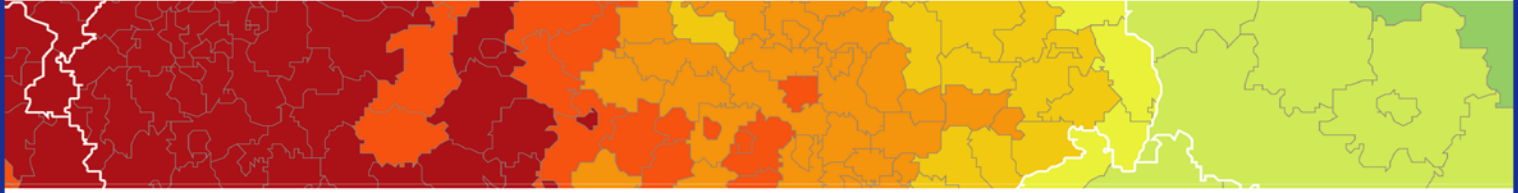


Inspire policy making by territorial evidence



PROFECY – **Processes**, **Features** and **Cycles** of Inner Peripheries in Europe

(Inner Peripheries: National territories facing
challenges of access to basic services of general
interest)

Applied Research

Final Report

Annex 11 **Case Study Report** **Kreis Siegen-Wittgenstein** **(Germany)**

Version 07/12/2017

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PROFECY – Processes, Features and Cycles of Inner Peripheries in Europe

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Abbreviations

CDU	Christian Democratic Union of Germany
DG REGIO	Directorate General Regional Policy
DG AGRI	Directorate General for Agriculture and Rural Development
EAFRD	European Agricultural Fund for Rural Development
ERDF	European Regional Development Fund
ESF	European Social Fund
EU	European Union
GDP	Gross Domestic Product
ILS	Research Institute for Regional and Urban Development
IP	Inner Periphery
LEADER	Liaison entre actions de développement de l'économie rurale
LOG	Landesordnungsgesetz (state organisation law)
Mbit/s	Megabits per second
NGO	Non Governmental Organization
NRW	North Rhine-Westphalia
NUTS	Nomenclature of Territorial Units for Statistics
PPS	Purchasing Power Standards
SGI	Service of General Interest
SME	Small and medium-sized enterprises
SPD	Social Democratic Party of Germany

Executive Summary

This case study has been carried out as part of the ESPON project 'PROFECY – Inner Peripheries: national territories facing challenges of access to basic services of general interest'. It was conducted in May and June 2017 by the ILS – Institute for Regional and Urban Development through analysis of secondary data and original empirical data collected by way of semi-structured interviews and a focus group discussion.

The case study report presents the German case study 'Siegen-Wittgenstein', a district within the federal state of North Rhine-Westphalia. It was chosen to investigate the concept of Inner Periphery based on delineation data classifying the area as having relative low access to regional centres and performing below the considered thresholds for access to certain Services of General Interest.

The area is characterized by a rather stable economic development but faces challenges regarding (a) the management of demographic change and the supply of skilled work force, (b) the adjustment of traffic and data infrastructures to current standards, and (c) the adaptation of planning system structures for dealing more effectively with the challenges in the rural, sparsely populated and border region parts. Regarding the internal differentiation of the case study area, the eastern part – the area of Wittgenstein – is found to be much more affected than the western part of Siegerland.

Stakeholders assessed the case study's challenges as similar to the adjacent districts but rated the access to resources as worse when compared to the metropolitan regions. Generally, a lack of visibility of and political attention towards the wider region and its specific needs, as well as influence on higher decision making levels was acknowledged.

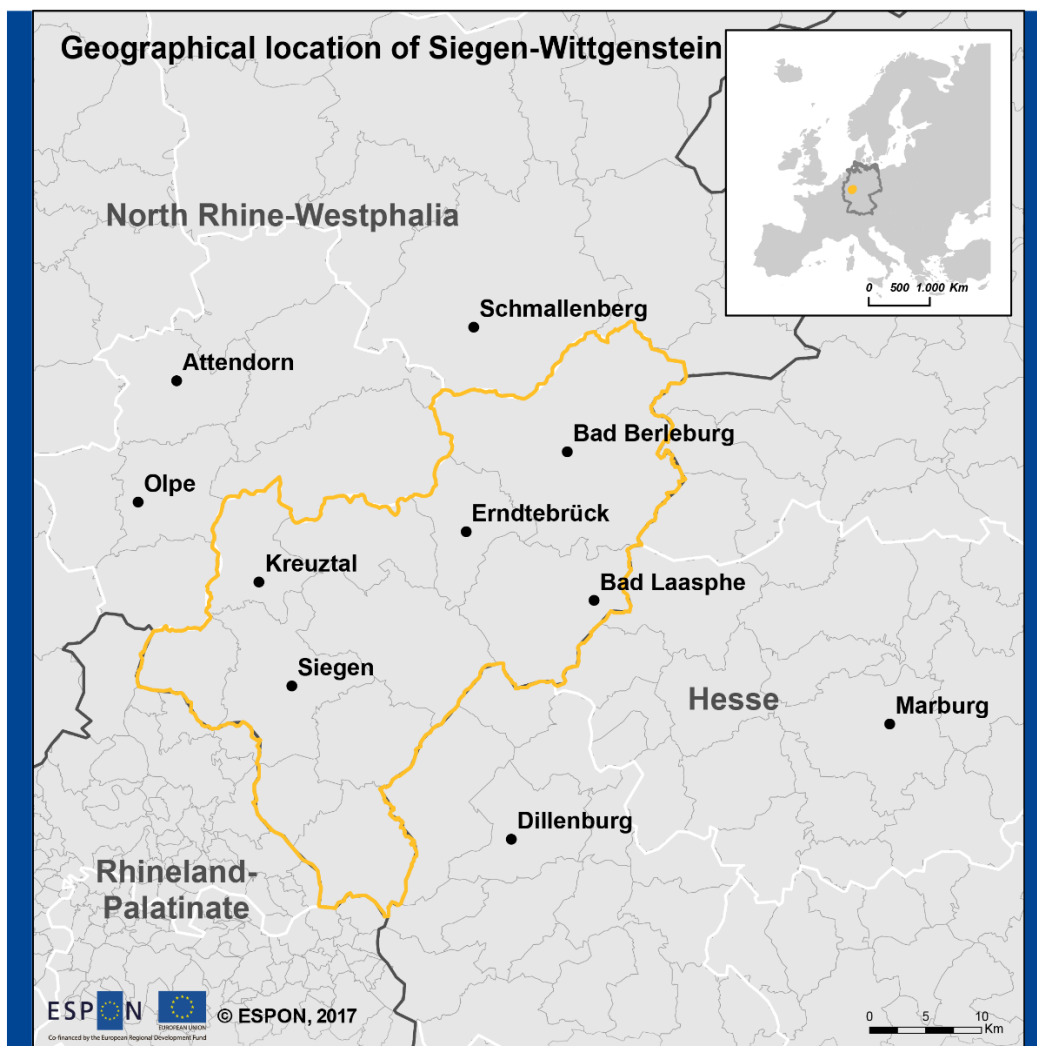
On the assets side of the case study area are however stable and effective networks with a broad range of stakeholders, on the local as well as on the regional level, which is a powerful resource to tackle peripheralisation. Especially on the regional level, one programme was considered by the interviewed experts to have helped to approach problems comprehensively. The regional structure development programme REGIONALE, set up by the federal state of North Rhine-Westphalia, is said to have established a valuable and effective cooperation platform to integrate local development concepts, to learn from each other, and to gain visibility, recognition and influence regarding higher governance levels.





1 Introduction of the case study background

1.1 General information and location in European space

The district Siegen-Wittgenstein is located in the south-eastern part of the state North Rhine-Westphalia in Germany and borders with the states Hesse and Rhineland-Palatinate (see Map 1.1). The district and case study area Siegen-Wittgenstein contains two parts, the former district Siegen in the south-western part and the former district Wittgenstein in the north-eastern part of the district, that were separated until 1975.¹ (p.1) With a total area of 1,132.89 km² and 280,800 inhabitants, its population density is relatively low (243 people per km²) in comparison to the state average (524 people per km²).

Map 1.1: Geographical location of Siegen-Wittgenstein within administrative structure



-  Siegen-Wittgenstein
-  NUTS-1 boundaries
-  NUTS-3 boundaries
-  LAU-2 units

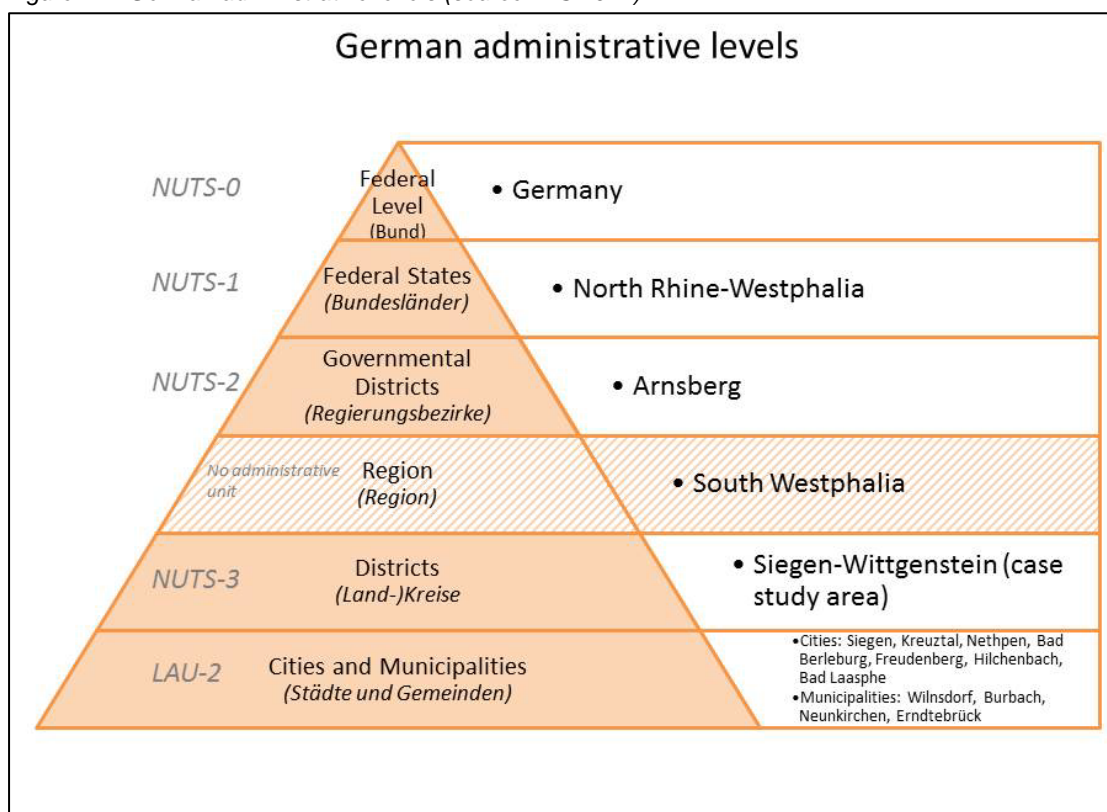
Local level: LAU-2
Source: ESPON Profecy
Origin of data: ILS Dortmund, 2017
CC- UMS RIATE and RRG for
administrative boundaries

While in the Siegerland region the population density is about 370 people per km², Wittgenstein is much less populated (84 people per km²) and has a more rural character. A

special position has the city of Siegen, which is – with slightly over 100,000 inhabitants – classified as a large city according to Germany’s statistical standards. It is the regional centre as well as the seat of the district’s administration and the University of Siegen. This is one reason why Siegen is the only city with a growing population in younger cohorts since 1999 (18-30 years) even though its total population is shrinking as the other parts of the district. In comparison to that, there is a dramatic shrinkage regarding the total population and the population development of the younger generation in Wittgenstein. While a decline of 9.3% of the total population can be observed since 1999, the three municipalities lost from 13.2% (Erndtebrück) up to 21.9% (Bad Berleburg, Figure 1.2) of their population aged 18-30 (see Map 2.4).

70% of the mountainous case study area is covered by forest. Nevertheless, the region is classified as *Predominantly Urban* (rural population less than 20% of the total population) according to the European Commission (DG REGIO and DG AGRI). One reason for that is that a lot of small administrative units (with rural character) were incorporated into bigger municipalities and cities in the course of the community reforms in the 1960s and 1970s.¹ (p.3) Since then, almost every village belongs to a bigger city or municipality that counts as an urban area.

Figure 1.1: German administrative levels (source: ILS 2017)



Besides the regional centre Siegen there are four cities and municipalities (Bad Berleburg, Bad Laasphe, Kreuztal, Neunkirchen), characterized as sub-regional centres, that have a supply function for the surrounding communities.² (p.143)

Figure 1.2: Bad Berleburg, typical small city for the eastern part of the case study area (source: ILS 2017)



Siegen-Wittgenstein belongs, like eleven other districts and administratively independent cities in North Rhine-Westphalia, to the governmental district (Bezirksregierung)^a Arnsberg (see Figure 1.1). The governmental district Arnsberg has the function of a general representation of the federal state government of North Rhine-Westphalia and acts as an intermediate level between the districts with its cities and communities and the federal state government. Subsequently, on the one hand, the governmental district has a linkage and assistance function. On the other hand it has some delegated responsibilities from the federal state government like school location development planning.³ Five of the districts in the south-eastern part of the governmental district Arnsberg (Siegen-Wittgenstein, Olpe, Märkischer Kreis, Hochsauerlandkreis, Soest) form the region South Westphalia with a total population of 1.83 million. This region is no administrative unit but a kind of regional umbrella organization consisting of the five districts and its local administrative units. In 2007, the five districts and their regional concept have won a competition called REGIONALE, a structural funding programme for regional development by the state of North-Rhine Westphalia. Since then the region South Westphalia represents the interests and goals of its members on a supra-regional level and also works to coordinate their interests internally.

^a English translations for ‚Bezirksregierung‘ vary significantly across English language scientific articles, we here adopt the translation ‚governmental district‘, requesting the reader to bear in mind that the same administrative level might appear with a different name in other publications.

The overall political environment of the case study area is characterized by relative stability on the local level as well as on the federal state level. For many years, one of the two major parties SPD and CDU, which can be classified in the political centre, form the governments on each level. This leads to relative planning security on all relevant levels and for the relevant stakeholders within the case study area.⁴ (p.25f.)

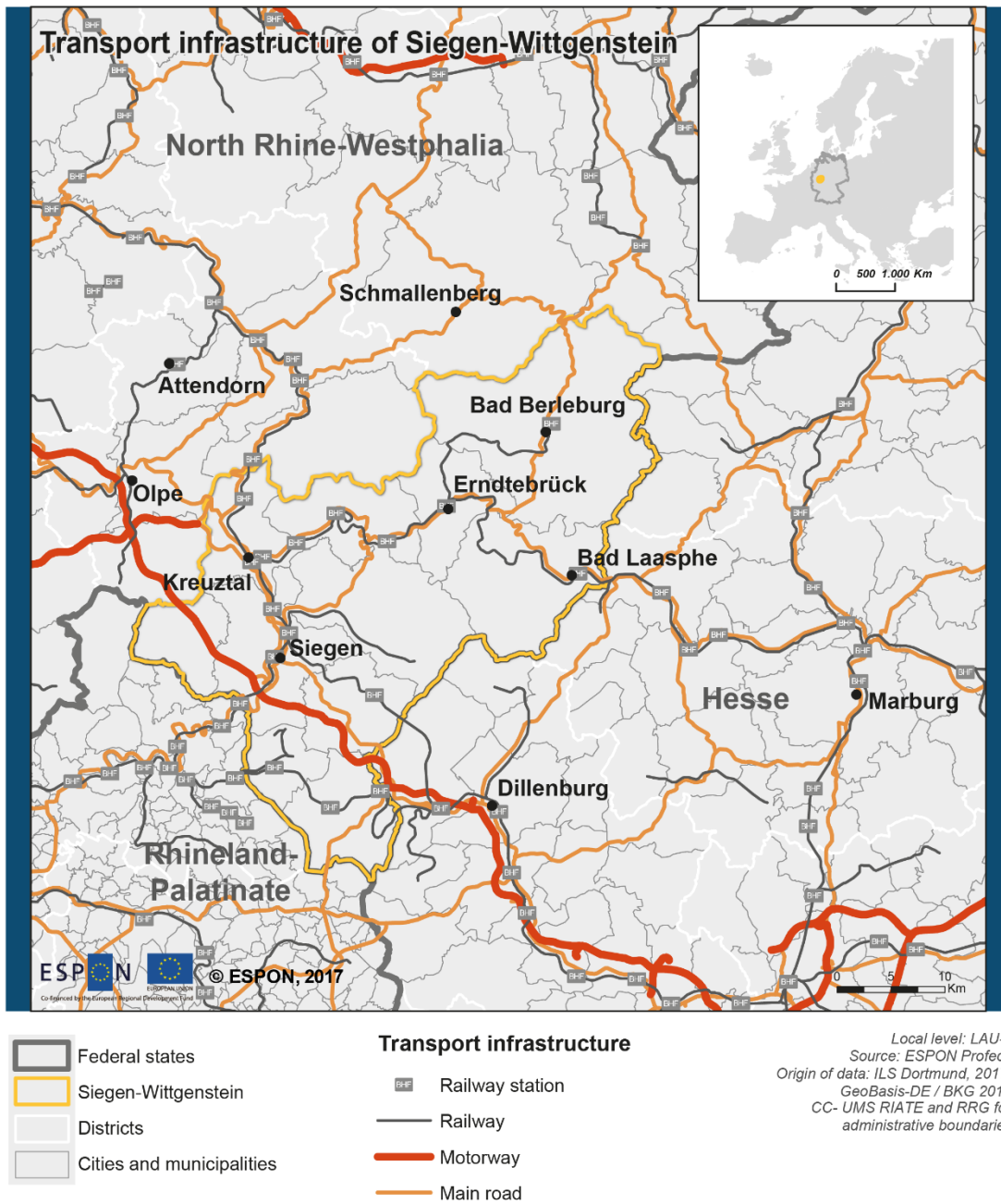
1.2 IP delineation outcomes

The case study area can be classified as Inner Periphery especially according to the travel time to regional centres (D1) and concerning the low access to some Services of General Interest (SGI) (D3). Concerning D1 there is a clear differentiation within the case study area. While the cities and municipalities in the Siegerland area (south-western part) have good access to the regional centre Siegen, the travel time from the area of Wittgenstein (north-eastern part) to the regional centre is much higher (see Map 1.2).

