar to the map with the number of hospitals the city of Dortmund show a quite marginal number compared to Duisburg.




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Local level: NUTS 3  
 Source: BKG/BBSR, 2010  
 Origin of data: Destatis, 2009  
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### Germany Case Study

#### Hospital beds per 10.000 inhabitants

-  up to 50
-  50 - 58
-  58 - 68
-  68 and more

## **Social Housing**

The Ruhrgebiet is affected by working-class quarters which were built during the industrial stage of the region. These quarters were built by steel and coal companies. In the 1970s the social housing programme by the government reached the cities of the Ruhrgebiet and many new quarters occurred with over 1000 new flats for more than 3000 inhabitants.

Characteristically for these quarters were tower buildings and a good connection to the public transport which made them very attractive. Because of the later tendency to build one-family houses in suburban areas these public financed estates became problem areas quite soon.

Today these houses are in the possession of housing societies and most of them have a very high necessity of renovation (The Ruhr Regional Association

<http://www.metropoleruhr.de/en/start/the-ruhr-regional-association.html>).

### **3.3 Summary: questionnaire survey**

The survey, developed by the polish project partners, was distributed to all 53 municipalities in the Ruhr region and additionally to the authorities of the four counties Wesel, Recklinghausen, Unna and Ennepe-Ruhr-Kreis. So a total of 57 questionnaires were sent by mail. The contact details of the staff members in the different authorities were provided by the regional association of the Ruhr region which is responsible for planning issues in the area.

The questionnaire was translated into German assuming that the return rate will be higher in this case.

Of the 57 questionnaires 22 were sent back, which is a rate of 38.6%. Not one of the four authorities of the counties replied the questionnaire.

The map below shows the participating municipalities and their allocation in the area. Five of the eleven cities take part in the survey furthermore seven municipalities of the Kreis Unna, five of the Kreis Recklinghausen, four of Kreis Wesel and only one of Ennepe-Ruhr-Kreis. With the municipalities of Xanten and Sonsbeck (Kreis Wesel) two communities located at the outermost edge of the Ruhr region participate.



## Germany Case Study

### Municipalities in the Ruhr region participating at the survey

- Cities
- Kreis Wesel
- Kreis Recklinghausen
- Kreis Unna
- Ennepe-Ruhr-Kreis

The first part of the survey deals with the presence of services of general interest and their accessibility for the inhabitants. In the first question the communities should evaluate the accessibility to basic services within their locality for households, individuals and businesses. In summary the accessibility is evaluated as mainly good and very good especially for the net infrastructures as electricity. To certain services the accessibility is also seen as bad by some municipalities. One community, interestingly one city which do not belong to a county, evaluates the accessibility to hospitals for households as bad. Two communities assess the

accessibility to technical and vocational schools as well as to universities as bad. One of these cities is located at the edge of the Ruhr region so the answer does not astonish.

It is remarkable that four of 22 communities evaluate a bad accessibility in the case of post offices. Except of one three of these cities all belong to a county. For businesses even six communities estimate a bad accessibility to post offices.

The main groups which are seen as having the biggest difficulties to access certain services are people with disabilities and households without a car. From this it can be probably followed that the local public transport is not usable for handicapped people as well as the transport net is not dense enough to serve the population adequately.

The technical infrastructures as the provision of electricity, gas, water and sewage and waste management is seen as generally accessible for households and businesses in the communities. There are much more problems with the access to broadband connection which is seen as generally accessible for households only by six of 21 communities and for businesses by seven communities.

The desirable share of households and businesses that should have access to services of general interest is in the majority of cases indicated with 100%. For some services like cultural institutions or universities a few communities consider a rate less than 100% as appropriate.

Another part of the survey deals with questions about the availability of services in the community. Overall the results show that the presence of services is satisfactory for most municipalities. Two communities think the local health centres are not sufficient to meet the need of the population. One of these communities only has 8.700 inhabitants and is located at the edge of the Ruhr region which could explain this result whereas the other one is laying in the central part.

Regarding hospitals one authority sees an under-supply in their municipality. With almost 30.000 inhabitants the city does not possess a hospital which is obviously seen as problematic.

Even four authorities evaluate the number of kindergarten as not sufficient for the local community. Regarding child care for children under the age of three the provision with places in the kindergarten is not sufficient in Germany and has to be developed in the future. That will also be the case in the Ruhr region and could explain this result.

