ESPON

# LP3LP
# Landscape Policy for the Three Countries Park

**Targeted Analysis** 2013/2/21

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This report presents the final results of a Targeted Analysis conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

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# I. Introduction

The LP3LP project was conducted according to 3 research Phases (A, B, C):

**Phase A - Defining the European identity of 3LP**

**Phase B - Landscape perspective for the 3 Countries Park**

**Phase C - The interface between the 3LP landscape perspective and EU policy**

The following chapters (II, III and IV) provide more detailed information about each Phase. (For an overall introduction to the 3LP, the LP3LP project, including its project aims and hypotheses, see Chapter 1 in the Main LP3LP Report.)

**Phase A** of the project determined the particular identity of the 3LP in the European context, including regional and European dynamics. Apart from investigating basics on landscape and concepts for achieving local and European goals through investment in landscape quality, the use of ESPON studies and results informed us about global dynamics that may have an impact at the regional level along with comparisons with other European (cross-border) regions. At the same time, a review of European policy documents that may have a significant impact on both image and usage of landscape was carried on, in parallel with the stakeholders' existing (cross- border) perspectives. (Chapter II Main Report).

**Phase B** was dedicated to the development of the landscape perspective, nourished by themes and issues that arouse in the previous phase. This Phase started with taking stock of the unique regional capital and potentials inherent in the landscape, and summarized it with five core qualities. The following process was structured as an iterative design process, and included three stake-holder workshops. This information was used to formulate and establish a shared vision on the future of landscape in cross-border collaboration resulting in a cross-border landscape perspective (Chapter III Main Report).

**Phase C** was dedicated to the recommendations regarding the interface between landscape policy of 3LP and European Policies. Main policy documents in EU policy areas matching with themes of the 3LP initiative were analyzed with prospect to the period 2014-2020. In a first step, policy objectives were interpreted with regard to the demands they impose on landscapes. In a second step, the European policy context as well as European funds and support instruments were investigated upon suitable means for implementation of the 3LP landscape perspective. Finally, informed by discussions in expert and stakeholder meetings, policy recommendations linking the European and regional 3LP scale (considering both a top-down and bottom-up path) were derived in the form of a governance proposal for the case study and 4 thematic strategies (Chapter IV Main Report).

# II. Phase A: Defining the European identity of 3LP

## II.1. Questions to be addressed

The aim of this first part of the project is to understand the particular identity of the 3LP area in comparison to other areas with similar features in relation to physical qualities, occupation patterns and processes, land-use and economic potentials. By positioning the 3LP within the EU context, it shall become feasible to determine the territorial capital and potentials of the area, taking into account the polycentric metropolitan context of the region. Emphasize is to be made on using ESPON studies, particularly the EDORA project. The integration of European dynamics will enlarge the debate and bring new evidence based information for the designing of the landscape perspective.

According to project specifications, different questions will be addressed:

1-What is the identity of 3LP in regard to its polycentric metropolitan situation as well as territorial capital and potentials within a European context using ESPON studies and results?

2-Which European (cross border) regions have an identity comparable with the identity of 3LP in a European context?

3-What are the general implications of the established European identity of 3LP for the development of the landscape policy of 3LP?

Before answering the questions, clear definition of the concept of European identity, notably the links between landscape and landscape planning, seems necessary.

## II.2. European identity of the 3LP: defining the concept

### II.2.1. What do we understand by European identity?

Since last decades, we observe globalization process (climate change, economic crisis, energy paradigm, technological advancements in exploitation) often playing against local specificities. One of the major consequences is a rapid change of landscape leading to loss of heritage values and identity of landscapes (Antrop 2004a, Council of Europe 2000). Rural landscapes (but not only) have changed drastically. We observe a general decrease of importance of the primary sector and structural changes in agriculture (i.e Primdhal et al 2009) and the increase in the mobility of individuals (Domon 2011) along with the increasing intensity of the urbanization process (EEA 2006). And yet, it is mainly the traditional rural structures that form the great European landscapes and make them recognizable (Vandermotten et al. 2010, Lebeau 1986). Against this background, there is a collective demand, addressed to policy makers and planners that the consumption of space must respect landscape (Conan 1994). Moreover, the amenity quality of

landscape is destined to act as an important resource for territorial development in the 21st century (Agnoletti 2010, Conan 1994, Domon 2011).