Map 1.2: Travel time to regional centres (Inner periphery according to delineation 1)



Map 1.3: Transport infrastructure of Siegen-Wittgenstein



Furthermore, there is a clear internal differentiation regarding access to the federal motor- and railway system. The Siegerland area, in particular the largest cities Siegen and Kreuztal, enjoy direct access to the federal motorways A45 and A4 that connect the district with the urban agglomerations of the Ruhr area, the Rhine valley and the Rhine Main area (see Map 1.3). However, there is essentially just one connection between the regional centre Siegen and the municipalities in the Wittgenstein area via the B62 (connection to Bad Berleburg via B480). Due to the topography it is a quiet hilly and winding road, which leads to long travel times.

Figure 1.3: Train station Bad Laasphe – students commuting home from school (source: ILS 2017)



Figure 1.4: The run-down train station of Erndtebrück – now under construction (source: ILS 2017)

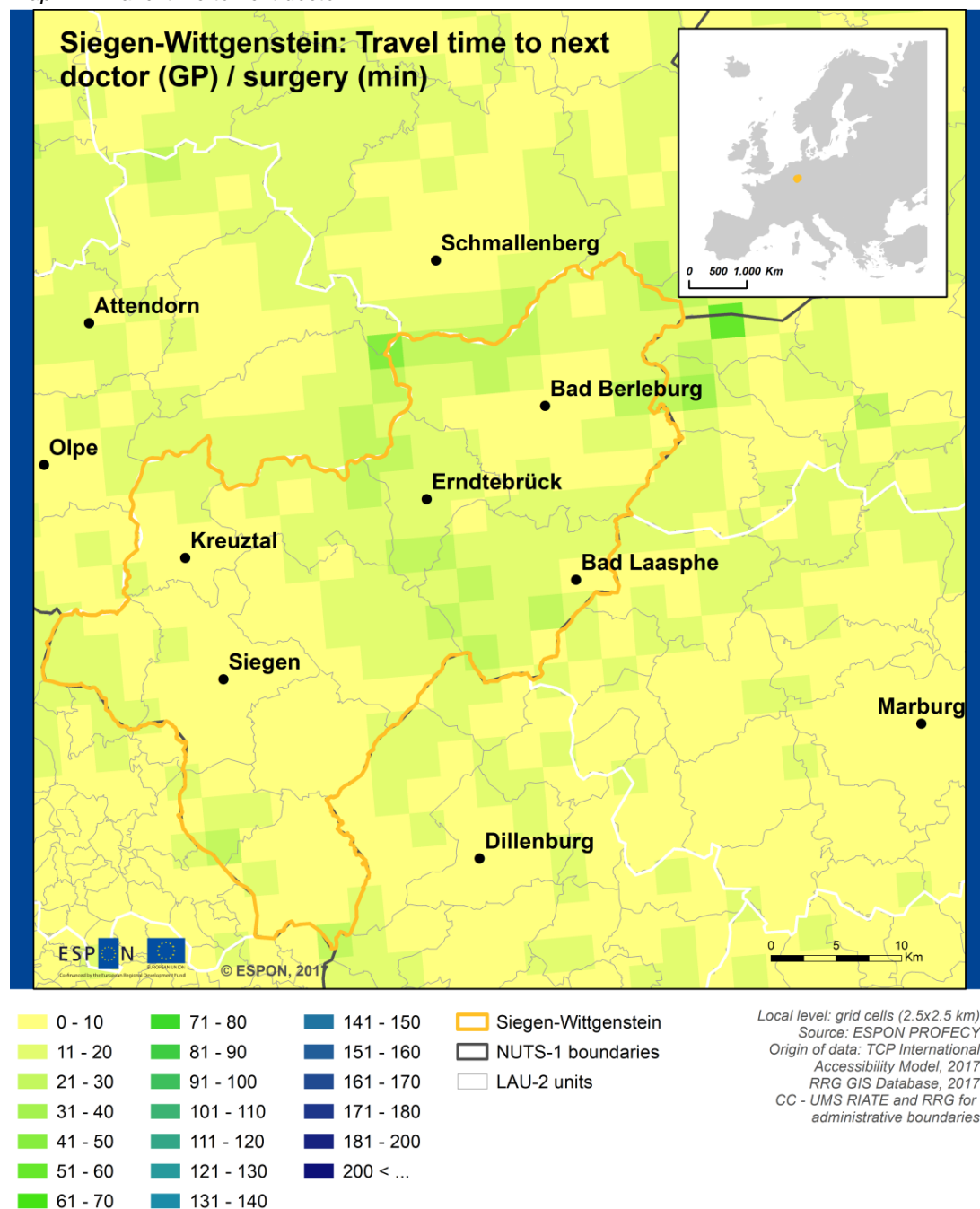


The district is not connected to the supra-regional intercity rail network. There are regional trains connecting Siegen and its environment to metropolitan areas, but the Wittgenstein area (the eastern part of the district) and its main municipalities are accessible via local trains only, which makes travelling by train quite unattractive (see Figure 1.3 & Figure 1.4). From Siegen

to Bad Berleburg it takes around one and a half hours by train and 45 minutes by car for a distance of ca. 30km linear distance.

Relating to D3, the case study area is characterized by low access to some SGIs, especially concerning doctors and primary schools but also regarding retail and banks. Considering the calculations for each grid cell, an internal differentiation within the case study area can be identified. The access to all of these SGIs is lower in the Wittgenstein area. When analyzing the travel time to the next doctors (Map 1.4), it is apparent that the accessibility to health care is worse in the three municipalities in Wittgenstein, in particular outside the town centres and along the borders to the surrounding districts.

Map 1.4: Travel time to next doctor



1.3 Basic socio-economic characteristic

Siegen-Wittgenstein today has a total population of about 280,800. With a decline of -7.5% since 1999 (until 2013) the population shrank significantly in comparison to the whole state of North Rhine-Westphalia (-2.4%) and Germany (-1.7%). The respective figures for young people (-2.5%) seem relatively low at first sight in comparison to the total population decline and moderate in comparison to the whole region of South Westphalia, where the young population has shrunk by approximately one tenth since 1999. Again, however, there is a clear pattern of polarization: the University of Siegen attracts young people of the region and the surrounding districts and is increasing its student numbers. This is why Siegen is the only city in the case study area with an increase of the young population (+9.1%), while all others show a decrease of up to -21.9%. The gender proportion of the population of the case study area (0.97 males to females, Gender Imbalance 2013) shows no significant difference neither when compared to the federal state level (0.95) nor when compared with the national numbers (0.96).

Table 1.1: Basic demographic characteristics of Siegen-Wittgenstein district (various sources: see Annex 2)

Indicators	Siegen-Wittgenstein (NUTS3)	Region South Westphalia (group of NUTS3)	North Rhine-Westphalia (NUTS1)	Germany
Population density (2013) - per km ²	243	223	515	226
Total population (2013) – inhabitants	274,904	1,383,061	17,571,856	80,767,463
Population development (1999-2013) - %	-7.5	-6.99	-2.38	-1.7
Population development age 18-30 (2005-2013) - %	-2.5	-9.86	0.6	-2.7
Old age dependency ratio (2013) - %	34.4	34.7	33.8	31.5
Gender imbalance (2013) - female/male %	0.97	0.97	0.95	0.96
Share of foreigners (2013) - %	8,29	8.55	10.91	8.58

A striking feature of the case study region is that despite many of the aforementioned factors of locational disadvantage it is and for decades has been a booming region in economic terms. The region South Westphalia – and Siegen-Wittgenstein as part of this region – is characterized by a high level of socio-economic development, being home to manufacturing and production industries. This is also reflected in the high number of employees in the secondary sector (43.7%) in comparison to North Rhine-Westphalia (28.6%). By this, South Westphalia is the strongest industrial region in North-Rhine Westphalia and the third strongest in Germany.⁵ (p.5)

Siegen-Wittgenstein has, like the whole region, a relatively low unemployment rate (5.8%) compared to North Rhine-Westphalia (8.3%) and Germany (6.9%), caused by the high number of jobs in the industries. Until the 1960s, Siegen-Wittgenstein was characterized by mining and metallurgical industries.⁶ Even after the last mines shut down in 1962, the economy continued to be strongly dominated by medium-sized (often family-run) companies in the manufacturing sector. These include, in particular, metal-producing and processing, the manufacturing of metal products, mechanical engineering as well as the manufacture of rubber and plastic products.⁵ (p.5)

The Gross Domestic Product (GDP) per capita in Purchasing Power Standards (PPS) is in Siegen-Wittgenstein even higher (35,898) than in the region (33,091), in North Rhine-Westphalia (34,796) and in Germany (33,169). By this, the case study region's GDP is 108% of the average in Germany.

Figure 1.5: View over the municipality of Erndtebrück, showing the typical interspersion of SME production sites in landscape and settlements (source: ILS 2017)



Even though the district is home to the University of Siegen, which was founded in 1972 and where about 18,600 people are currently studying⁷, the share of tertiary educated people in Siegen-Wittgenstein is lower (16.6%) than in the Federal State (19.8%). This is also linked to the very competitive and successful small and medium-sized companies that can offer a high number of apprenticeships and jobs in the secondary sector.

2 Characteristics of the case study: Patterns and processes

2.1 The evolution of the case study region as IP

This paragraph presents the case studies' economic, social and governance development and distills the major triggers and drivers that cause peripheralisation in the case study area.

From an economic point of view, the case study area has a long and continuous **economic development** rooted in a twofold but related engagement: 1) in the management of forest areas (so called Hauberg economy) in order to produce firewood, tanbark and charcoal for 2) the regionally important iron ore industry. These economic orientations can be traced back to the Middle Ages and have since then undergone restructuring and specialisation rather than breaks and major changes. Economically, the case study area is not peripheralised. Contrastingly, the areas' economic structure has gained stability and resilience over the course of several recent crises. The companies are mostly small and medium sized, regionally rooted family businesses specialising in the field of metal processing and machine engineering, with about 90% working with less than 50 employees. In the opinion of local economy specialists, such a structure is favourable, as it prevents massive layoffs and fast rising unemployment levels (expert 3). This attitude has been the outcome of a learning process during the steel industry crisis in the beginning of the 1990s when approximately 5000 jobs were lost and the district had to take action to cope with the situation. Back then, a regional development concept was designed and RESIDER II funds were employed to strengthen the science and development structure of the local economy and shifted its focus from steel and metal processing to mechanical engineering.

Nowadays, the unemployment rate is very low compared to other regions, even in the most remote part of the case study area. Experts even speak of a full employment situation, which is a positive economic indication on one hand but at the same time raises the question of a sufficient supply of skilled work force to sustain this development in the future. Since 2011, skilled work force acquisition has been in the focus of the case study areas' stakeholders and a strategy paper has been written on this topic and put into practice. Still, the shortage of qualified labour supply is an important topic that was often associated with the discussion of Inner Peripherality in the case study area.

Based on the traditional specialisation in forest management – being the district in Germany with the largest percentage of forest coverage – and on the development of some case study cities as spa and health resorts in the 1970s, measures are taken to improve tourism in the area. Most important here is the net of hiking tours running through the case study area, with the '*Rothaarsteig*' as longest and most prominent one ranking among the nationwide top long distance hiking routes. A second project is quite unique: a group of European bison was established and now roams freely through the forest. However, this project was only made possible because of a special ownership situation, with most of the affected forest belonging to one family. Still, the freely moving animals are subject of lawsuits, as they cause damage to owners of adjacent forest patches and the future of the project is not secured. One leading

planning expert was critical about the project and called for small scale projects in tourism rather than going for these kinds of unique and exceptional, but also risky projects.

Relevant for the economic ability to maneuver is furthermore the case study area's current public financial endowment. Here, an opposing trend between the local economic situation for private stakeholders and for local public stakeholders can be detected. While private average income is quite high and municipalities have high tax revenues, only two municipalities in the district remain with balanced financial household plans. Experts see the reason for this imbalance in the mainly rural structure of the district where costly infrastructure has to be sustained for a large but sparsely populated space. Even for the district administration, which remained in a stable financial situation until recently that allowed them to fill gaps for the municipalities, the situation tightens and experts raise the need to address the problem at its roots: the basic reason is seen with the municipal financial laws of the federal state of North Rhine-Westphalia (expert 1) which privilege agglomerations over rural spaces and whose calculation basis would have to be adjusted or made more flexible in favour of areas with sparse population but large spaces, if significant changes were to be expected and the local financial situation was to be improved.

Looking at the **social development** in the area, demographic change in the forms of aging and out-migration of younger population groups stands out in statistics as well as in the interviewees' narratives. However, this trend is not equally strong in the entire area, with the city of Siegen being rather stable in terms of inhabitant numbers while the eastern, rural parts face rapid declines: 'The larger the distance of the settlements from the motorway 45, which divides the district area [from North to South], the more they are affected by demographic change with regard to negative population forecasts' (expert 1).

As discussed above, this development challenges the local companies in finding suitable work force and at the same time creates difficulties for the local administrations to hold up a certain level of infrastructure and services. Experts are aware of this situation and multiple measures are taken to increase the attractiveness of the case study area as space to live and work. At the same time, however, interviewees admitted difficulties in finding effective ways to counter the process or to cope with it efficiently.

One factor influencing positively the population development in the city of Siegen is the university with regards to both growing student numbers and its importance as employer. Its student numbers have steadily increased over the last decades since the foundation in 1972. Nevertheless, interviewees (e.g. expert 2) describe that only in recent years mutual recognition of the potentials of close cooperation has grown and that there is a closer cooperation between local and regional stakeholders on the one hand and the university on the other hand now.

To add to the understanding of the case study area's development, a short overview of administrative structures and **governance development** needs to be given. Most relevant in this respect is the unification of the two former districts Siegen and Wittgenstein in 1975 to the

newly created district 'Siegen' which only in 1984 reincorporated Wittgenstein in its name and from then on carried its current name 'Siegen-Wittgenstein'. Not only the naming process but also interviewees' narratives indicate that this unification did not occur on an equal basis: 'It has always been the rich Siegeners and the poor Wittgensteiners' (expert 13). This has to be kept in mind when discussing inner differentiation of the case study area and today's unequally located potentials and challenges.

Despite these historically rooted internal differences, the region is seen as having well functioning governance arrangements, stakeholders a consensual way of confronting challenging issues and a high degree of loyalty once common decisions have been taken: 'What is a fundamental characteristic of this region is stakeholders' unity in political and structural policy issues no matter if these are employers, representatives of labour union, administration or politics: they all act in concert, and from that way of acting almost none has ever departed.' (expert 2)

Linked to the above presented three perspectives of development – economic, social and governance development – four main supra-regional processes that trigger the evolution of an Inner Periphery can be identified on the basis of interviews.

Increased importance of transport and data infrastructure

One process that drives peripheralisation on the regional scale is linked to a delay in adjusting to national and global standards with regards to transport and data infrastructure. This causes problems for the competitiveness of companies and the regions' ability to attract new investment and population. This is relevant for companies which have to transport their goods and expect their employees to commute to work as well as for bringing tourists into the regions or for accessing SGI inside or outside the case study area.

One main issue here is the **road infrastructure** which has been traditionally structured along the mountain ranges and which, due to higher policy level decisions, has never been developed further. The higher-level decision not to build an extension of a motorway into the area was partly discussed as the outcome of the area not sufficiently lobbying for its infrastructural demands (expert 1). Experts describe the limited attractiveness of the region for certain companies which would on the one hand fit well in the specialisation profile of the region, but which are dependent on good road infrastructure: 'If you had freight intense production, no one would come to the idea to establish [their company] here now.' (expert 13) In recent years, a local initiative has been formed to improve the situation and was successful in amending the national road infrastructure plan for 2030 (see below), but experts expect tangible improvements to take a significant amount of time before effects will be felt in the region (expert 8).

Looking at train connections to other regional centres and the **public transport system** within the case study area, there has been a clear downtrend over the last decades which now poses problems regarding the attractiveness of the region for less mobile groups, such

as young and old people who are not any more or not yet able to drive on their own. Train connections from the regional centre Siegen were cut over the last decades with the result that no high speed train services the connections and journeys take unreasonably long compared to car travel time. The same cut backs have been realised for local public transport: 'What became clear during the development of the public transport plan which was passed last year: how difficult it is in a scarcely populated space to create services that enable people from remote villages to take part in cultural and leisure activities in the [local] or regional centre.' (expert 1) On the other hand, public transport is also an important aspect to make more people able to join the work force and commute to work even if they have no own car: 'Here every family has two or three cars in their car port. Who cannot afford this anymore is out [of the labour market].' (expert 3)

A challenge that is addressed by interviewees, but also approached in several regional development strategies is the state of **digitalisation and data infrastructure**. Plans and funds of national and federal state level are in place to reach a 50mbit/s supply for every house by 2018. However, this is highly unexpected to be realised when discussed by local experts (expert 1 and 6) and even seen as impossible for remote houses. Special attention shall be given to the needs of companies in this aspect. Glass fibre access infrastructure is planned to cover all households by 2025. Inconsistencies regarding thresholds to access funding hinder a development according to local demands, as will be discussed below.

Metropolisation processes and increased attractiveness of metropolitan spaces

On a national scale as well as beyond, metropolitan regions as attractive places to work and live have been growing in recent years. This fosters processes of reurbanisation or relocation processes from villages to small centres. The out-migration of young people in search of education, work and different life style opportunities is a clearly visible trend in the case study area. 'Every child who is born and raised here first and foremost considers [to leave the area]: 'Shall I go to Frankfurt, shall I go to Cologne?' or any other metropolitan region which is close-by. There is the 'life style feeling' that pulls young people.' (expert 8).