On the contrary the provision with primary schools is evaluated as sufficient by all municipalities. The provision with primary schools close to the population which is regulated by the regional planning seems to be successful.

Again the availability like the accessibility of post offices is estimated as insufficient by five municipalities. So postal services seem to be not satisfactory for the communities in the Ruhr region.

Regarding the quality of technical infrastructures many municipalities consider renovations for some services as necessary. 14 municipalities think that local roads have to be renovated. In the case of regional and state roads five communities desire an expansion and four a renovation.

The railway system is also seen in need for renovation by 13 municipalities. Even five communities replied this question with the need for reconstruction.

Only three communities see a need for renovation in the case of the electricity network. The sewage system shows another picture. Ten communities would like to have a renovation of the system whereas only two communities evaluate a need for renovation of the water supply network.

In the case of waste disposal, gas supply, fixed telephone line and the net coverage of mobile phones the vast majority do not see any need for action.

Expansion is desired in the case of broadband connection by even 13 municipalities and not all of them are located at the edge of the urban agglomeration. So even in some urban cities, located in the centre of the Ruhr region, an expansion of broadband connections is desirable. Considering the share of renovation estimated by the municipalities it ranges a lot especially in the case of local and regional roads (from 20 to even 90% in one case). But it has to be said that this question, apart from broadband connection, was answered by only one to six municipalities. The need for expansion of the broadband network is evaluated by eleven municipalities, but the share ranges again quite enormously from 5% to even 100%.

For most technical infrastructures the quality is estimated as acceptable and good. Four municipalities think the quality of their local roads is bad, but only one considers a bad quality of regional and state roads. The quality of the railway system is estimated as acceptable by six municipalities and as good by ten of 22 participating cities.

The quality of the electricity network as well as the water provision is evaluated either as good or as very good. Only one community in both cases considers the quality as only acceptable. For the sewage system the results are a bit more differentiated. For one municipality the quality is bad, for six it is acceptable, eleven municipalities think it is good and three are completely satisfied. The waste disposal is estimated by all communities as good and very good (twelve and ten times).

The net coverage for mobile phones is seen as mainly good and very good, four municipalities think it is only acceptable. The quality of broadband connection is considered slightly different. In one municipality it is seen as very bad, still in four as bad. In the regional analysis of services of general interest the city which estimates a very bad quality in broadband connection has in fact a lower share of population connected to broadband than other cities with a similar number of inhabitants.

Regarding the quality of social services the facilities are evaluated as good by many municipalities. Post offices are again one service which quality is considered as insufficient. For one authority the quality is very bad, for one bad and still seven evaluate their post offices' quality as only acceptable. In the case of post offices a red line is visible regarding their accessibility, availability and also their quality. This may be due to the liberalisation process the Deutsche Post follows in which many, especially small, agencies closed or were merged. Old people and households without a car could have disadvantages in this process.

As a conclusion of the survey it can be said that the dissatisfaction of the municipalities with services of general interest is not very high. The accessibility as well as the availability are mainly evaluated as good. In case of a bad assessment it does not play a role if the municipality is located in the core of the Ruhr region or at its edge. A consistent structure is not recognisable in the answers like bigger cities are more satisfied than smaller cities.

### **3.4. Political contextualisation of SGI in the region**

Because of the structural change from a coal and steel based industry to a service oriented economy the Ruhr region is part of political debates for a long time now. One of the main points in the discussions certainly was the financing of such a change noticeable not only in a decreasing number of jobs and coal mines but also in a change of the townscape.

For overcoming the structural crisis and for the socio-economic reorganisation of the area the state as well as the federal state North Rhine-Westphalia contributes regionally significant financial resources to the biggest German agglomeration.

Big cuts in the coal and steel industry and in subsequent sectors of industry led to extensive use of financial and structural instruments by the state, by North Rhine-Westphalia and since the 1970s the regional policy of the European Union were introduced to abolish and reduce disparities within the community.

In addition to the development of the infrastructure the support of the coal and steel industry and its employees played a central role in the first years of financial aid. Reasons were on the one hand the protection of a national energy provision and on the other hand to achieve a social absorption of employment reductions.

After increasing criticism about the strong financial focus on the old industry sectors the policy developed approaches for a diversification and adjustment of the economic structure and for the support of small and medium sized companies.

From 1987 to the late 1990s a policy for the improvement of regional structure were followed up. There are different programmes and areas eligible for funding in this policy like support for universities, science and education.