Identity of a region is multifaceted and places are comparable in certain ways only. Identity should work as a common denominator for 3LP cross border territory, going beyond existing borders, as it can play a role in unifying people in a community, allowing citizen to mobilize for collective perspective (Conan 2004). This aspect is of central importance as the sense of community and shared values can play a major role in public decision process and can lead to the implementation of visions for collective future (i.e. Barca 2009, Stewart et al. 2003).

European landscape convention tackles identity in its preamble by saying *"Aware that the landscape contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage, contributing to human well-being and consolidation of the European identity"* (Council of Europe 2000). In Article 5 (General measures), the convention states that *"Each party undertakes to recognise landscapes in law as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity"*. Many works have focused on the thigh links between identity and landscape (Vandermotten et al. 2010, Pedroli 2000) revealing the high complexity of the subject as it encompass the connections between past and present, physical and cultural components. According to project specification, it is asked in this research to focus on ESPON studies and results. The ESPON program is indeed a very rich source of information as it brings scientific evidences on EU territorial dynamics. Using ESPON as a gateway for defining European identity of the 3LP helps reducing the complexity of the question as the identity of 3LP is therefore to be considered in terms of territorial issues. Basically, the questions to answer are: **What are the territorial dynamics, occurring at European level, affecting the 3LP landscape? In what kind of EU territorial typologies does the 3LP fits, helping to understand how is the 3LP unique to the rest of Europe and what makes it similar to other regions?**

Relevant ESPON reports have therefore been selected according to their relevancy in terms of landscape information. Research dealing with subjects that do not have direct impact over landscape have not been taken into account (for a complete list of selected project, see table 1 below).

### *Table 1 Table showing selected ESPON projects*

| ESPON study | Focus on research area | Focus on (available) results |
|---|---|---|
| EDORA (Priority 1) | Analysis of endogenous development opportunities of rural areas.<br>Study of under-used opportunities for cooperation between towns in rural areas.<br>Identification of main driving forces and opportunities of rural areas<br>Projections on the likely evolution | Typology of rural areas<br>Indicators (type of rural areas, development opportunities, socio-economic situation and competitiveness). |
| ATTREG (Priority 1) | Key factors of attractiveness of European regions and their distribution across Europe.<br>Analysis of the role of sectors and trends for attractive regions and cities.<br>Identification of challenges and development opportunities related to natural, cultural and landscape heritage in enhancing attractiveness.<br>Analysis of possible development paths/future perspectives for both, attractive and still unattractive regions, | Indicators of attractiveness and competitiveness.<br>European maps revealing the attractiveness of European regions and cities. |
| EU LUPA (Priority 1) | Current European land use patterns and land use changes, dynamics and trends.<br>Relations between land use patterns (and more specifically urban land use patterns) and drivers of development.<br>Efficiency of land use patterns taking into account the relations between urban areas and open space | Maps visualizing land use processes in Europe.<br>Relations between specific land use patterns and performance of European regions.<br>land use development patterns in cross-border regions and the differences between patterns inside neighbouring cross-border regions and between border regions and inland |
| METROBORDER (Priority 2) | Main characteristics of cross-border metropolitan regions.<br>Analytical support for strategy building | Common reference framework for the main functions of cross-border metropolitan regions and for governance structures.<br>Map of metropolitan polycentric cross-border areas.<br>Analysis of the particular territorial potentials and challenges and the main threats for the case study areas.<br>SWOT analysis of the case study areas.<br>Indications for actions related to the EU and the national level.<br>Presentation of appropriate instruments to promote a metropolisation process. |
| POLYCE (Priority 2) | characteristics of the polycentric system | Macro-regional polycentric structures in Europe.<br>Urban structure, quality of life and governance.<br>Strengths and weaknesses in different aspects of metropolitan development.<br>Indicators for polycentric development.<br>New strategic and cooperative initiatives. |
| PURR (Priority 2) | Methodologies to assess territorial potential. | Worked example of the application of the territorial potential methodology. |
| ESPON 1.3.2 Territorial trends of the management of the natural heritage | Natural heritage as an asset for territorial development (including cities) | Links between landscape and formation of local culture.<br>Contribution of landscape to European identity. |
| ESPON Project 1.3.3 - Impacts of cultural heritage and identity | Cultural heritage and identity.<br>Cultural landscapes. | Classification of regions based on their cultural components and orientations.<br>Case study of management practices and territorial effects of cultural heritage at local level. |
| SGPTD Secondary Growth Poles and Territorial Development in Europe; Performance, Policies and Prospects (Priority 1) | Performance of secondary cities.<br>Prospects for secondary cities. | Typology of secondary cities in terms of performance and how policies affect them. |
| DEMIFER (Priority 1) | Study of the size and structure of population.<br>Development of alternative scenarios for European regions. | Typologies of European regions.<br>European maps on the current demographic and migratory flows. |
| TERCO (Priority 1) | Analysis of the appropriate scale for different domains of transnational territorial cooperation.<br>Identification of the most favourable framework | Typologies of transnational and cross-border cooperation areas.<br>European maps (typology of different possible |