Changing the image or the attractiveness of the case study area with regard to cultural activities is one approach pursued by local stakeholders to meet peoples' changed preferences. This is realised through intensifying the cooperation with the University and mainly through enlarging the range of cultural activities. However, enhancing professors' or students' attachment to the region is a difficult task. Before, the majority of professors used to live in Siegen and their contribution to and engagement with the city and the region is visible in, e.g. the establishment of the theatre and a quite renowned museum (*Museum für Gegenwartskunst*). In recent times, this engagement seems to have diminished with many professors not living in Siegen any longer, but commuting to Siegen only from Tuesday to Thursday while living elsewhere. The city of Siegen is rated low in the attractiveness to students, as assessed by many experts: 'The students which come from other regions to Siegen in fact expect [to find the lively atmosphere of] a student city like Marburg, like

Münster, like Bonn maybe, and what they find is a city that for a long time shied away from its university.' (expert 2)

Another local strategic approach to this challenge of increased attractiveness of metropolitan spaces is to emphasise and stress the manifold advantages of rural life and living conditions. This approach will be discussed later on in the section on future scenarios and options.

Demographic change

Demographic change is a universal trend for Germany but its impact on regions and localities differs. Experts remember that the aging of rural communities and the out-migration of young people have been on the policy agenda for a long time. 15 years ago, the district commissioned a first study on the situation. 'But it has proven to be an extremely wide field, difficult to navigate.' (expert 3) There is insecurity and uncertainty about adequate measures to counteract this trend, without at the same time increasing disparities between the more urban and the rural parts of the district.

Demographic change presents challenges mainly in three ways: firstly, it is affecting the supply of skilled labour force, as mentioned above, but also produces problems for companies' succession arrangements. Secondly, it leads to an increasing demand of more specialised services for an aging population. Thirdly, a decrease in population overall means a diminishing number of SGI users and imbalances between supply and demand in the provision of the services.

The current situation of **SGI provision** in the case study area is discussed in the following paragraphs. The assessment of the interviewed experts is summarized and discussed for the different fields of health care, education, supermarkets and banks as well as cultural amenities and infrastructure.

Primary health care / Hospitals / Specialists / Pharmacies

No supply gap is recognised in the city centres, but large gaps in the villages, where the former model of 'rural practitioners' does not work anymore. It seems that doctors prefer less intense working conditions and the old-established practitioners have difficulties finding successors. Several alternatives are being discussed, like to divide consultation hours among a group of doctors, so that not one person needs to commute to or stay in the places in need of services on a daily basis; fostering cooperation across district borders; or awarding scholarships for medical students in exchange for their obligation to work in the area after graduation for a limited time. Digitalisation of doctoral services such as diagnosis is also discussed as an option. The overall influence of the districts' administration on providing adequate solutions is felt to be limited: 'It is difficult for the district administration to get involved in fields where we have no explicit responsibility [...] we have discussed this problem many times but we cannot provide solutions. We just do not get 'rural practitioners' for this area before we have not succeeded in changing the guidelines of the Association of Statutory Health Insurance Physicians with regards to the payment of practitioners who work here.

Every practitioner prefers to go to Freiburg [a city with a large middle-income population], where a double income can be earned with patients there.' (expert 3) The situation regarding the provision with specialist services is described as so far sufficient by most experts, with the exception of maternity clinics. However, close monitoring and a coordinated strategy developed and moderated by the district is regarded as necessary. For the future, closer coordination also across district and federal state borders is considered. The assessment as regards the provision of pharmacies has been univocal unproblematic.

Primary schools / Secondary schools / Higher education

In the field of education responsibilities are very scattered across the administrative levels; primary schools are in the responsibility of the municipalities, secondary schools attached to the governmental district level, vocational schools in the responsibility of the districts and higher education infrastructure such as universities under the coordination of the federal states level. Therefore, regional or local stakeholders and institutions in the case study area can only extend limited influence on the situation. The state of primary schools is discussed critically by most experts: against falling student numbers a number of schools already had to be closed in the area. The requirements regarding the minimum number of pupils for maintaining a school are only of minimal flexibility across the federal state, and more schools are expected to close. This will result in higher commuting time for students and their higher dependency on an insufficient public transport system. Regarding the secondary school a similar process of concentration is described by experts. There is more influence of the district level in the field of vocational schools, where it has the main steering capacity and the current supply is deemed sufficient and well adjusted to the local economy's needs (expert 1).

Banks / Food shops / Supermarkets

Banks and access to banking services are generally discussed as unproblematic, as is the supply with food shops and supermarkets with regard to the city centres, but less so for the villages. In fact, the service hours and assortment of the centrally located supermarkets are well above average compared to some areas in metropolitan regions. For single villages, shops run by volunteer groups are installed and digital shopping options are named as alternatives for local supply, but at the same time discussed critically as one factor eroding the local economy.

Cinemas / Libraries / Cultural centres

This SGI section was the only one where experts expressed clearly contrary opinions. Some stressed the availability of cinemas and museums even in the small towns and the variety of options in the region, ranging from a theatre in Siegen – newly established against the common trend to close theatres, to an annual open air festival of national (if not international) significance to a literature festival in Bad Berleburg related to the Frankfurt book fair. Others discussed the lack of an alternative art scene and the need to travel to the metropolitan areas for cultural activities.

Inflexibility of planning system

A bundle of challenges is being summarized under the term 'Inflexibility of planning systems'. One aspect is the position of the case study area when looking at its geographical-administrative location. The administrative restructuring after the Second World War left the district in a border position of the federal state of North Rhine-Westphalia, bordering the federal states of Hesse and Rhineland-Palatinate. As federal states in Germany are endowed with quite high legislative and administrative power and freedom, local conditions on either side of a federal state border can be quite different and the border can pose a significant obstacle for cooperation or even for coordination of plans and developments. Borders often cut through established and historically developed activity spaces and formerly established cooperation. This can still be felt today in the case study area: the southern edges of the district and especially the ones of Wittgenstein are still informally attached to the adjacent districts in the federal state of Hesse. From some parts of the case study area, the regional centres on the other side of the federal state border are easier to access and therefore the district is split with regard to the orientation towards regional centres.

2.2 The case study against the region, country and Europe

Main statistical figures of the case study area and the differences when compared to the region's, federal state's and the national averages were presented in chapter 1. Comparing the statistical data of Siegen-Wittgenstein with the average of the EU-28, there are some interesting results. The case study area has a noticeable economic strength (the GDP per capita is 135% of the EU average, 2014) and a very low unemployment rate (less than half of the EU average, 2016). This is due to the high number of jobs in the manufacturing industries. While the ratio of employed persons in the manufacturing sector in Siegen-Wittgenstein amounts to 29% in 2014, the EU average is around 14%. Another interesting point is that the old age dependency rate, thus the number of elderly people as a share of those of working age, is higher than in the EU28 (31.8% compared to 28.8%, 2015). This is in particular due to the out-migration of young people and the lower number of children.

Leaving the statistical comparison and turning to the information gained in the interviews, a much more complex picture arises regarding which scales and governance levels are considered of relevance for dealing with the challenges in the area and which aspects appear when comparing and relating the case study area to these.

One important space of reference are the adjacent districts to the north of the case study area, which form the region of South Westphalia. These are on the one hand described as having very different historical developments as regards affiliations, religion or dialects (expert 2) but on the other hand described as facing similar challenges nowadays regarding socio-economic aspects (expert 3).

Most similarities were seen between the case study area and the district 'Märkischer Kreis' as well as with the district 'Kreis Olpe'. These similarities are perceived on the basis of a similar

orientation of the local economy towards metal processing and engineering, the number and existence of very strong SME world market players and the common need to cope with shortage of skilled labour. As regards motorway connection, these two districts are seen to be slightly advantaged compared to Siegen-Wittgenstein. At the same time, they are also characterized as having little own initiatives when looking at institutionalised business development. The district 'Hochsauerlandkreis' was considered more advanced and experienced regarding service and tourism activities as well as the successful application for funding. Efforts are made to join the activities of Hochsauerlandkreis and Siegerland for tourism development, but geography and road connection as well as the perception that the 'Hochsauerlandkreis' is a dominant player in this field seemed to inhibit cooperation.

With the districts to the south, on the other side of the border of the federal state of Hesse, 'Waldeck-Frankenberg' and 'Marburg-Biedenkopf', no intensive exchange or cooperation activities are mentioned by experts, and even a decline in these activities when compared to the 1980s and 1990s (expert 1). However, the adjacent districts in Hesse are also partly seen as competitors in economic development. Thus, a technology zone which is located close to the study area, but in Hesse, has already attracted companies which formerly were located in the case study region (expert 3).

'Oberbergischer Kreis' and 'Rhein-Sieg-Kreis' do not appear on the mental map of the interviewees. Instead, the case study area was often contrasted by the interviewed experts with the metropolitan regions surrounding it. For example, the Ruhr area was mentioned as the centre of industrialisation which was and is being confronted with similar economic restructuring challenges as the case study area. Interviewed experts often draw the picture of a Ruhr area, which has been highly supported and funded by the federal state government, and still has not managed the restructuring process successfully. Experts contrast this with a narrative of the case study area where funding and support had been scarce and people had successfully struggled out of crisis by themselves. The federal state of North Rhine-Westphalia in this context is often described as paying unequal attention to the metropolitan and the more rural parts of the state, with the Ruhr area and the Rhine valley being in the centre of attention and allowed more resources than the rural and more sparsely populated (also in terms of voters) areas in the eastern part of North Rhine-Westphalia, bordering other federal states.

As the Rhine valley with its centre Cologne as well as Frankfurt or Marburg are all approximately one hour drive away, they too appear on the mind map of interviewees and constitute a space of reference. Especially the better shopping, entertainment and higher education opportunities are articulated and compared with the conditions in Siegen-Wittgenstein. But when contrasting the district with the metropolitan urban areas, the positive aspects of the case study area are also discussed – the close-by spaces for recreation and the closeness to nature and beautiful landscape are named as assets of the district.

A further administrative level which was often mentioned as reference was the federal state of North Rhine-Westphalia and the bordering states of Hesse and Rhineland-Palatinate. The fact that the case study area is positioned in a border region creates disadvantages for the area from the differences of administrative systems: 'Positioned in a three-states-corner, and that is really a tremendous problem, because in Hesse and in Rhineland-Palatinate and also here in North Rhine-Westphalia they are following different strategies for the federal state development planning, and for us it is always difficult to harmonise these with the neighbours and to find options for joint projects.' (expert 1)

Discourse aspects that set the case study area apart from other areas

A central topic that came up in most of the interviews was a negative image attached to the whole or to parts of the case study area and the attitude with which the area was presented or presented itself in various arenas. One process that can contribute to creating or stabilizing Inner Peripherality via 'spoiling the image'⁸ is stigmatization. Stigmatization – in our research context – attaches negative attributes to specific localities via discourses and may influence stakeholders' actions and decisions. These discourses might be represented in media and narratives to different degrees. Some discourses develop a strong impact and hold on for long spans of time. For our case study area, three prominent narratives are important: former local, unsuccessful marketing activities, the labelling as peripheral, secluded space and an impactful newspaper article. Interviewees recollected a marketing campaign for the case study area from the 1980s employing the then very popular picture and wording of 'Province' (German: *Provinz*) which then held very positive connotations of 'French provence' and 'mediterranean life style'. However, the connotations of the word changed towards 'remote', 'old-fashioned' and 'outdated', which then stuck to the case study area on the basis of this campaign.

One narrative specifically connected to the area of Wittgenstein is a characterisation of the area as being 'behind the seven hills where the seven dwarfs lived' with reference to the fairy tale 'Snow-white', which in German language bears a word resemblance with 'Wittgenstein'. It holds a double problematic as it on the one hand sets the two parts of the district, Siegen and Wittgenstein, against each other and on the other hand creates an overall image of a very remote place.

The most influential narrative, however, was triggered by a newspaper article written in 1996 for the nation-wide distributed SZ Magazin.⁹ The title of the article has since become a proverb-like saying, which plays with the German words for winning and losing: 'What is worse than losing: Siegen' (the name of the regional centre of the Kreis Siegen-Wittgenstein which also means 'winning' in German). The article creates an image of bad urban restructuring and incompetent local governance and has since publication been recited multiple times. The author of the article was even invited by the regional broadcasting station after the recent restructuring of the city centre to comment on the development of the last decades and to hopefully reconcile and mend the image but with little success.

2.3 Internal structure and disparities inside case study region

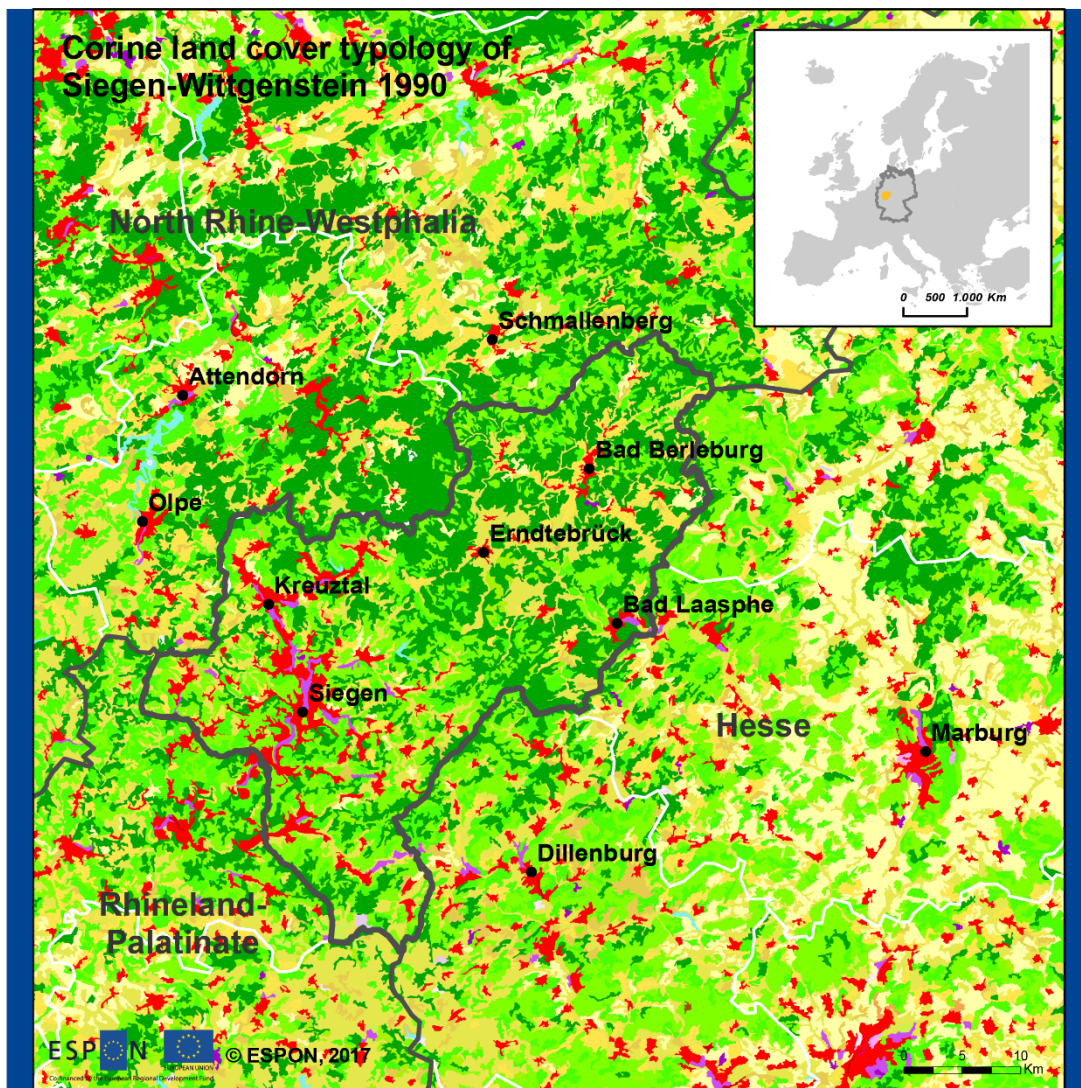
The case study area can be said to consist of two parts, the former district Siegen and the former district Wittgenstein, which were and are partly still separated by geography and history: Map 2.1 to Map 2.3 give a first impression of this situation showing more urban fabric in the western part and more forest areas in the eastern part where, additionally, high mountain slopes can be found that act as natural barriers and are still causing longer transport times and difficult access to Wittgenstein. Analysing the development over time (with data for the years 1990, 2000 and 2012; see maps on land use below) one can detect a slight increase in built up area especially in the already more urban western part and from 2000 to 2012 a clear increase in forest coverage. These changes increase the different character of the two parts, Siegerland being more urban and Wittgenstein becoming more rural in structure.




The two parts of the case study area were separate administrative units on district level until 1975 but their separate development roots further back till the 17th century, when the two parts were under different reign and acquired different dominant religions and economic profiles. This former division is still reflected in multiple aspects such as statistical key figures, infrastructure or local identities and most of the experts mention it as an influential factor of regional development.

There is a clear differentiation inside the case study area and lots of disparities between the Siegerland region and the region of Wittgenstein with regard to the total population and the population density. While the Siegerland region consists of eight cities and municipalities with a total population of about 234,500, the region of Wittgenstein consists of three cities and municipalities (Erndtebrück, Bad Laasphe and Bad Berleburg) with slightly above 40,000 inhabitants. The population development has been discussed above – the detailed development is once more illustrated in Map 2.4.

Internal differences can also be observed concerning the communication accessibility of the case study area. While a virtual accessibility with more than 50 Mbit/s is provided in most of the households of the largest cities Siegen and Kreuztal (94.8% and 86.2%), two of the smallest communities, Bad Laasphe and Erndtebrück (both located in Wittgenstein), have a very low accessibility (36.5% and 4%) (see Map 2.5).