One programme ("Bund-Länder-Gemeinschaftsaufgabe Hochschulbau") supported the expansion and new building of universities up to and including the year 2006. Due to this programme the Ruhr region has a very dense net of tertiary education with important spillover effects. Today six universities and sixteen universities of applied science are located in the Ruhr region.

Since 2003 the state supports the federal states with financial aid in the programme "Future, education and care" to establish an infrastructure with full-time schools in a modern way and suitable for the demand.

Regarding the employment situation the Ruhr region are still suffering under the structural change and the connected shift to more service oriented jobs. The unemployment rate is still one of the highest in the country only exceeded by the eastern German federal states.

In western Germany the Ruhr region is together with Bremen the agglomeration with the highest subsidies per inhabitant to integrate unemployed persons in the labour market.

Additionally there are programmes financed by the state, the federal state or the EU that support business start-up and the regional economic structure. Locational disadvantages should be abolished and economically underdeveloped regions should be led to the common economic development to avoid regional disparities (Lackmann 2008).

For the support of the regional economic structure the local investment spending is supported with direct subsidies to the investment costs of private companies and as well to municipal infrastructure projects related to economic activities. These are singular subsidies for investments in companies which have to assert themselves independently on the market



after receiving the subsidy. The input is restricted on investments which generate additional income in the area and is only allowed to run in prior defined particular economically underdeveloped regions.

The European structural funds play an important role for the Ruhr region especially the financial resources from the fund for regional development (EFRE). The Ruhr region is declared as a "Target 2 area" which is defined as an industrial region with a declining development. The resources are preferential used to diversify the onesided economic structure and to undertake environmental and infrastructural measures. Additionally a technology and innovation support take place as well as investment subsidies for the commercial economy. The federal state North Rhine-Westphalia will receive 1.3 billion Euro until 2013.

For the integration of long-term unemployed persons into the labour market and for the support of unemployed teenagers and women the European Social Fund (ESF) gives financial resources.

Since 1971 the federal government give financial support in the so-called urban development programmes. The programmes range from renovations and modernisation of streets, buildings and other infrastructures up to a social programme in unprivileged city quarters. After the German reunification the focus of the urban development funding concentrated on the eastern German cities as they had an extensive need to catch up in urbanistic reconstruction.

In the programme "Reconstruction and development" the Ruhr region, Düsseldorf and the Saar region received with twelve Euro per inhabitant the highest financial support of the western German cities. In the Ruhr region particular the cities of Oberhausen and Bochum profited by this programme.

The social-political importance of the urban development funding is strengthened by the programme "Social City" which should be hinder the downwards development of unprivileged quarters with extensive measures to improve the chances for the local population. Social interests like employment and education, civic participation and living together are important parts of this programme. The agglomerations Nuremberg and Ruhr received the highest financial rate per inhabitant. The intensive support of the Ruhr region is comprehensible as many problems due to the structural change are concentrated in this area which should be addressed with the programme. In the Ruhr region the cities of Bottrop, Essen, Duisburg and Gelsenkirchen exceeded the average financial support of 15 € with a financial support of 30 €. The assisted areas possess typical features of an old working-class quarter as a high share of unemployed persons, welfare recipients, foreign people as well as little participation in education, the loss of buying power and urbanistic grievance. The programme supports measures on qualification projects, encouragements for the local economy (particular craft and retail), the construction of education facilities as well as establishments of cultural institutions and companies.

After focussing on the renovation and development of eastern German cities, western German cities getting more attention since 2004 as they also show similar problems like in eastern Germany due to changing demographic and economic structures.

The Ruhr region is at the centre of the support of the programme “urban reconstruction west” as the loss of jobs in the past brought a massive decrease of population. With the programme it should be achieved an improvement of the living environment, the partly reconstruction of vacant housing stocks and the valorisation of city-centres with their shopping facilities.

It is apparent that the Ruhr region received a high number of financial supports in the last decades but compared to other western German agglomeration the Ruhr region still faces big problems and challenges due to the structural change. The economic structure changed from a coal and steel based industry to a more service oriented economy with the outcome that the kind of jobs and also the appearance of the cities changed. As a result financial resources had to be transferred to the region helping to create and maintain liveable cities.