Map 2.1: Corine land cover typology of Siegen-Wittgenstein, 1990



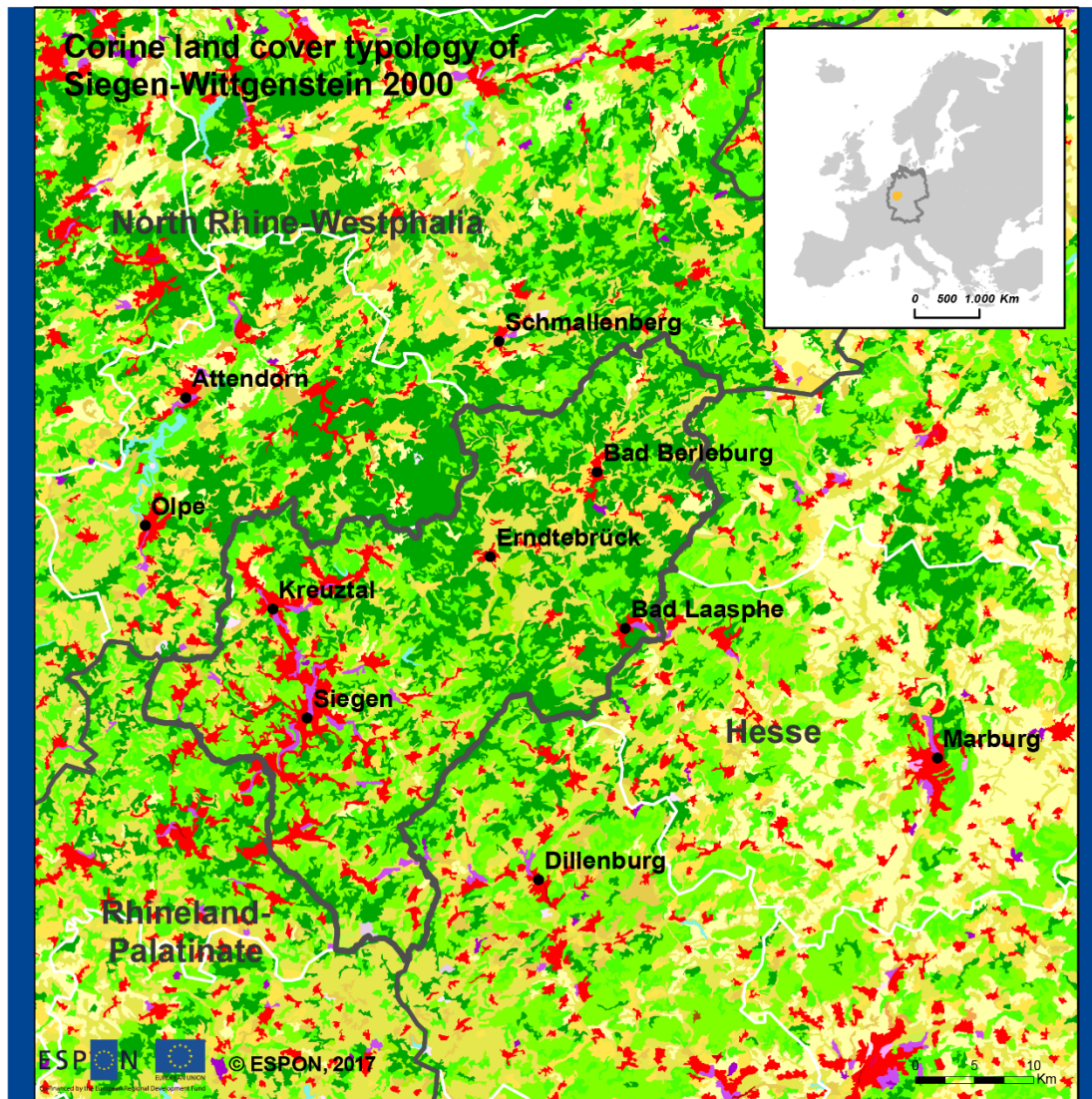
-  Siegen-Wittgenstein
-  NUTS-1 boundaries
-  NUTS-3 boundaries




Local level: LAU-2
 Source: ESPON Profecy
 Origin of data: ILS Dortmund, 2017; EEA
 CC- UMS RIATE and RRG for
 administrative boundaries

CLC Code

- | | |
|---|---|
|  112: Discontinuous urban fabric |  211: Non-irrigated arable land |
|  121: Industrial or commercial units |  231: Pastures |
|  122: Road and rail networks and associated land |  242: Complex cultivation patterns |
|  124: Airports |  311: Broad-leaved forest |
|  131: Mineral extraction sites |  312: Coniferous forest |
|  132: Dump sites |  313: Mixed forest |
|  141: Green urban areas |  324: Transitional woodland-shrub |
|  142: Sport and leisure facilities |  512: Water bodies |

Map 2.2: Corine land cover typology of Siegen-Wittgenstein, 2000



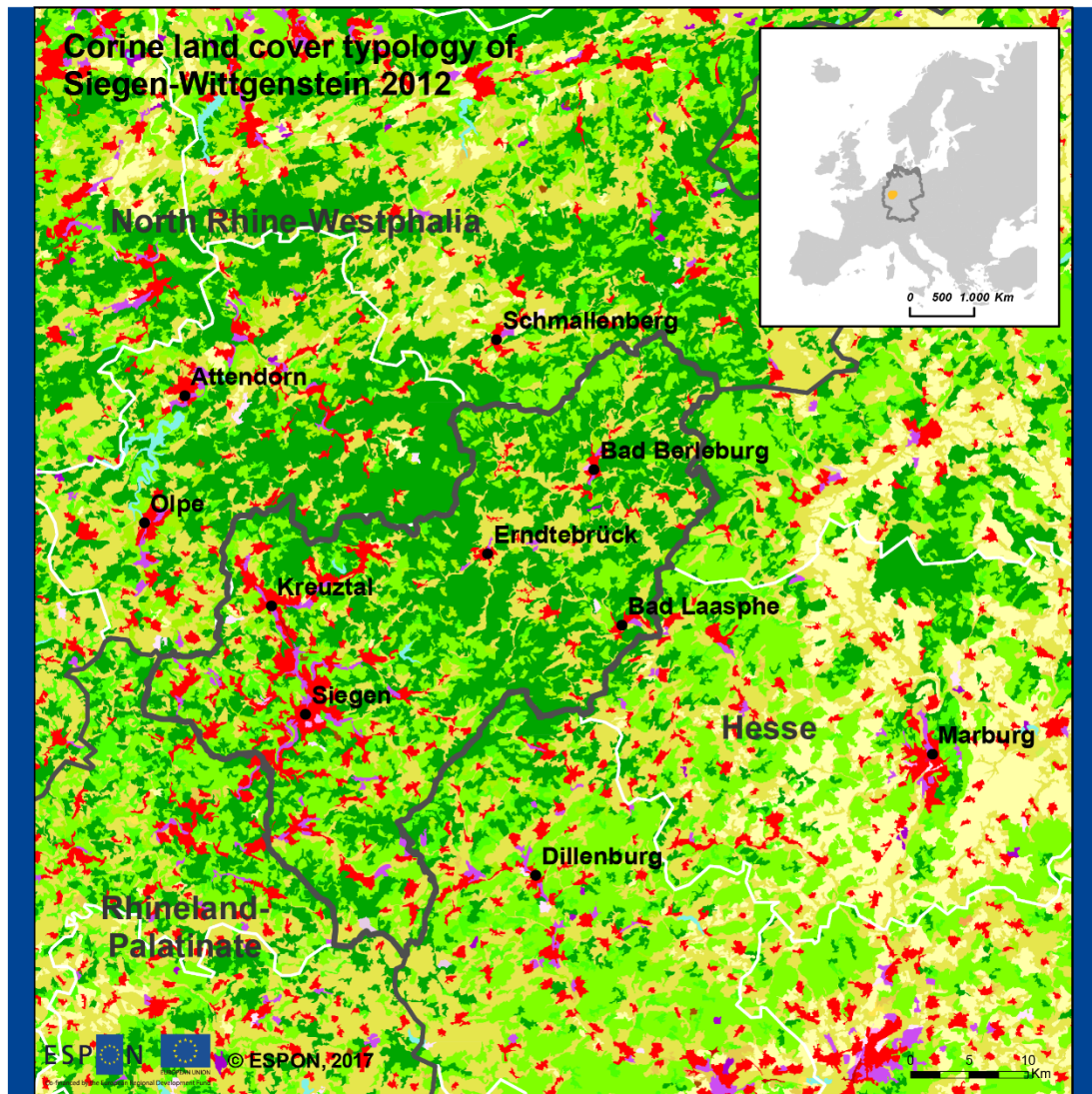
-  Siegen-Wittgenstein
-  NUTS-1 boundaries
-  NUTS-3 boundaries




Local level: LAU-2
 Source: ESPON Profecy
 Origin of data: ILS Dortmund, 2017; EEA
 CC- UMS RIATE and RRG for administrative boundaries

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|  112: Discontinuous urban fabric |  211: Non-irrigated arable land |
|  121: Industrial or commercial units |  231: Pastures |
|  122: Road and rail networks and associated land |  242: Complex cultivation patterns |
|  124: Airports |  311: Broad-leaved forest |
|  131: Mineral extraction sites |  312: Coniferous forest |
|  132: Dump sites |  313: Mixed forest |
|  141: Green urban areas |  324: Transitional woodland-shrub |
|  142: Sport and leisure facilities |  512: Water bodies |

Map 2.3: Corine land cover typology of Siegen-Wittgenstein, 2012



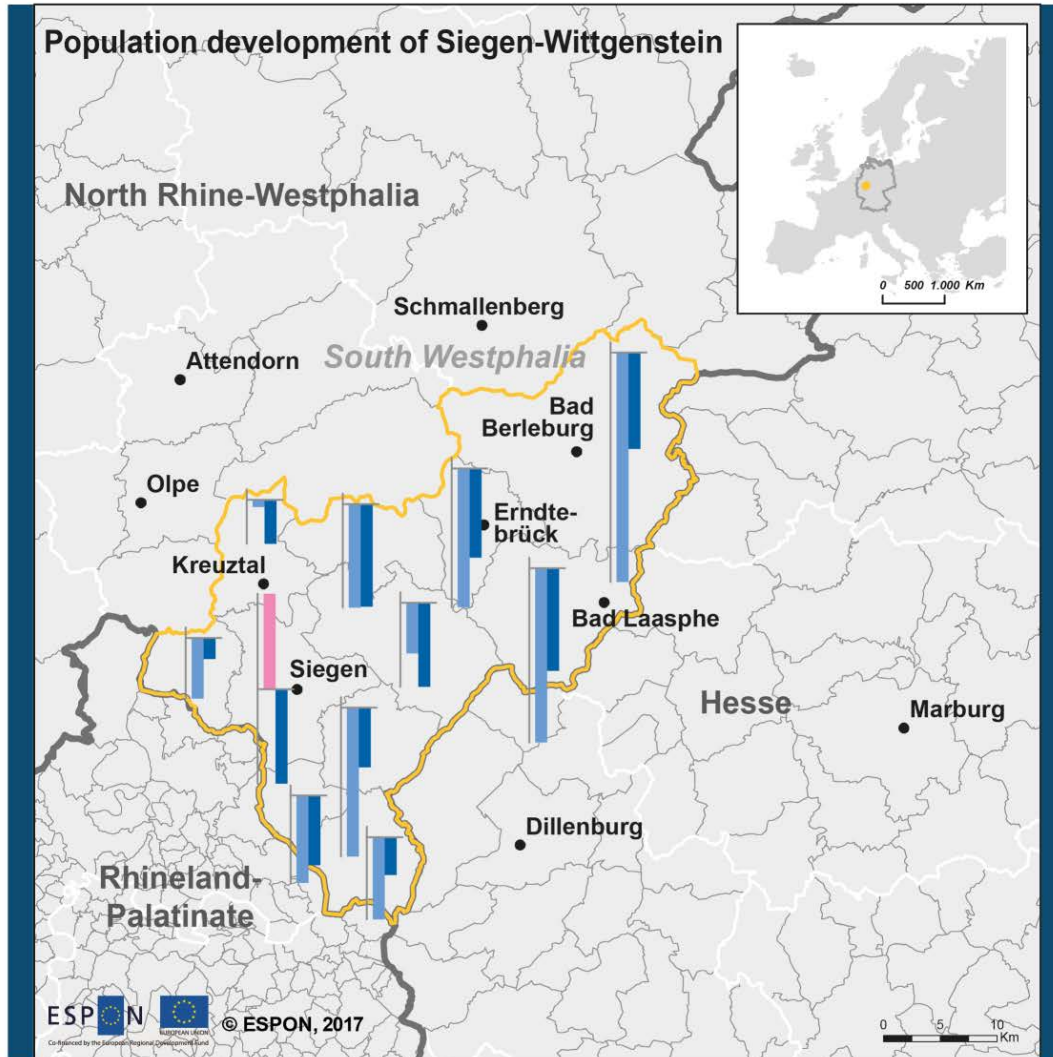
-  Siegen-Wittgenstein
-  NUTS-1 boundaries
-  NUTS-3 boundaries

Local level: LAU-2
 Source: ESPON Profecy
 Origin of data: ILS Dortmund, 2017; EEA
 CC- UMS RIATE and RRG for
 administrative boundaries

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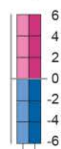
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|---|---|
|  112: Discontinuous urban fabric |  211: Non-irrigated arable land |
|  121: Industrial or commercial units |  231: Pastures |
|  122: Road and rail networks and associated land |  242: Complex cultivation patterns |
|  124: Airports |  311: Broad-leaved forest |
|  131: Mineral extraction sites |  312: Coniferous forest |
|  132: Dump sites |  313: Mixed forest |
|  141: Green urban areas |  324: Transitional woodland-shrub |
|  142: Sport and leisure facilities |  512: Water bodies |

Map 2.4: Population development of Siegen-Wittgenstein



-  Federal states
-  Siegen-Wittgenstein
-  Districts
-  Cities and municipalities

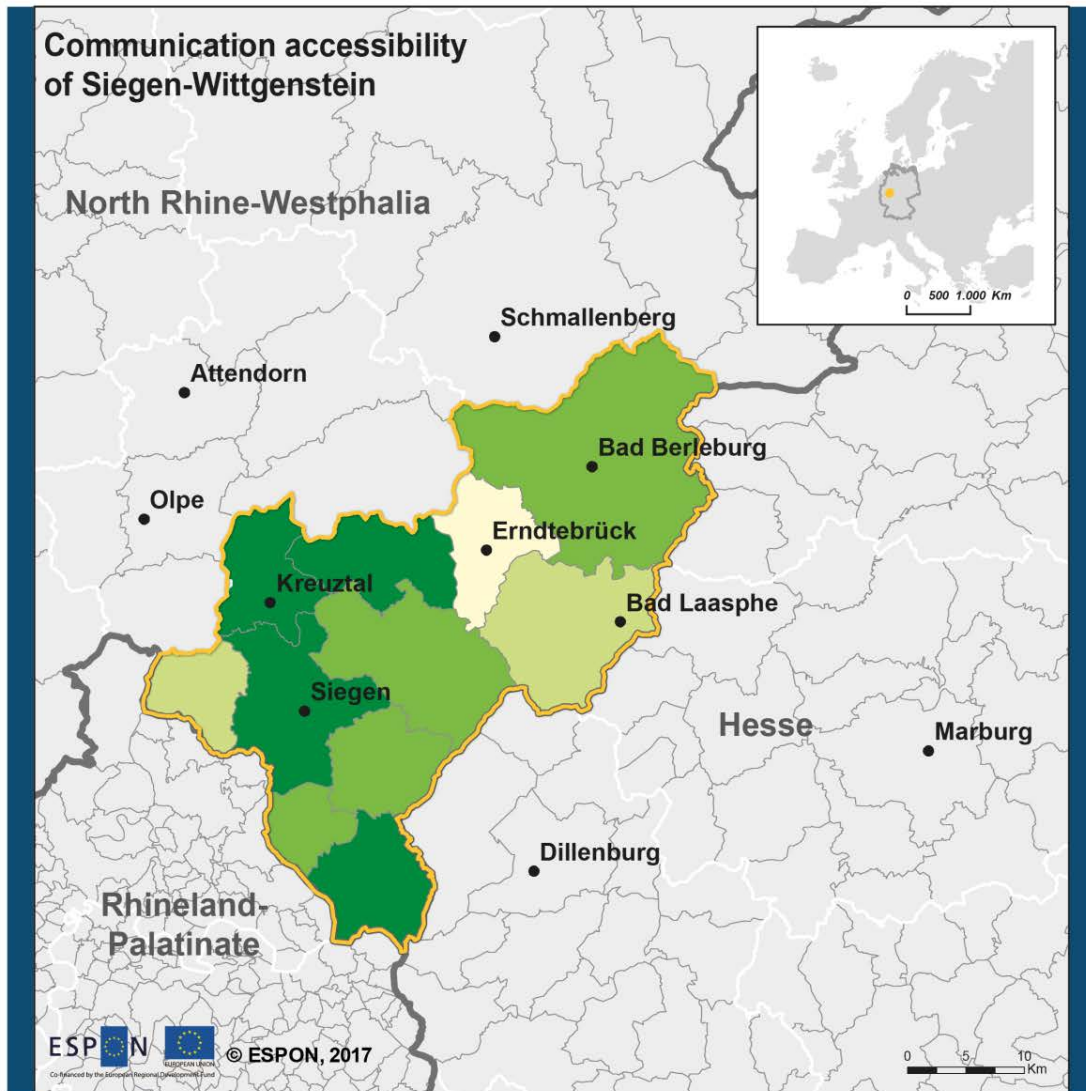
Population development in percent



Population development 1999-2013, total
 Population development 1999-2013, 18-30 years

Local level: LAU-2
 Source: ESPON Profecy
 Origin of data: ILS Dortmund, 2017; IT.NRW
 CC- UMS RIATE and RRG for administrative boundaries

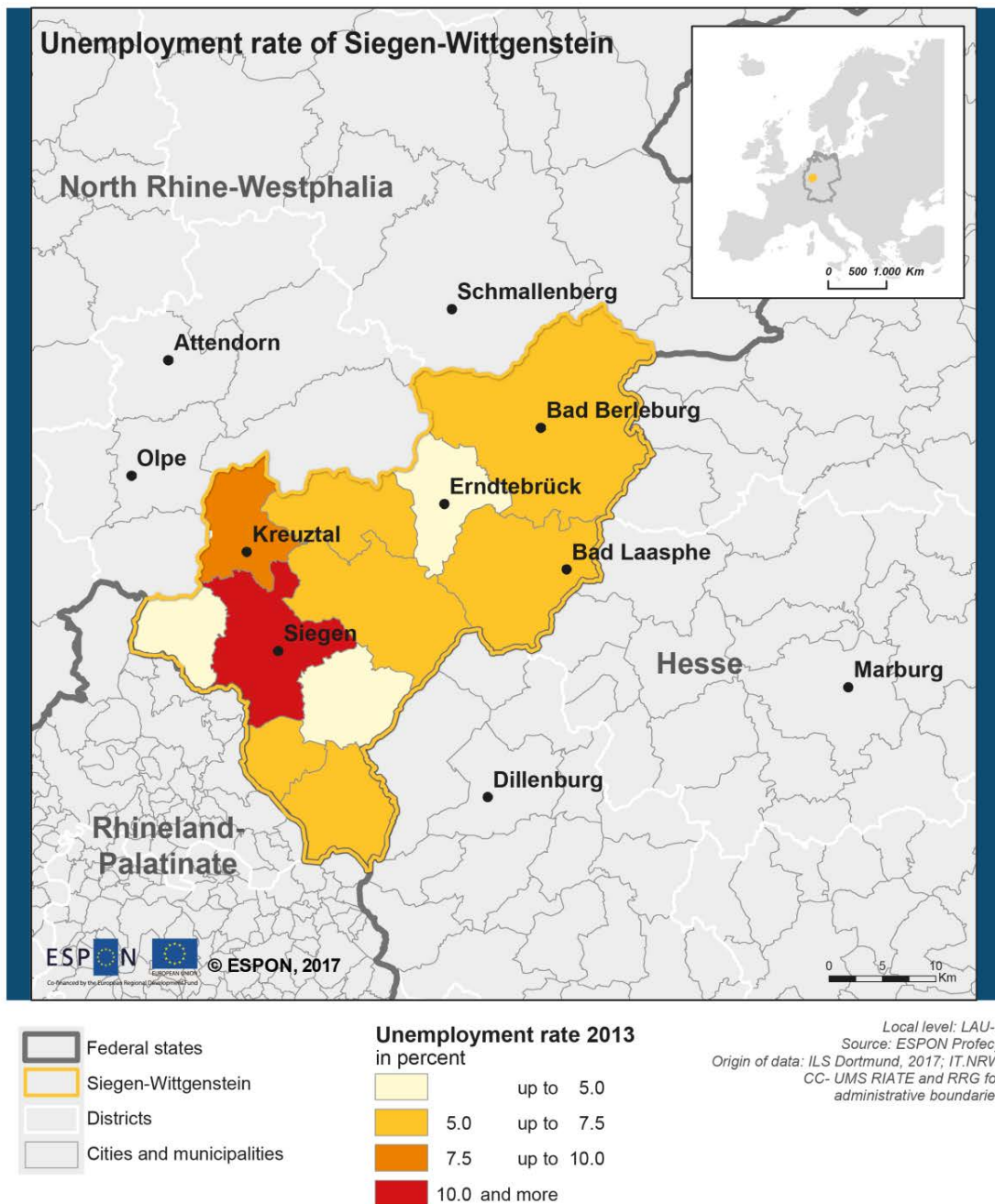
Map 2.5: Communication accessibility of Siegen-Wittgenstein



Analogous to the proportion of employees in the secondary sector which is even higher in Wittgenstein (52.8%) than in the Siegerland area (44.1%), the unemployment rate is much lower (5.6% to 8.2%)^b (see Map 2.6). It is noticeable that the youth unemployment rate in particular (between 3.9% in Erndtebrück and 5.3% in Bad Berleburg) is very low.

^b These unemployment rates are not directly comparable with those mentioned in Chapter 1.3 because on a local level the unemployment rates are calculated differently than those on a regional/district level. But Map 2.6 visualizes well the internal differentiation within the district.

Map 2.6: Unemployment rate of Siegen-Wittgenstein



2.4 Local, regional and state coping strategies

There is a large amount of local initiatives in place – by both the local administration and policy as well as by representatives of the economy and the civil society. It is impossible to mention them all. Indeed, the manifold local initiatives and the active local civil society are a particular asset of the district and seen as a potential to cope with challenges. The initiatives range from building hiking trails to make the area more attractive for sustainable tourism via very active local clubs for cultural activities to developing a welcome culture for refugees, immigrants, potential new employees and beyond. Overall, there is a well-established local cooperation between employees and employers and between policy makers and other

stakeholders. The ability of the SMEs to keep up with new trends and developments is assessed positively as well.

We here focus on the policy programmes related to the EU level: two LEADER regions are successfully established in the case study area.

1) LEADER-Region Wittgenstein: This is a joint programme of the cities Bad Berleburg, Bad Laasphe and the municipality Erndtebrück, which form the Zweckverband Region Wittgenstein (in the eastern half of the district Siegen-Wittgenstein) with ca. 41,000 inhabitants. The programme targets the area's remoteness from main traffic infrastructure, its sparse population and the challenges posed to the region by ongoing and future demographic change and gaps in SGI coverage. There is also a focus on aging and the growing gap between demand and supply of qualified work force which endangers the so far stable economic situation. As key aspects to cope with the situation, increased cooperation between the municipalities and the engagement of the local communities in social and volunteering activities are named and organized along the following themes: 1. supply with services and infrastructures and integration, 2. living together in village and city, 3. nature, tourism and leisure, 4. climate protection and sustainable energy. The programme stresses the lab character of the region as a pilot for tackling future problems of rural development, amongst others through exploiting better interlinkages and cooperation with multiple governance levels and programmes.

2) LEADER-Region '3-Länder-Eck' (LEADER region '3-states-border triangle')¹⁰: This is a joint programme of the municipalities Neunkirchen, Burbach and Wilnsdorf with a total of about 48,000 inhabitants (in the southern part of the district Siegen-Wittgenstein), targeting cross-border cooperation with municipalities in the states of Hesse and Rhineland-Palatinate. The concept acknowledges only a few problems related to peripherality, namely the insufficient coverage of the area with doctors and with infrastructure for children, youths and families. The latter aspect is linked to a perceived lack of skilled work force and the related need to increase the attractiveness of the region. The development goals presented in the programme target sustainability, innovation, the creation of a regional identity and trans-(state)border cooperation as general topics in the fields of environmental protection, adjustment to climate change and demographic change with special fostering of children, youths and families. The programmes' initiatives are linked to other funding from national and state (EU) level.

Both programmes run as part of the EU-funding period 2014 – 2020 and are coordinated by two regional managers in each LEADER-region. In our view, these LEADER initiatives did not take a prominent position when talking about peripheralisation or strategies against it. On the one hand, outcomes are not visible to a great extent yet, on the other hand, doubts arouse whether the programme targets the most urgent problems of the case study area and whether solutions might not be more sustainable if realised bottom-up, without additional external funds. 'You do not have to get EU funds for this, [the topics addressed with the LEADER

programme] are not the major problems of the region.’ (expert 13) Among the experts, different understandings of how much influence local administrations should take in this programme prevailed.

The need to shape policy actions locally was also stated by interviewees. Policy action can be initiated from the state level (for instance, in the frame of ESF funding), but needs to be shaped by the local level in order to raise its effectiveness and impact. An expert hereby referred to a regional development concept, aimed to tackle skilled labour shortage. The programme was designed by the federal state but did not work well locally: ‘It was quite limited insofar, as it was based on the active participation of the companies, basically, this [participation] is important, but go and ask an entrepreneur who has no labour shortage whatsoever today: ‘Take part in the project, because you will have a shortage of skilled employees in ten years.’ (expert 3)

The level of governmental district, which is the Regierungsbezirk Arnsberg for our case study area, is a mainly administrative level, with no strong policy-making competences, but rather administrative and management function. Nevertheless it plays an important role concerning certain SGI infrastructures as it is in charge of secondary schools planning and also functions as an intermediary support bureau for local municipalities regarding project development and funding application processes. This level is perceived as supportive of the regional goals and development aims and of much more help than it used to be years before: ‘The cooperation and the common understanding, which you find at the Bezirksregierung Arnsberg is just excellent [...] It is not anymore: you’ve got a project and you go to Arnsberg and ask your way through all departments... instead: you’ve got a project idea for your municipality and you invite them and the leader of the department for regional development will come with his team and then the urban developer and the person responsible for LEADER programmes, all sit together and think about how I can get [my project realised], it is almost a dream situation.’ (expert 12) At the same time the dependency on political good will of this administrative level e.g. regarding the sustaining of secondary schools is acknowledged by the experts: ‘[The governmental district] has held a sheltering hand over it so far.’ (expert 13).

The main and universally positively discussed regional programme is the so-called ‘REGIONALE’ and the creation and institutionalisation of the region South Westphalia which was mainly stimulated through the REGIONALE programme. REGIONALE is a cohesion policy and funding format of the federal state of North Rhine-Westphalia which started in 2000. It gives regions the opportunities to apply for support on the basis of a coherent development vision and programme as well as a reliable network of policy, administration, science, economic and civil society stakeholders. Every three years (in the beginning every two years) one or sometimes more regions are awarded the respective funds through a competition with other regions.

South Westphalia obtained approval beginning of 2017 for a programming period till 2025. The overall aim of this strategy, based on the co-operation of all relevant stakeholders, is to

prevent young people, in particular, from leaving the South Westphalia region. As a main vehicle, digitalisation is seen as essential for the development of the region. For example, digital platforms are planned, in order to increase mobility of people or improve health care.

This second application is a follow-up to the successfully applied REGIONALE programme 2013 when the districts of Soest, Olpe, Siegen-Wittgenstein, Märkischer Kreis, Hochsauerlandkreis first engaged in the formation of South Westphalia as a region. The first REGIONALE programme aimed at challenges rooted in demographic change and globalisation processes and stressed the economic potential of the region. Even if in the beginning the cooperation between the different districts started with the clear purpose of getting access to EU, national and federal state funds mainly (expert 2), the cooperation is now assessed very positively by all experts with regards to

1) Strengthening of regional coordination, cooperation and networking, mutual knowledge and learning opportunities. Even experts, who were generally critical about structure development programmes in the beginning stressed the benefits of cooperation and the need to find solutions on a regional scale. The REGIONALE was ‘the only time of which I know when something blissful came from Düsseldorf [the federal state capital].’ (expert 13)

2) Visibility of the region from outside: being fragmented in five districts with quite a different history and development, none of the single districts was able to gain attention and a significant visibility on its own at higher governance levels (or if, then for single segments such as tourism), for investors from outside or for potential employees. In these fields, clear improvements are emerging through a joint management of local requests to higher policy-making levels, and the joint promotion of the region as an economically important and potent region. Expert 9 for example recalls a talk with a ministry official who replied to a complaint about the uneven distribution of resources among North Rhine-Westphalian regions: ‘But the region does not demand anything!’ stressing with this quote the need for peripheralised regions to make themselves heard and to get attention for their concerns and needs.

3) Self-confidence of the local communities and stakeholders: as mentioned above, the region of South Westphalia has no shared history or narrative and the single districts had an either neutral or negative image (see chapter 2.2). Interviewees attributed great influence to the REGIONALE 2013 and especially to the communication and marketing strategy of the REGIONALE steering agency, which positively influenced the self-perception of inhabitants and stakeholders: ‘It just did not come to people’s minds, one always underestimated the region [...] but this is the industrial core of North Rhine-Westphalia.’ (expert 13). Self-confidence was gained for being an economically successful region, with resilient and innovative SMEs and ‘hidden champions’ (expert 2).

On a regional level, not only the region of South Westphalia has gained momentum over the last decade. Also the regions of Münsterland, East Westphalia and South Westphalia – being adjacent to each other and forming the eastern part of the federal state of North Rhine-

Westphalia – have formed an association to coordinate their interests and to make themselves heard in the federal state's government and beyond.

The interviews also allowed for insights on the interlinkages of the different policy and administrative levels and their cooperation with economic and civil society stakeholders. The regional level seems especially suitable for coping strategies as regards transport development and strategies to attract external work force. One recent and in the interviews positively discussed example is the successful amendment of the national transport infrastructure plan in a joint effort of economic and administrative stakeholders representing various cities and districts in the region. A second example is the attraction of skilled work force at regional level. Current efforts are bundled into a programme called 'Home field advantage'. It aims at bringing back people who once lived in the region, moved away for education or work and might have a tendency to move back.

Moving one level up: local experts considered the attention given to the case study area by the federal state level very critically. Probably due to its small population, the problems of the area were said to be insufficiently acknowledged and addressed: 'The government on federal state level has a total disinterest in this region [...] this region does not matter at all.' (expert 13) Frustration is clearly expressed in some of the narratives: 'It is clear to me that not everything deserves funding, but if you are very familiar with the funding mechanisms [...] when you've got the impression: that [project idea] will fit in and then it does not fit for some reasons and the whole thing fails. That is not so nice then.' (expert 3) As mentioned in 1.2, the federal state level is perceived as a level where to compete for funding and resources – however, metropolitan regions such as the Ruhr area and Rhine valley are perceived as advantaged in this competition.

Certain locally important aspects however are mainly approached from and the responsibility of the federal state level: broad band infrastructure according to the plans stated above, youth employment measures such as '*Jugend in Arbeit +*' [youth in work], which is considered very successful, '*Potenzialberatung*' since 2001, which aims at improving companies' profiles, and tourism development; the latter with a vision to make the area attractive as living area and to maintain the landscape rather than to increase guest-night numbers.

Coping strategies initiated by the federal level were seldom mentioned by the experts. This is also due to the fact that in the German spatial planning and funding system the most relevant level to deal with the discussed issues is the federal state level as regards political decisions and resource distribution. Still, in recent years the federal level has acknowledged a need to strengthen the rural areas and to attend to the perceived disadvantage of rural as compared to metropolitan areas. A nation-wide programme with a focus on rural areas' development needs has been set up which might become applicable for the case study area, too. Furthermore, national urban development funds are mentioned as being relevant for Siegen and Kreuztal, but at the same time discussed critically, as communities need to raise own funds in order to benefit from the national programme and this co-payment is more and more

difficult to finance: 'It is getting harder and harder for rather important measures – and with this I simply mean securing built-up structures of historic village centres, or the enlargement or modernisation of school buildings – such things, that you have problems to raise your own contribution. I have a talk with the governmental district on this issue soon, how you can apply these funds a bit more flexible and how to combine them with other funding opportunities.' (expert 1)

When looking at employed EU programmes, several were mentioned as being currently or recently implemented in the case study area. These programmes are mostly coordinated on the federal state level. ERDF funds are considered as very relevant due to the quite large amounts that can be applied for, but the district level itself hardly ever leads applications and rather takes part in projects led by institutions with more expert capacity to handle such applications (expert 3). One example of a current ERDF project is the '*Start-up-Innovationslabor Südwestfalen*', a cooperation between University Siegen and University of Applied Science South Westphalia which has the objective to help start-up entrepreneurs to realise their ideas. In relation to ERDF projects, critique was put forward pointing at an imbalance of the funding allocation: too much was allocated for designing concepts and for consulting so that little money would be left to eventually realise the developed concepts (expert 3). The ESF funding is prominently named as being relevant regarding qualification and employment measures, integration and inclusion in the labour market. The European Agricultural Fund for Rural Development (EAFRD) is described as a programme which can be used for co-financing and as supplement for measures which require larger sources such as broad band connection. In the case study area, EAFRD funds were mainly deployed to fund rural development measures in the frame of LEADER.

The interviews' analysis makes clear that no programme stands on its own, but that horizontal and vertical integrations needs to be achieved, encompassing always more than one governance level and involving a broad range of stakeholders – this makes cooperation and communication essential skills for stakeholders' initiatives in the case study area

General critical aspects mentioned for policies and programmes

Four aspects come to the fore in the analysis of the interviews that were assessed critically in relation to policies and programmes relevant for the IP area. The first is the constant pressure to engage in innovative concept writing and participation processes while at the same time there is increasing insecurity if the application will be successful at all. In the perception of the experts, this leads to wrongly allocated resources and may in the end destroy local communities' motivation to take part. Experts also criticise the constant pressure to propose innovative measures when in fact well-established measures would be sufficient to improve the situation.

A further critique was that programme guidelines are often developed by higher levels that are not sufficiently acquainted with local conditions, so that local experts perceived a certain distance between what could realistically be achieved in the local situation and decision

makers' expectation. Expert 3 stresses the former set-up of ESF funds as an especially good example for an efficient and effective programme: before the 2000s a budget was set for each labour market region and the local stakeholders were quite free to decide how to make the best use of the budget. Today, a shift of decision power has taken place, with the federal state level giving more specifications and prescriptions as regards what can be funded. This leads to more insecurity and intransparency regarding which of the planned projects will actually get funded in the end and a more dependent position of the local and regional level stakeholders.

Other critical points were financial planning and controlling challenges. Experts discussed the difficulty of raising own funds for each application and the long time an application process usually takes: '[...] till the point in time when the application process effectively starts it takes a long time and this often collides with what we have to document in the local financial planning, and also the administration tasks are very, very demanding for application and especially regarding controlling.' (expert 1). As it had happened once in the region that a local authority had to pay back supposedly ill-used funds, the local stakeholders were very aware of this danger: 'the applicants are frightened, that they may make a mistake. [...] the city [...] had to repay funding [...] several million were to be paid, and it all developed from a formal error 15 years back. The responsible administrative officer is not working there anymore. And this is not okay that way, you have to state this very clearly.' (expert 3)

A last issue which was discussed above when talking about primary schools closure, is concerned with thresholds and standards for programme participation and funding. Quite a lot of examples came up during the interviews that suggest handling standards more flexibly: receiving funds for road renovation is tied to a threshold number of cars passing that road in need of repair daily; broadband needs to be under a certain speed limit to be eligible for improvement, etc. Here, experts and local stakeholders would wish for the possibility to pay more attention to the local conditions instead of applying universally set standards.