### **3.5. Conclusion of regional case and prognosis**

The Ruhr region is the most densely populated area in Germany with more than 1.100 inhabitants per square kilometre. Due to this the provision with SGI is still rather good though the population decreased in the last years and will decrease in the future below five million inhabitants according to current prospects.

Of course there are some services which show a bad provision rate like number of kindergartens for children in the age below three years. In the survey distributed to the communities of the Ruhr region the provision with post offices were estimated by many local authorities as non-satisfying. But regarding all services as a whole the region do not suffer from an under-provision at the moment. Nevertheless the Ruhr region does have structural problems caused by the economic reorganisation after the steel and coal era. The reduction of jobs in the industrial sector was one of the main challenges in the past and is it still until today. The reorientation to service based jobs is not completed and is up to now not able to absorb the loss of jobs in the industry.

In the conducted interviews with three experts from different areas several driving forces and challenges were cited. The interview partners were from the city council of Waltrop, the public utility company of Dortmund and a scientist from the technical university of Dortmund. The city of Waltrop has 29.600 inhabitants, is located in the Kreis Recklinghausen and abuts the city of Dortmund. From 1903 to 1979 the coal-mine Waltrop was the biggest employer in the municipality. The city council Waltrop see as *the* main driving force the tense financial situation of the municipalities. Administrations are not able anymore to provide SGIs in the same range than twenty years ago because of the lack of money (e.g. public libraries and swimming pools were closed). The city is not able to plan new building projects without the financial support of investors. But especially for small cities it is very difficult to find investors as the cities are not that attractive like Dortmund or Essen where huge projects were realised with the aid of investors. The demographic change is seen as a driving force as well but with less influence on SGIs than the financial situation.

The second interview partner, the utility company of Dortmund, provides electricity, gas, water, internet and the local public transport. The interviewed person considers the

demographic change as one of the main driving forces which will influence their provision. Through the demographic change the need and demand for the services will change. Also the pluralisation of the society through migration, less typical family structures will affect their provision and the standards of services will change. The tense financial situation in the municipalities is not mentioned though the main shareholder of the company is still the city of Dortmund.

The scientist from the technical university of Dortmund also considers the financial situation of the municipalities as the main driving force. But there are still enough SGIs available which are accessible for everyone. A rethinking in the local authorities has to be established that it is not sustainable anymore that each city affords every service. Because of the compact structure of the Ruhr region the cities could split the services. The problem is that most cities will not abandon their services to keep their autonomy.

For the city council of Waltrop the financial situation is also seen as the main challenges in the future particularly when the German system of solidarity will not change. A solidarity tax has to be paid to eastern German cities supporting them in their development after the reunification. After twenty years many western German cities, especially in the Ruhr region, consider the tax as not necessary anymore. They are of the opinion that due to their tense financial situation and other social problems (high unemployment rate etc.) the tax should be distributed also to other cities or rather the tax should be abolished. The demographic change will be another challenge for the city. The requirements especially of elder people have to be fulfilled and the services have to be adapted. But if the financial situation will not improve the implementation of certain activities will be difficult.

For the public utility company in Dortmund the decided energy turnaround of the federal government is seen as the main challenge. Also the competition on the energy market is considered as another challenge.

The scientist mentions the same challenges for services of general interest as the city council of Waltrop which are the financial situation of the municipalities and the demographic change. But at the same time it is pointed that the Ruhr region is very well equipped with services of general interest and that there will not be a lack of SGIs in the near future.

#### **4. Conclusion**

A fundamental part of the German regional planning is the central place theory by Walter Christaller. From the 1960s on the German cities are categorised in a four level hierarchical system of central places which are equipped with different hierarchically graded services. The basic structure consists of high-order centres (the highest level of provision), the middle-order centres, the low-order centres and the small centres (lowest provision of services). The determination for a municipality as a central place does not dictate the provision of population in this centre exclusively but also for the service area of the communities in the surrounding, that must be supplied as well.

The high-order centres offer the broadest provision with services. In addition to the basic services they are featured with specialised services, e.g. universities and specialised hospitals. Low-order and small centres in contrast simply offer the everyday basic services and consequently have the smallest area of influence. Due to the organisation in this system the sufficient provision is guaranteed even for rural areas. Nevertheless the demographic change and the tense financial situation of many municipalities may lead to changes in the provision with SGIs especially in regions that are affected by an enormous loss of population or have only limited financial resources to adapt SGIs to contemporary and future challenges.