2.5 Future scenarios

Prospective analysis presented in this part of the report were aimed at answering three main research questions:

- What are the externally and internally driven influences on the problem of inner peripheralisation of a specific locality?
- What are the key drivers for the future development – chances or threats in the context of further peripheralisation processes in the area under investigation?
- What future scenarios can be drawn for each case study according to the estimated positive or negative impact and likeliness of possible uptrend, downtrend or sideways of key drivers in chosen localities suffering from inner peripheralisation?

Future scenarios for the development of the case study area can be derived from the major planning documents, from the interviews with experts, and from the scenario tool which was conducted with all experts after each interview.

The two major planning/ policy documents that provide insights into future development options as perceived by the local stakeholders are

a) 'Regionales Entwicklungskonzept 2015 des Kreises Siegen-Wittgenstein'⁵ (Regional development concept 2015 of the district Siegen-Wittgenstein) on district level and

b) Bewerbung REGIONALE 202X: Digital. Nachhaltig. Authentisch. Die Südwestfalen-DNA¹¹ [Application for the Regional Structural Policy Programme 'REGIONALE' 202X: Digital. Sustainable. Authentic. The South Westphalia DNA] on regional level.

Looking at the district level, six future development goals are set: to develop the economic competitiveness and innovative capacity to ensure good working conditions; to provide an integrated education and qualification system; to preserve the mobility of the inhabitants and to improve the transport of goods; to preserve and enhance the health, care and social infrastructure; to ensure a liveable environment and an intact natural and cultural landscape; and to interconnect the existing recreational and cultural opportunities with tourism. Cross-sectional topics, more specifically demographics, digitalisation and sustainability, are linked to each of these goals.

On the regional level, the most relevant future development options are seen in the cooperation of all relevant stakeholders in the participating regional districts, in order to prevent young people, in particular, from leaving the South Westphalia region. As a main vehicle, digitalisation is seen as essential for the development of the region. For example, digital platforms are planned in order to increase mobility of people or improve health care.

Further options and visions for the future development of the area were identified through the interviews and discussed in a focus group talk. To sum up, the following place-specific territorial capital of the case study area can be outlined:

- Strength of networking and cooperation among local and regional actors
- Strong SME basis
- Landscape and natural capitals
- Strong feeling of local belonging

On the basis of these generally agreed-upon assets, the following steps can be defined as relevant for a positive future development of the area:

- Regional learning processes especially within the frame of the South Westphalia regional cooperation network but also across the federal state borders. For the South Westphalia regional cooperation, the REGIONALE programme has been a major instrument for making stakeholders aware of and able to benefit from cooperation and

networking. An increase of these networking activities, horizontally as well as vertically, will have positive outcomes for the case study area. Regarding the networking across federal state borders, first attempts have been made to improve the local SGI provision, especially water and sewage infrastructure. Further cooperation within the LEADER region *Drei-Länder-Eck* is on the way. Still, future developments face legislative hurdles and will have to be addressed on high policy levels to improve cooperation across federal state borders.

- Increased visibility of Siegen-Wittgenstein and especially of Wittgenstein for qualified work force from outside the region or for graduates of the University of Siegen. At the same time, it is essential to realise the local work force potentials, such as women's labour market participation. The attractiveness of the region for work force is linked to the future development of SGI provision. At the same time, if the case study area succeeds to attract employees or graduates, these might fill in gaps: the most prominent example, mentioned frequently in the interviews is the plan to establish a medical faculty at the University of Siegen and to supply scholarships with the obligation to stay in the region for some time after graduation and in this way reduce the gap in general practitioners coverage. The plan seems realistic as far as the set-up of the faculty is concerned. Whether it will in the long term really lead to a better supply with doctors in the rural areas remains to be seen.
- Strengthened connections to and more influence upon decisions taken at the federal and federal state level, especially with regard to negotiating planning system inflexibilities, the adjustment of funding thresholds, voicing interests in long term infrastructure decision processes, and having a say in the design of future programmes for sparsely populated areas. As mentioned above, the REGIONALE programme created a solid basis for these aspects and stakeholders on local and regional level seem to have understood how to place their interests and voice their demands. The rather new cooperation of three regions (Münsterland, East Westphalia and South Westphalia) to constitute a political counterbalance to the metropolitan areas within the federal state is an indicator of this and might have the ability to question established power and decision making equilibriums in favour of peripheralised regions.

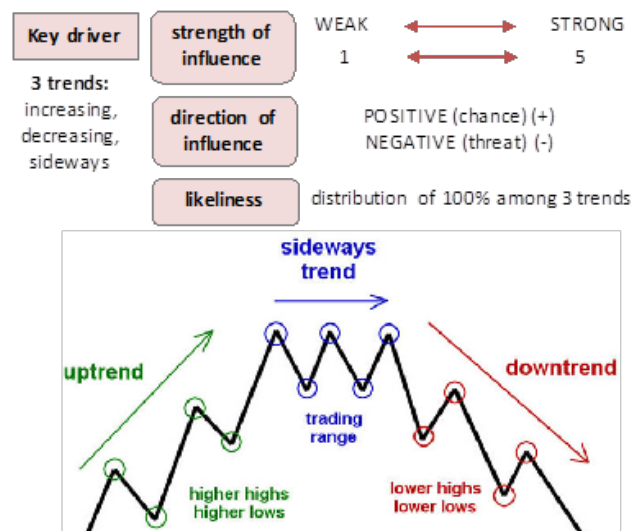
The topic of digitalisation was once more raised in the focus group discussion as a major stepping stone to achieve for further development. There even was the demand for 'positive discrimination' of rural regions, which generally should benefit from more and better digitalisation options and better infrastructures for enabling digitalisation than metropolitan areas, as a compensation to the attractiveness of metropolitan infrastructure. Most experts expected a slow, but steady process of improvement as regards the necessary infrastructure. It was also said, however, that these improvements needed to go hand in hand with an openness towards digitalised services, infrastructures and technologies on the side of the

user and recipients: ‘The change we are now witnessing [regarding digitalisation] occurs with a speed which we have so far not experienced yet – at least not me – and if we are not cooperating [especially between long established and new comer economic stakeholders] and listen to all opinions it will be difficult to realise positive development in the future.’ (expert 8)

In the PROFECY Project, future scenarios are defined as a description of a possible future path of development of chosen case study areas. They are not intended to represent a full description of the future, but rather to highlight central elements of a possible future and to draw attention to the key factors that will drive future developments. In the PROFECY project, “Scenarios are descriptions of journeys to possible futures. They reflect different assumptions about how current trends will unfold, how critical uncertainties will play out and what new factors will come into play” (UNEP 2002, p. 320)¹². According to this definition, in the PROFECY Project, future scenarios should be considered as “explorative” and/or “descriptive” type as they are opposed to “normative” scenarios in literature. The main question asked when building explorative scenarios is “What would happen if” and the present is taken as their starting point.

Scenario building was based on the scenario questionnaire and the interview carried with experts and stakeholders listed in the Annex 8 to this report. The scenario questionnaire consisted of four elements: (1) dimensions of inner peripheralisation process, (2) key factors in each dimension, (3) likeliness and (4) strength of influence for the future development of the area. Experts were asked to fill a questionnaire specifying on the scale -5 (strong negative impact) to 5 (strong positive impact) and 0 for no impact for a set of factors and drivers of peripheralisation process and the likeliness (distribution of 100% among particular trends) of their impact in the chosen IP region with the indicated power on a possible uptrend, sideways and downtrend (see Figure 2.1).

Figure 2.1: The structure of the scenario questionnaire specifying elements to be evaluated by experts (source: ULODZ 2017)



Opinions of all experts were calculated and presented in Table 2.1 and Table 2.2. reflecting their average assessments of the likeliness of a certain key factor to occur and its strength of influence on peripheralisation of the area in the future. The arrows used in tables represent the most probable trend (or two trends – if the difference between their assets is below 5%) of particular factors as evaluated by the experts.

The main findings of the scenario tool are presented in the Table 2.1 and Table 2.2 and discussed below. The first table shows the average of all experts' assessments of the likeliness of a certain development to occur (in the next 5 years in %; experts had to divide 100% among the possible options of an uptrend, a sideways and a downtrend development); the arrows used in tables represent the most probable trend (or two likely trends) of particular factors as evaluated by the experts. The assessments of experts were quite similar here and they seemed to have a common expectation and understanding of the prevailing and future processes. This can be interpreted as an outcome of the regular and constant communication between local and regional stakeholders, which enables a joint understanding of the challenges. On the one hand, experts expected declining numbers of residents, a strong increase in aging and a decline in SGI access. On the other hand, numbers of well-educated people, numbers of jobs, individual income and national level subsidies were mainly expected to remain stable. Sideways development was expected for 'Access to policy networks', but with the often expressed side remark that networks were very good already and hardly to improve. The only topic on which no clear trend emerged was 'Transport system network'. This might be due to the fact, that the scenario tool asked for an assessment of the development within the time frame of five years. Some experts might have rated this too short to bring about changes in a slowly shifting system as traffic infrastructure and opted for sideways. Others might have thought about the recent success of the region in voicing their demand to amend the national road infrastructure plan in the stakeholders favour. And a third group might have thought that the situation will still worsen in the coming years on the basis of only long term plans to improve the regions access to the road network and the quality of the roads itself and also regarding the public transport system where funding is expected to decline.

Table 2.1: Results of scenario tool: Probability (next 5 years in %) – Average of all experts' assessments (source: ILS 2017)

		Uptrend	Sideways	Downtrend
Number of residents	↓	7	25	68
Ageing	↑	83	11	6
Number of NGO's	→	14	59	27
Share of well- educated people	→	28	51	19
Number of jobs	→	29	45	26
Individual income	↑ →	38	43	20
Access to SGIs	→ ↓	18	39	43
Transport system network	?	36	35	30
Cooperation of local authorities within the region	↑ →	40	50	10
National level subsidies	→	33	47	20
Access to information on policy supply at national/regional level	↑ →	43	45	13
Access to policy networks/relations	→	32	58	11

Table 2.2 summarises the experts' assessment on how each of the single factors could influence peripheralisation, with negative numbers meaning a slowing down of or even a countermovement to peripheralisation processes, while positive numbers imply increased peripherality. Looking at the downtrends column we see that two aspects are attributed very high influence: Number of residents and the transport system network. Regarding both aspects, actions should be taken to avoid further negative developments.

In the column 'Sideways' two interesting aspects emerge: experts value the local work force as having a positive influence and decreasing peripheralisation trends. On the other hand, experts are fairly consistent in their assessment and see the negative influence of the current state of the transport system on peripheralisation.

Experts assess that an increase in residents and better access to SGIs would have a high – presumably positive – impact on the case study area's development. However, both is very unlikely to occur as was stated in Table 2.1. One finding in particular should be stressed here: Experts are consistent in their assessment, that the cooperation of local authorities within the region is having a positive influence on combating peripheralisation processes, while at the same time they judge this as quite likely to be realized in the future as well.

Table 2.2: Influence on peripheralisation [+5 bis -5] – Average of all experts' assessment. (source: ILS 2017)

		Uptrend	Sideways	Downtrend
Number of residents	↓	-4	0	4
Ageing	↑	2	0	-2
Number of NGO's	→	-3	0	2
Share of well- educated people	→	-3	-1	3
Number of jobs	→	-3	0	3
Individual income	↑ →	-2	0	3
Access to SGIs	→ ↓	-4	0	3
Transport system network	?	-3	1	4
Cooperation of local authorities within the region	↑ →	-3	0	3
National level subsidies	→	-3	0	2
Access to information on policy supply at national/regional level	↑ →	-2	0	2
Access to policy networks/relations	→	-3	0	3

The results of the scenario tool can be summed up as follows: experts see a need for action as regards countering population decline and the need to improve the transport system network. The option that is most likely to show positive results in the mid-term range, being evaluated as effective and feasible at the same time, is a further strengthening of local authorities' cooperation.

3 Discussion

In this summarizing discussion different insights on past, current and future problems of the case study area shall be critically discussed. It is of specific interest, in how far the assessments of experts, and the different strategies, plans and policies present complimentary or rather divergent perspectives regarding the areas' assets and challenges; and whether strategies, plans and actions respond adequately to the problems of the area.

According to the interviewed experts and our own insights, there is a joint overall understanding of the evolution and state of current challenges in the case study area. Demographic change, transport and communication infrastructure upgrade, and greater political attention towards the area as well as greater influence on higher level decision making processes are being named as the major challenges. This assessment of challenges also confirms the classification of the case study area as Inner Periphery – in this case as area of low accessibility of regional centres and of low access to certain Services of General Interest. The traditional inner differentiation of the case study area in two parts, Siegerland and Wittgenstein, was still relevant when discussing current peripheralisation processes. Wittgenstein is univocally rated as being much more affected by peripheralisation and more stakeholders from the Wittgenstein area did not question the assessment of the area as Inner Periphery.

During the focus group talk the present experts, however, suggested abandoning the term 'Inner Periphery' as it was felt to emphasise a static, rather than dynamic perspective on these areas and potentially stigmatizes the areas labeled as IPs. They would rather suggest a term that also allows for positive associations like 'regions with under-utilised potential'.

The fact that there is a joint narrative on the challenges can be interpreted as the outcome of a well-established and steady local and regional networking process over the last decades. There is a climate of mutual trust and respect – also across stakeholder groups that traditionally would be expected to have opposing interests.

Multi-fold actions have been taken to manage the above-mentioned challenges. However, it goes without saying that challenges such as demographic change are long lasting processes and create ongoing and continuous challenges in a wide range of fields, also in the future. Other local problems can only be improved on the long run, e.g. when infrastructure plans covering the next decades are affected. For the area Wittgenstein, there is a longstanding path dependency and history of disadvantage regarding demographic and SGI development, which is not easy to tackle.

The stakeholders in the case study area aim at small but sustainable and feasible solutions rather than relying on the effects of grand projects; and they pose quite large responsibility to adequately cope with the situation on the local economic stakeholders and communities.

To be better able to cope with peripheralisation processes, experts request from policies and programmes

- more local and regional decision power how to allocate funds, as the federal state level's insights into local problems was considered insufficient
- more transparency regarding the application and decision process for funds, as too many local and regional resources were used to constantly design strategies with then little chance to put them into practice
- simplification of application for and controlling of funds received through programmes
- flexibilisation and adjustment of thresholds and requirements to local (rural, sparsely populated area) conditions, as thresholds and requirements appear to be set up and measured against urban area realities
- to invest in basic infrastructure (motorways, railways, data infrastructure), that is beyond the responsibility of the local authorities, so that successful developments, such as a stable regional economy are not threatened

This list can also be read as a negative of what did not go well in the past when tackling peripheralisation processes.

However, local and regional experts were aware that they had to lobby stronger at higher policy levels to realise their plans and make sure that their region's specific needs were considered. **The most important instrument for tackling peripheralisation processes therefore seems to be the REGIONALE programme (see chapter 2.4 and Annex 3 & 4), as it closes a network gap at an intermediary, regional level and promotes the areas' visibility for higher administrative and policy levels. Relating to the former lack of organised proximity at regional level, the programme was rated efficient and effective by all experts.** The institutionalisation of the South Westphalia region and the formulation of a clear and jointly developed strategy gives orientation to the administrative levels above and below: local strategies such as the district's regional development concept or the two LEADER-concepts are clearly integrated into the South Westphalia strategies.

Linking back to conceptual thinking on Inner Periphery development (as presented in the Interim Report, chapter 9. 'Processes and drivers identified') and contrasting empirical findings with the three different 'Descriptive Models', which are based on literature review, the following conclusions arise.

Regarding the Descriptive Model of Type 1, the case study area is affected by processes of 'Poor access or long travel time to centres of economic activity' and 'Increased production and distribution costs – low competitiveness', and partly also 'Scarce funding for local/regional transport and telecoms'. However, in the case of Siegen-Wittgenstein, they do not trigger processes as suggested by Descriptive Model of Type 1, namely a decline in networking, knowledge levels and productivity as well as a decrease in fiscal revenues. We acknowledge a decline in Human and Social Capital in our case study area, yet the underlying processes do not seem to link to fiscal aspects and business cost structures as much as suggested by

the Type 1 Model, but rather to the prevailing paradigm of metropolisation and an out-migration of younger population. This evaluation may reflect German fiscal redistribution specificities and the processes linked to Type 1 Model might be more influential in other countries, where the relevance of the local tax base is higher. Also, many of the companies in Siegen-Wittgenstein are family-owned, with a strong sense of local belonging. The model might have more relevance for newly establishing companies and regions with a less strong economic base.

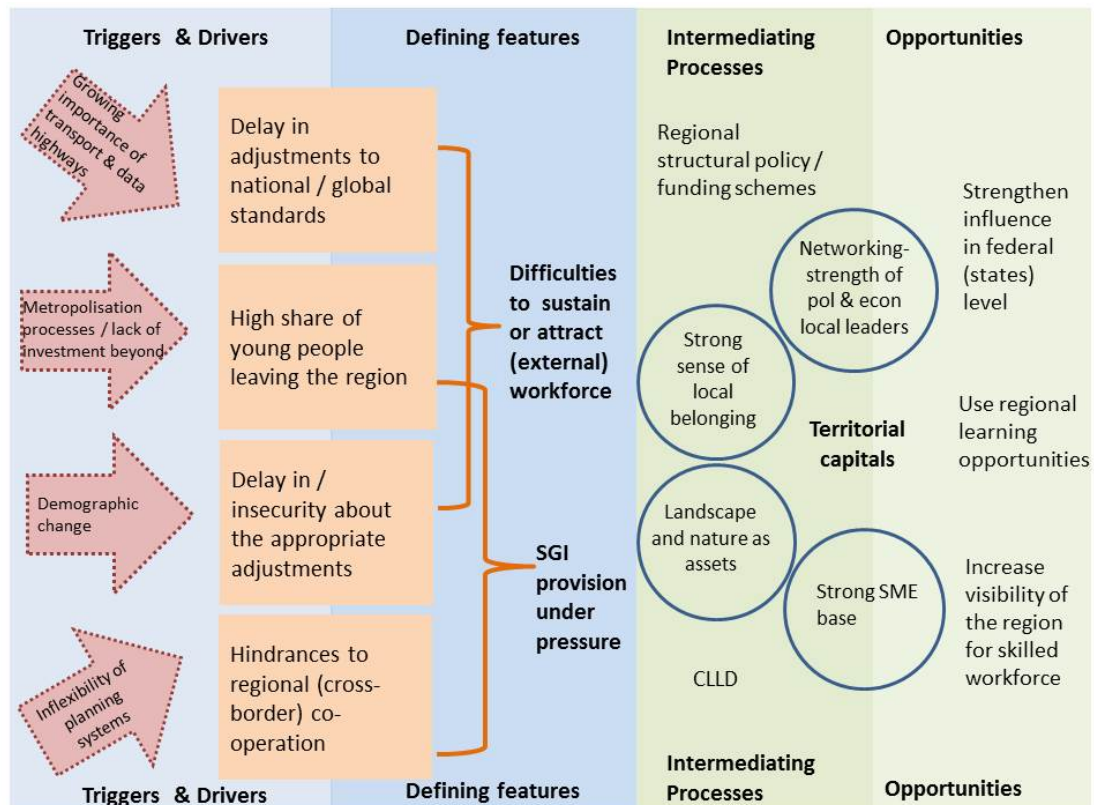
Comparing our insights with 'Descriptive model of Type 2', we find an overlap between empirical findings and the conceptual model, insofar as SGI in this model play a more important role for the development of Human and Social Capital (with fiscal effects only playing a subordinate role). However, empirical insights from the Siegen-Wittgenstein case suggest linking the development of SGI and Human and Social Capital to communication and transport infrastructure, as developments in the latter field may open up new options for the former fields. In addition, differences in national fiscal – as mentioned in the previous paragraph – and planning systems must be taken into account when discussing IP processes.

Descriptive Model of Type 3 describes the processes in Siegen-Wittgenstein fairly well when looking at network influences and aspects of connectedness. One aspect of importance needs to be differentiated more properly in this model according to our empirical experience: the model shall not only discuss interconnectedness as such but also degrees and scales of institutionalisation of connections. This can help to draw attention of the stakeholders to this aspect and to identify 'proximity' gaps in situations where partial connectedness is given already.

4 Conclusions

The quantitative analysis and the qualitative research have shown that there is a significant internal differentiation inside the case study area that leads to the conclusion that in particular the area of Wittgenstein can be identified as an Inner Periphery.

Figure 4.1: Visualisation of triggers and drivers, defining features and intermediating processes of the case study Siegen-Wittgenstein (source: ILS 2017)



There are four main processes identified that influence the evolution of an Inner Periphery in the case study area and which are briefly discussed here (see Figure 4.1 & Chapter 2.1 for further details).

The growing importance of transport and data infrastructure on a supra-regional scale combined with a delay of adjustments to current standards on the regional scale drive the case study area into a problematic situation. The underdeveloped data infrastructure and disadvantageous transport system affect local companies and their supra-regional competitiveness and has a negative influence on new investments from outside the area. In parallel, this affects the attractiveness of the area as residential location.

As a second main supra-regional trigger, metropolisation process and the increasing attractiveness of metropolitan areas can be mentioned. Not least out of this reason a high share of young people are leaving the region even though the University of Siegen is growing

in its number of students. There are, however, difficulties to make young people feel attached to the area and to retain them in the area once they graduated.

Another main trigger process is the demographic change and the insecurity about appropriate adjustments and how to intervene. The demographic change affects the case study area in general, but the loss of population has particular impact on the rural parts. This leads to increasing disparities between the different parts of the district.

The fourth identified trigger process is the inflexibility of the planning system and the geographical location of the district Siegen-Wittgenstein in a corner position of the federal state of North Rhine-Westphalia. As the federal states in Germany have their own legislation and different regulations and planning systems, the cross border cooperation presents quite a challenge and disadvantage for areas located close to federal state borders.

These triggering and driving processes lead to two central challenges in relation to Inner Peripherality. They put pressure on the local stakeholders to firstly adjust the SGI infrastructure and the (data) traffic infrastructure and, secondly, to attract qualified work force to sustain the healthy SME driven economy.

But there are some relevant strengths and territorial capitals as well: there is a strong sense of local belonging and identification of key stakeholders and local communities with the region/area. Connected to that, a strong network of political and economic local leaders and stakeholders has been identified. Another remarkable strength is the vivid economic base and the high number of small and medium-sized enterprises, which are also located in the sparsely populated areas of the case study area. The natural landscape capital can play an important role in attracting potential residents and employees to live and work in the area/region. Besides these territorial capitals, the high number of different policies and strategies at different levels, but above all their integration into a vision and overall strategy for the region is remarkable: policy programmes like LEADER on the local scale, a regional development concept for the whole district, and the structural policy programme REGIONALE for the region South Westphalia. In particular the formation of the region South Westphalia is an essential potential for the future development of the case study area and provides many opportunities. It is an expression of the strong regional cooperation and the desire for better visibility and influence on the federal and national level. South Westphalia aims to represent its member districts as a region with high economic strength and a high quality of life with its great natural potentials. This provides the opportunity for the case study region to increase its visibility also for attracting skilled work force. In addition, the region South Westphalia provides a network that gives the case study area the opportunity to learn from other districts that are partly confronted with similar challenges. It provides a platform for discussions and the development of coping strategies.

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Annex 1:

Table 1a: Introductory data

1 Identification of case study area Siegen-Wittgenstein		
1.1	Administrative regions involved	Federal State: North Rhine-Westphalia Governmental district: Arnsberg
1.2	Name and ID of the NUTS-3 areas that are (partly) covered by IP area	DEA5A
1.3	Size of IP in km ² (and national average IP size)	1132.89
1.4	Classification of concerned NUTS-3 area according to urban-rural typology as developed by DG AGRI and DG REGIO [source: Eurostat: http://ec.europa.eu/eurostat/statistics-explained/images/7/76/Urban_rural_typology_of_NUTS_3_regions_new.xls]	PU - Predominantly Urban (rural population less than 20% of total population)
1.5	Names of the regional centres within the IP	Siegen (regional centre) Bad Berleburg, Bad Laasphe, Kreuztal, Neunkirchen (sub-regional centres, not registered as RC in PROFECY calculations)
2 Delineation outcomes		
2.1	IP according to Delineation 1 (Travel time to Regional Centres) y/n	Y
2.2	IP according to Delineation 2 (Economic potential interstitial areas) y/n	N
2.3	IP according to Delineation 3 (Areas of poor access to SGI) y/n	Y
2.4	IP according to Delineation 4 (Depleting area index) y/n and % of area coverage; brief qualitative description of the situation	N
2.5	Type of IP according to PROFECY delineation-typology	Combination 5: Low Access to SGIs – not depleting (to be discussed)

Annex 2:

Table 1b: Exploratory data

No.	Issues	CS Siegen-Wittgenstein	Region South Westphalia	North Rhine-Westphalia	Germany
3					
3.1	Population density per km ² (2013)	243	223	515	226
3.2	Total population (2013)	274,904	1,383,061	17,571,856	80,767,463
3.3	Population development (1999-2013) %	-7.5	-6.99	-2.38	-1.7
3.4	Population development age 18-30, (1999-2013) %	-2.5	-9.86	0.6	-2.7
3.5	Old age dependency ration (2013)	34.4	34.7	33.8	
3.6	Gender Imbalance (2013)	0.97	0.97	0.95	0.96
3.7	Ethnic composition (2013)	share of foreigners 2013: 8.29% Europe: 6.58% Africa: 0.42% America: 0.15% Asia: 1.03% Australian/Oceania: 0,01%	share of foreigners 2013: 8.55% Europe: 7.3% Africa: 0.3% America: 0.11% Asia: 0.68% Australian/Oceania: 0.005% Rest: 0.06%	share of foreigners 2013: 10.91% Europe: 8.82% Africa: 0.56% America: 0.21% Asia: 1.24% Australian/Oceania: 0.01%	share of foreigners 2013: 8.58%
4					
4.1	Growth measured as GDP per capita in PPS (2013) in Euro	35,898	33,091	34,796	33,169
4.2	Unemployment rate (2013) %	5.8	6.1	8.3	6.9
4.3	Youth unemployment rate (2013) in %	5.9	5.5	7.4	6

4.4	Main economic basis: Share of employees per sector (2013) (agriculture[1], industry[2], services[3], knowledge-intensive industry [4], creative industries [5]) if possible in more detail and with time series [Source: INKAR] %	2009 2013 1) 0.2 1) 0.3 2) 44.4 2) 43.7 3) 55.4 3) 56.0 4) 13.6 4) 13.1 5) 1.8 5) 1.9	2009 2013 1) 0.6 1) 0.6 2) 48.5 2) 46.4 3) 50.9 3) 52.9 4) 15.1 4) 14.2 5) 1.3 5) 1.4	2006 2013 1) 0.8 1) 0.5 2) 31.5 2) 28.6 3) 67.6 3) 70.9	2013 1) 1.5 2) 24.7 3) 73.8
4.5	Development of the economic situation in the past (dominant industries, major breaks etc.; please describe in a few sentences)	Until the 1960s, the region Siegen-Wittgenstein was characterized by mining and metallurgical industries. Even after the mines have shut down, the economy continues to be strongly dominated by medium-sized (often family-run) companies in the manufacturing sector. These include, in particular, metal-producing and processing companies, among which are many automotive suppliers, as well as mechanical engineering. In 1972, the University of Siegen was founded, where about 18,600 people are currently studying and which is going to be expanded in the future.			
4.6	Share of tertiary educated people (according to ISCED, 2013) %	16.6	16.3	19.8	
4.7	Forms / Amounts of received financial transfers (key allocations)	49,757,624 (181€ p.p.)		7,362,607,664 (419€ p.p.)	
4.8	Virtual Accessibility (Next-generation network (NGN) coverage in %, 2013)	≥ 50 Mbit/s: 75.9% ≥ 30 Mbit/s: 81.7% ≥ 16 Mbit/s: 85.5%	≥ 50 Mbit/s: 72.7% ≥ 30 Mbit/s: 76.5% ≥ 16 Mbit/s: 83.2%	≥ 50 Mbit/s: 82.2% ≥ 30 Mbit/s: 87.4% ≥ 16 Mbit/s: 92.9%	≥ 50 Mbit/s: 71.2% ≥ 30 Mbit/s: 80.7% ≥ 16 Mbit/s: 88.4%

4.9	Virtual SGI provision (local government initiatives / support of virtual services) (please describe in a few sentences)	<p>For the district level the following services can obtained digital:</p> <ul style="list-style-type: none"> • Online deregistration of vehicles • Online application of the desired registration number for vehicles • District council information system • Ticket service for cultural events • Online application for financially support for students • Online platform for volunteer work • Digital city map for the region • Online timetable information • Online car pool and ride sharing platform • Online information about seminars at the adult education centre • Online information about regional foods • Online garbage and recycling calandary • Online information about emergency services • Electronic submission of ideas or complaints • Electronic forms for different applications 			
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Annex 3:

Table II: Policies and programmes

Types of policy/programme	Duration of participation (period of implementation)	Objectives related to the study area	Type of project implemented in the study area	Financial expenditures in the study area
Regional/Cohesion policy				
REGIONALE: structural development programme for regions within the federal state of North Rhine-Westphalia	2007-2013 & 2017-2025	Strengthening Regional cooperation and mutual learning	Various projects – see annex 6 for details	153 million Euro for the whole of South Westphalia, ca- 17 million for case study area (2007-2013), not fixed for 2017-2025 yet
Regionales Entwicklungskonzept 2015 des Kreises Siegen-Wittgenstein (Regional development concept 2015 of the district Siegen-Wittgenstein)	In effect since 2015	State development goals of the district and describe way to reach the goals	Various projects – see annex 6 for details	Integrated in the districts regular budget
Specific policy measure financed by the Operational Programme (ERDF, ESF)				
ESF funded projects	Constantly acquired funds, distributed in very different projects	ESF-federal programme for the reduction of long time unemployment	Individual consulting / work place related qualification and coaching / long-term subsidies for work places / German language skills development	[?]
ERFE-„Start-up-Innovationslabor Südwestfalen“	2017-2020	Cooperation net between local universities	Support start-up entrepreneurs	4.3 million Euro for this and four other projects in other districts in North Rhine-Westphalia
EFRE.NRW-Projekt „Landesweite touristische Innovationswerkstatt“	2016-2019	Develop local tourism infrastructure	Qualification for tourism SME / Knowledge transfer / Barrier free tourism	3.1 million Euro for all 11 participants in North Rhine Westphalia
Transnational/ interterritorial cooperation				
Administrative staff exchange with Danish municipality	Permanently once a year	Knowledge acquisition, innovation	Initiative of the city of Bad Berleburg	[?]

		transfer		
European Agricultural Fund for Rural Development (EAFRD)-LEADER				
LEADER-Region Wittgenstein – Eine Region denkt weiter	2014 – 2020	Bottom-up rural development	Various projects – see annex 6 for details	2.3 million Euro
Regionales Entwicklungskonzept der LEADER-Region „3-Länder-Eck“	2014 – 2020	Bottom-up rural development	Various projects – see annex 6 for details	2.3 million Euro
National / Federal state urban development programmes				
Urban development programme of North Rhine-Wetsphalia	Starting 2017	Redevelopment of urban structures	Redevelopment of public spaces and neighbourhood institutions	4.1 million Euro
Programm "Aktive Stadt- und Ortsteilzentren"	2011-2017	Redevelopment of the inner city of Siegen, integrated in the REGIONALE programme	Redevelopment of public spaces and neighbourhood institutions, traffic infrastructure, functional upgrade	6.75 million

Annex 4:

Table III: Governance structures

Governance structures	Role of local actors in the process of			
Types of policy/programme	Strategy design	Composition of the partnership involved in the project	Project implementation	Project financing and control
Regional/Cohesion policy				
REGIONALE: structural development programme for regions within the federal state of North Rhine-Westphalia	Institutionalised regional development agency in cooperation with representatives of all involved parties	Regional development agency in cooperation with representatives districts, cities, municipalities, economic and civil society stakeholders	Districts, cities, municipalities, economic and civil society stakeholders	Financing and final controlling by federal state / process controlling by districts/cities/municipalities/regional development agency
Regionales Entwicklungskonzept 2015 des Kreises Siegen-Wittgenstein (Regional development concept 2015 of the district Siegen-Wittgenstein)	District government with relevant stakeholders	District government with relevant stakeholders	District government with relevant stakeholders	District government
Specific policy measure financed by the Operational Programme (ERDF, ESF)				
ESF funded projects	Federal state ministry	Federal state ministry, district administration, regional employment office, measure implementing institutions	Federal state ministry, district administration, regional employment office, measure implementing institutions	Federal state ministry, district administration, regional employment office
ERFE-„Start-up-Innovationslabor Südwestfalen“	Regional university network	Universities in the region in cooperation with the start-up enterprises	Universities in the region in cooperation with the start-up enterprises	Regional university network
EFRE.NRW-Projekt „Landesweite touristische Innovationswerkstatt“	Tourismus NRW e. V. in cooperation with regional tourism organisations	Tourismus NRW e. V., regional tourism organisations, local tourism stakeholders	Tourismus NRW e. V., regional tourism organisations, local tourism stakeholders	Tourismus NRW e. V. in cooperation with regional tourism organisations
Transnational/ interterritorial cooperation				
Administrative staff exchange with Danish municipality	Two partner administrations	Two partner administrations	Two partner administrations	Two partner administrations
European Agricultural Fund for Rural Development (EAFRD)-LEADER				
LEADER-Region	Participating cities	Cities/municipalities	Newly established	Financing and final

Wittgenstein – Eine Region denkt weiter	and municipalities in cooperation with local stakeholders	es and local stakeholder relevant in the programme, mainly civil society	office with regional manager	controlling by federal state / process controlling by cities/municipalities/regional manager
Regionales Entwicklungskonzept der LEADER-Region „3-Länder-Eck“	Participating cities and municipalities in cooperation with local stakeholders	Cities/municipalities and local stakeholder relevant in the programme, mainly civil society	Newly established office with regional manager	Financing and final controlling by federal state / process controlling by cities/municipalities/regional manager
National / Federal state urban development programmes				
Urban development programme of North Rhine-Westphalia	Recipient cities	Cities and local stakeholder relevant in the programme	Joint implementation under the management the respective cities	Financing and final controlling by federal state / process controlling by cities
Programm "Aktive Stadt- und Ortsteilzentren"	City of Siegen	City of Siegen local stakeholder relevant in the programme	Joint implementation under the management of city	Financing and final controlling by federal state / process controlling by cities

Annex 5:

Table IV: Socio-economic characteristic of administrative units of case study area (internal structure)