The German case study, the Ruhr region, is affected by both of these aspects. The economic structural change from a coal and steel based industry to a service sector led to a decrease of jobs and consequently of population and a limitation of financial resources.

Compared to other western German agglomerations the Ruhr region evolves more cautious than other regions due to the dominance of economically weak industries. The good location of the region in the centre of Europe with a beneficial accessibility, and the agglomeration of population that results in the hugest market of Germany should be in favour of a rapid economic development. Still this development is not sufficient to improve the situation neither on the employment market nor for the municipalities' budget.

A detailed analysis of different services did reveal a balanced distribution of services of lowest centrality that are services of everyday life like pharmacies, nurseries and primary schools. Longer distances to services of higher centrality have possibly to be accepted by the inhabitants of the four investigated counties. Still the overcoming distances to those services are comparatively short if opposed with the rest of Germany – especially eastern Germany. In the core of the Ruhr region all cities have between 117.000 and 582.000 inhabitants which means they unite at least services of middle-order centres.

Regarding the current results from the survey in the 53 municipalities of the Ruhr region the provision and distribution with services of general interest seems to be sufficient. The differences in the provision between the cities are only marginal and the communities estimate the situation of most SGIs as positive and acceptable. Only a single service was graded as insufficient by the majority of the participating communities. Both the presence and accessibility of post offices were considered as bad in many communities. Still this critical

rating might be due to the fact that communities are not in duty of this service as it is provided by a privatised post company.

The survey deals also with the accessibility of SGIs for different population groups with the aim to investigate if certain groups have more difficulties to access SGIs than others. The communities estimated an unproblematic access to SGIs for most groups. Only households without car and persons with disabilities seem to have more difficulties to reach SGIs, which seems to be especially true in high-order centres. One could suggest that the public local transport is neither developed satisfactorily nor usable for disabled persons. The aspects income and unemployment seem to be unimportant for accessing SGIs in the Ruhr region.

The good provision with economic and social services is probably a heritage of the successful industrial period of the coal and steel era. Particular technical infrastructure like motorways was built in the time of prosperity in the 1950s and 1960s and the region can still benefit from this time.

In contrast to the survey the interview with the city council of Waltrop revealed that concerns about the close provision with services for the local population are apparent. Especially the supply with retail sales in the city centre was mentioned not only in context of provision but for the attractiveness of the city as well. It became apparent that the attractiveness for a municipality like Waltrop is very important to keep the local population and to create incentives for companies and potential new inhabitants.

The interviewed person criticised the public local transport which was evaluated as not acceptable to overcome distances between different municipalities. If services of higher centrality are shared between neighbouring communities the accessibility becomes a central aspect, since it has to be guaranteed especially for people without car and disabled persons. All interviewed persons considered the demographic change as an enormous challenge that increases with the difficult financial situation of all municipalities in the region. The city council of Waltrop is aware of the fact that services have to be adapted to the consequences of the demographic change but the tense financial situation will eventually hinder the implementation of measures.

In the interview with the scientist it was stated that the communities in the Ruhr region have currently sufficient SGIs to meet the needs of the local population. For the future it might desirable to split services between cities to preserve financial resources. In principle the dense net of cities could support a division of services that would be more sustainable compared to the present situation. In contrast smaller cities would be in thread of dropping behind big cities like Dortmund and Essen when competing for SGIs. Since private investments will play an important role when establishing new SGIs in a city as communities cannot afford financing projects alone. Private investors would possibly decide on cities with a certain degree of popularity. Therefore competition for SGIs might results in an even stronger difference of services offered in big cities compared to services offered in relatively small cities. When SGIs are shared the improvement of the local transport becomes a central issue to guarantee an uncomplicated transport of people between centres.

The public utility company of Dortmund, which is a local energy provider, considers the demographic change and the energy turnaround, which was decided by the federal government in 2012, as the major future challenges. The energy turnaround is to understand as the change from a fossil based energy provision to renewable energies. Through the demographic change the demand for the offered services will change and with it the company has to adapt their services.

After the regional analysis of SGI and the evaluation of the case study survey one can declare that the provision with SGI is sufficient for the local population in the Ruhr region at the moment. The municipalities are equipped with SGI according to the Regional Planning Act, which guarantees a comprehensive provision accessible for all citizens. The participating municipalities estimate the supply mostly as positive and acceptable. The providers of SGIs are aware of present and future challenges and in the next years it will show if the current measures will have the desired effects.

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