	Siegen									Wittgenstein			
	Freuden- berg	Kreuztal	Hilchen- bach	Siegen	Netphen	Neun- kirchen	Wilnsdorf	Burbach	REGION Siegerland	Erndte- brück	Bad Laasphe	Bad Berleburg	REGION Wittgen- stein
Population density per km ² (2013)	54.5km ² 328.1 p/km ²	71km ² 435.4 p/km ²	80.9km ² 185.4 p/km ²	114.7km ² 866.6 p/km ²	137.4km ² 167.8 p/km ²	39.6km ² 344 p/km ²	72km ² 280.5 p/km ²	79.7km ² 180 p/km ²	649.7km ² 360.9 p/km ²	70.9km ² 101.9 p/km ²	135.8km ² 102.9 p/km ²	275.3km ² 69.9 p/km ²	482 km ² 83.9 p/km ²
Total population (2013) [source: Wegweiser-Kommune]	17,873	30,899	14,993	99,403	23,051	13,638	20,196	14,418	234,471	7,220	13,977	19,236	40,433
Population development (1999- 2013) [source: IT.NRW]	-2.0	-4.2	-9.8	-9.0	-8.0	-6.6	-5.7	-3.6	-7.2	-8.5	-9.8	-9.2	-9.3
Population development age 18-30, (1999-2013) [source: IT.NRW]	-5.8	-0.7	-9.9	+9.1	-4.8	-8.3	-14.2	-7.8	+0.3	-13.2	-16.6	-21.9	-18.5
Old age dependency ration (2013) [source: wegweiser-Kommune]	33.5	34.8	38.2	33.4	32.4	36.2	35.7	34.3	34.2	33.5	37.8	35.4	35.9
Gender Imbalance (2012) [source: Wegweiser-Kommune]	0.96 ♂: 49.1 / ♀: 51.0	0.97 ♂: 49.2 / ♀: 50.8	0.97 ♂: 49.2 / ♀: 50.7	0.93 ♂: 48.2 / ♀: 51.8	0.99 ♂: 49.8 / ♀: 50.2	1.02 ♂: 50.5 / ♀: 49.5	0.97 ♂: 49.3 / ♀: 50.7	0.99 ♂: 49.8 / ♀: 50.3	0.96 ♂: 48.9 / ♀: 51.1	1.01 ♂: 50.2 / ♀: 49.8	0.99 ♂: 49.8 / ♀: 50.2	0.98 ♂: 49.4 / ♀: 50.6	0.99 ♂:49.7 / ♀: 50.3
Ethnic composition (2013) [source: Wegweiser-Kommune]	3.4	9.2	5.7	9.5	5.6	10.2	3.2	7.7	7.8	3.5	4.2	2.9	3.5
Growth measured as GDP per capita in PPS (2013)													
Unemployment rate (2013) [wegweiser-Kommune]	5.0	9.1	6.9	10.9	5.2	6.3	4.6	5.3	8.2	4.9	5.1	6.2	5.6
Youth unemployment rate	6.0	8.9	4.5	11.8	5.2	6.6	5.8	5.9	8.7	3.9	4.8	5.3	4.9

(2013) [source: Wegweiser-Kommune]														
Main economic basis: Share of employees per sector (2013) (agriculture, industry, services) if possible in more detail and with time series [source: Wegweiser-Kommune]	1) k.A. 2) 36.5 3) 63.4	1) k.A. 2) 59.9 3) 39.6	4) k.A. 5) 68.3 6) 31.6	1) 0.1 2) 26.1 3) 73.9	1) 0.2 2) 54.3 3) 45.5	1) k.A. 2) 60.9 3) 39	1) k.A. 2) 57.7 3) 41.5	1) 0.1 2) 66.5 3) 33.5	1) 0.1 2) 44.1 3) 55.8	1) k.A. 2) 67.8 3) 31.8	1) 0.2 2) 58.5 3) 41.3	1) 1.7 2) 43.1 3) 55.2	1) 1.0 2) 52.8 3) 46.2	
Share of tertiary educated people (according to ISCED, 2013) <i>[no statistical calculations on the local level]</i>														
Virtual Accessibility (Next-generation network (NGN) coverage in %, 2013) [source: Breitbandatlas-NRW]	≥ 50 Mbit/s: 30.7% ≥ 30 Mbit/s: 33.1% ≥ 16 Mbit/s: 37%	≥ 50 Mbit/s: 86.2% ≥ 30 Mbit/s: 91.7% ≥ 16 Mbit/s: 96.6%	≥ 50 Mbit/s: 80% ≥ 30 Mbit/s: 90.2% ≥ 16 Mbit/s: 91.6%	≥ 50 Mbit/s: 94.8% ≥ 30 Mbit/s: 96.7% ≥ 16 Mbit/s: 98.4%	≥ 50 Mbit/s: 49.2% ≥ 30 Mbit/s: 58.6% ≥ 16 Mbit/s: 62.7%	≥ 50 Mbit/s: 61.3% ≥ 30 Mbit/s: 84.8% ≥ 16 Mbit/s: 95.9%	≥ 50 Mbit/s: 96.6% ≥ 30 Mbit/s: 97.2% ≥ 16 Mbit/s: 97.8%	≥ 50 Mbit/s: 77.1% ≥ 30 Mbit/s: 88.1% ≥ 16 Mbit/s: 89.7%	≥ 50 Mbit/s: 80.5% ≥ 30 Mbit/s: 85.9% ≥ 16 Mbit/s: 88.8%	≥ 50 Mbit/s: 4% ≥ 30 Mbit/s: 11.9% ≥ 16 Mbit/s: 27.6%	≥ 50 Mbit/s: 36.5% ≥ 30 Mbit/s: 50% ≥ 16 Mbit/s: 59.3%	≥ 50 Mbit/s: 61% ≥ 30 Mbit/s: 68.5% ≥ 16 Mbit/s: 76.1%	≥ 50 Mbit/s: 42.4% ≥ 30 Mbit/s: 52% ≥ 16 Mbit/s: 61.6%	

Annex 6:

Table V: Content analysis of coping strategies documents

Document 1	
Title	Regionales Entwicklungskonzept 2015 des Kreises Siegen-Wittgenstein (Regional development concept 2015 of the district Siegen-Wittgenstein)
Information and status of the document	Written in 2015. First regional strategy document since 1992.
Type of the document (plan/strategy/...)	Strategy document of the whole district Siegen-Wittgenstein
Governance level/levels (local/regional/...)	Worked out under the leadership of the head of the district authority in cooperation with interdisciplinary regional and local stakeholders in theme-specific working groups.
Synthesis/general findings of the document – in context of peripherality of case study region or its part	<p>The biggest challenge of the region is the demographic decline and its consequences on the different sectors/issues. The overall aim of the concept is to keep the demographic change at a low level and to make it controllable. The aim is to improve the competitiveness and attractiveness of the district/region as a location for living and businesses. To reach this goals the concept establishes strategic guidelines and recommendations in six issues:</p> <ul style="list-style-type: none"> • <i>Economy and employment</i>: to develop the economic competitiveness and innovative capacity to ensure good working conditions • <i>Education and qualification</i>: to provide an integrated education and qualification system • <i>Traffic and mobility</i>: to preserve the mobility of the inhabitants and to improve the transport of goods • <i>Social issues, youth and health</i>: to preserve and enhance the health, care and social infrastructure • <i>Rural development, nature and landscape</i>: to ensure a livable environment and an intact natural and cultural landscape • <i>Tourism, culture and recreation</i>: to interconnect the existing recreational and cultural opportunities with tourism <p>Measures and projects for every issue have been developed. The cross-sectional topics demographics, digitalization and sustainability take part in every issue. The aims and topics of the regional development concept of Siegen-Wittgenstein are thematically close to those of the region South Westphalia.</p>
Document 2	REGIONALE 2025 Application
Title	Bewerbung REGIONALE 202X: Digital. Nachhaltig. Authentisch. Die Südwestfalen-DNA [Application for the Regional Structural Policy Programme "REGIONALE" 202X: Digital. Sustainable. Authentic. The South Westphalia DNA]
Information and status of the document	Application for the Regional Structural Policy Programme "REGIONALE" (Competitive Funding Programme), written in 2016, obtained approval beginning of 2017 for a programming period (to be decided yet) beginning in 2025. This is a follow-up application to the successfully applied REGIONALE programme 2013.
Type of the document (plan/strategy/...)	Strategy
Governance level/levels (local/regional/...)	Regional; South Westphalia with the regional districts Soest, Olpe, Siegen-Wittgenstein, Märkischer Kreis, Hochsauerlandkreis
Synthesis/general findings of the document – in context of peripherality of case study region or	The overall aim of this strategy, based on the co-operation of all relevant stakeholders in the participating regional districts, is to prevent young people, in particular, from leaving the South Westphalia region. As a main vehicle, digitalization is seen as

its part	essential for the development of the region. For example, digital platforms are planned, in order to increase mobility of people or improve health care.
Document 3	VISION South Westphalia 2030
Title	VISION Südwestfalen 2030 [VISION South Westphalia 2030]
Information and status of the document	Written and approved in 2016.
Type of the document (plan/strategy/...)	Vision; strategy document
Governance level/levels (local/regional/...)	Regional; South Westphalia with the regional districts Soest, Olpe, Siegen-Wittgenstein, Märkischer Kreis, Hochsauerlandkreis
Synthesis/general findings of the document – in context of peripherality of case study region or its part	<p>The VISION defines three aims for the region; in 2030 the region wants to be</p> <ul style="list-style-type: none"> • nationally known for its culture of co-operation in shaping the future of the region • the strongest SME industrial region in Germany • a synonym for / the incarnation of good life, work and leisure. <p>The document lists the strengths, the challenges, and the measures to be taken in order to reach these goals.</p>
Document 4	
Title	Region Wittgenstein – Eine Region denkt weiter (Region Wittgenstein – A region thinks ahead)
Information and status of the document	(Successful) Application as LEADER-Region in the EU-funding period 2014 – 2020.
Type of the document (plan/strategy/...)	Gebietsbezogenes, integriertes ländliches Entwicklungskonzept (Area focused, integrated rural development program)
Governance level/levels (local/regional/...)	Joint program of the city Bad Berleburg, Bad Laasphe and the township Erndtebrück, which form the Zweckverband Region Wittgenstein (in the eastern half of the district Siegen-Wittgenstein) with ca. 41.000 inhabitants / Program embedded in structures of Südwestfalen and North Rhine-Westphalia
Synthesis/general findings of the document – in context of peripherality of case study region or its part	<p>The concepts acknowledges the areas remoteness from main traffic infrastructure, its sparse population and the challenges posed to the region by ongoing and future demographic change and gaps in SGI coverage, aging and growing gap between demand and supply of qualifies work force to hold up the so far stable economic situation.</p> <p>As key aspects to cope with the situation increased cooperation between the cities and township and the engagement of inhabitants in social and volunteering activities are named and organized along the arenas: 1. Supply of services and infrastructure and integration, 2. Living together in village and city, 3. Nature, tourism and leisure, 4. Climate protection and sustainable energy.</p> <p>The concepts stresses the lab character of the region for tackling future problems of rural development and its interlinkages and cooperation with multiple governance levels and programs</p>
Document 5	
Title	Regionales Entwicklungskonzept der LEADER-Region „3-Länder-Eck“ (Regional development concept of the LEADER region „3-states-border triangle“)
Information and status of the document	(Successful) Application as LEADER-Region in the EU-funding period 2014 – 2020.
Type of the document (plan/strategy/...)	See title
Governance level/levels	Joint program of the townships Neunkirchen, Burbach and Wilnsdorf

(local/regional/...)	with ca. 48000 inhabitants (in the southern part of the district Siegen-Wittgenstein) targeting also border-transgressing cooperation with townships in the states of Hesse and Rhineland-Palatinatee
Synthesis/general findings of the document – in context of peripherality of case study region or its part	<p>The concept acknowledges only few problems related to peripherality, namely the insufficient coverage of the area with doctors and with infrastructure for children, youths and families. The later aspect is linked to an already felt lack of skilled work force and the related need to increase the attractiveness of the region.</p> <p>The development goals presented in the concept target sustainability, Innovation, creation of a regional identity and trans-(state)border cooperation as general topics and focus these on aspects of environmental protection, adjustment to climate change and demographic change with special fostering of children, youths and families</p> <p>The concepts initiatives are linked to other funding opportunities from national and state (EU) level.</p>

Annex 7:

Table VI: Content analysis of newspaper archives – image / stigmatization

For the German case study area 'Siegen-Wittgenstein' newspaper digital archives were screened for nation-wide distributed, daily published Frankfurter Allgemeine Zeitung, Handelsblatt and Süddeutsche Zeitung, and for the nation-wide distributed, weekly published ZEIT, Welt am Sonntag, Focus and Spiegel (different time spans were accessible for each newspaper online archive its starting point ranging from 1993 to 2005). The overall coverage of the region in nation-wide print media was quite low and out of the articulated that turned up a still smaller number held relevance for questions of peripheralisation. Overall approximately 50 articles were considered relevant for detailed screening and sorted cumulatively according to their context and the rough time of appearance to allow for the tracing of potential trends:

		Description of findings
Size of the article	Short (less than 1 page)	All articles were assumably shorter than one DIN A 2 newspaper page, some were online newspaper articles, so page length could not been appraised
	Medium(1-2 pages)	
	Long (more than 2 pages)	
Author of the article	Journalist	All considered articles were written by journalists
	Publicist/expert	
	Local authority	
Author's attitude	Positive	
	Neutral	Despite from the newspaper article mentioned in the text below the table most articles adopted a quite neutral tone.
	Negative	- Explicitly criticised was the establishment of the European bison area as a waste of money by one article
Context	Positive	1990s <ul style="list-style-type: none"> - Development of a long distance hiking trail - Local museum featuring international artist - Open air festival 'Kultur pur' - Positive turn in structural change - Successful breweries in the districts 2000s <ul style="list-style-type: none"> - (long distance) hiking trail - funding for media and art centre and theater - district depicted as recreational area - good job chance for youth 2010s <ul style="list-style-type: none"> - Funding granted for broadband development - Development of wild life - district depicted as fostering decrease of car dependency - hidden champions of the region - health industry as innovative element in the region
	Neutral	2000s <ul style="list-style-type: none"> - Discussion on improvement of road infrastructure 2010 <ul style="list-style-type: none"> - Development of regenerative energy in the region - Population decline
	Negative	1990s <ul style="list-style-type: none"> - Crisis of the regional steel industry

		<p>2000s</p> <ul style="list-style-type: none"> - Aggressive escalation during football match - Globalisation challenges for local industry - Disparities between promise and reality in tourism infrastructure - Unprofitable local airport - Very low position as office base in national rating <p>2010</p> <ul style="list-style-type: none"> - Dilapidated road infrastructure, refusal of funding for motor ways - Conflicts regarding wind energy areas - Potential closure of army administration
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One process that can contribute to creating or stabilizing inner peripherality is stigmatization. Stigmatization – as relevant for our research – attaches negative attributes to specific spatial units via discourses and may influence stakeholders' actions and decisions. These discourses might be represented in media and narratives to different degrees. Some discourses develop strong impact and hold on for long spans of time. For our case study area a very prominent narrative was triggered by a newspaper article by Hanjo Seißler written in 1996 for the nationwide distributed SZ Magazin. The title of the article has since become a proverb-like saying, which plays with the German words for winning and losing: "What is worse than losing: Siegen" (the name of the regional centre of the Kreis Siegen-Wittgenstein which is written the same way as 'winning'). The article creates an image of bad urban restructuring and incompetent local governance and has since publication been recited multiple times. The author was even invited by the regional broadcasting station after the recent restructuring of the city centre to comment on the development and to hopefully reconcile and mend the image but with little success.

Annex 8:

List of experts:

Expert 1	Regional policy-makers
Expert 2	Scientist
Expert 3	Strategic planner
Expert 4	Leader of higher education units
Expert 5	Representative of NGO
Expert 6	Regional economic stakeholders
Expert 7	Strategic planner
Expert 8	Representatives of associations of private entrepreneurs in the area
Expert 9	Regional journalist
Expert 10	Local policy-maker
Expert 11	Expert with experience of local development planning in the study area
Expert 12	Local policy-maker
Expert 13	Local economic stakeholder

Annex 9:

Remaining photographs (not included in the report; source: all ILS 2017)

Photograph 1: City centre of Siegen, the regional centre; front: statue of a caster – reference to the mining and metall processing tradition in the region; back: Apollo theatre – reestablished in 2007



Photograph 2: University of Siegen, founded in 1972, approx.: 20,000 students, current efforts to establish a medical faculty to approach the shortage of doctors in the region



Photograph 3: Train station Kreuztal, renovated and used as ,Culture Station'



Photograph 4: View over Wittgensteiner Land; the district of Siegen-Wittgenstein is 70 % forest covered and therefore the forest-richest district in Germany, high forest damage was caused by a large storm in 2007, large reafforestation is still under way



Photograph 5: Train station Erndtebrück; highly decrepited building, now under reconstruction



Photograph 6: Shop vacancies in the city centre of Bad Laasphe



Photograph 7: Shop window referring to the supra-regional initiative to promote local shopping



Photograph 8: Local licence number plate; the abbreviation BLB for Bad Berleburg / Wittgenstein was only re-permitted in 2012 (they were not issued since 1975 because of administrative reforms) to encourage feelings of local attachment



Photograph 9: Typical supermarket layout in the study region – designed for car accessibility, centrally positioned in city centres and near train stations, with long opening hours even in comparison with metropolitan zones and with large assortments

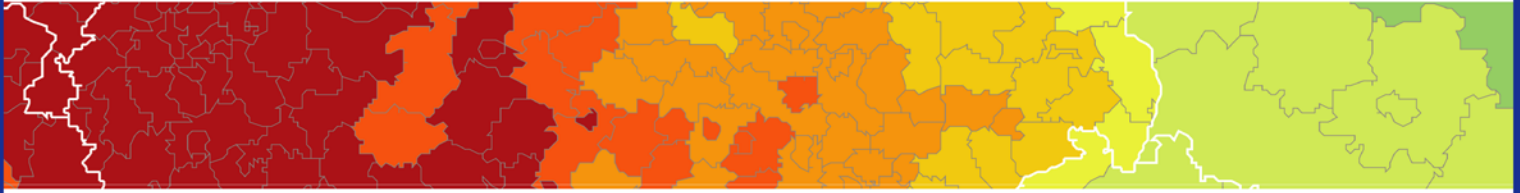


Photograph 10: European bison museum in Bad Berleburg; since 2013 a free-roaming bison herd was set up in the region of Wittgenstein as an ecological experiment as well as a tourist attraction; conflicts between forest owner and nature protection groups prevail



Photograph 11: Bad Berleburg; the Baroque stately home from 1733 seat of the princely house of Sayn-Wittgenstein-Berleburg, reflecting the regional distinct historical attachments and development path





ESPON 2020 – More information

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