| ESPON study | Focus on research area | Focus on (available) results |
|---|---|---|
| | conditions and good governance models for territorial cooperation. | cooperation areas, territorial state per possible cooperation area, territorial potentials and challenges). |
| FOCI (Priority 1) | The relation of cities to their hinterland. Analysis of existing and identification of potential « polycentric » inter-city cooperation | Typologies of the urban system of Europe. Maps of the European urban system |
| ESPON Climate (Priority 1) | Degree of vulnerability to climate change and impacts, mainly in environmental terms. Potentials for mitigation | Typologies of European regions in terms of vulnerability |
| ARTS (Priority 1) | Methodological framework for territorial impact assessment<br>Sensitivity of the different types of territories to selected EU directives | Territorial/regional sensitivity to different types of European directives |
| ReRISK (Priority 1) | Examination of the vulnerability for energy poverty.<br>Scenarios for different types of European regions. | Typologies of European regions.<br>European maps revealing the degree of vulnerability of different types of European regions. |
| TIGER (Priority 1) | Impact of globalisation on European territories. New forms of territorial organisation and integration responding to globalisation. | Identification of the territorial aspects of the globalisation process. |

Before going through ESPON information, an expert meeting was organized at the very beginning of the project (23th May 2012) in order to elaborate a set of criteria and discuss about the meaning of the European context of a region in terms of landscape. It allowed to open a debate beyond the ESPON framework and provided an opportunity for a focused dialogue between practitioners and researchers from Belgium, Netherland and Germany. A particular attention was paid to the cross border polycentric metropolitan context of the 3LP and the integration of European dynamics. Outputs of expert meeting, supported by the literature review, allow identifying the following elements as background of the European identity for the 3LP landscape.

### II.2.2. Experts meeting outputs

**European cultural and physical heritage** appeared as the first element when speaking about identity of a region in a broader context. The heritage is to be considered firstly in term of structures (physical components) such as soil, geology, relief, vegetation of a territory. But heritage is also to be seen in terms of culture: remnants, relics of (common) history shaping (parts of) landscape. The best reflection of complex history and the way people are living is indeed to be found in the built heritage (style of architecture, forms, castles, town plans, etc.). The physio-geographic components and human use must not be considered as two separate elements, but rather in interaction. Geomorphological and historical sites in the landscape may be accentuated to create more awareness of shared roots, history and landscape identity. It appears paramount, to fully understand European identity of the 3LP, to focus on shared historical narrative in landscapes whether in cultural and natural dimensions. Heritage implies several dimensions that form the way people make landscapes. These dimensions have to be analyzed in terms of conflicts and collaboration.

**Citizen's values and feeling of belonging to (part of) Europe** appear as the second element when speaking about identity. What makes people feel that they and their region belong to Europe? People play indeed a paramount role as they transfer values and

sentiments onto landscapes making them symbols that express different thoughts, ideas and emotions (see also Nogué et al 2004).

**Governance and institutions** is the last criterion. It can be seen from the institution point of view where political decisions (including those coming from EU level) have an impact over landscape. The governance issue highlights the conflicts induced by planning process where two logics are confronted: the one carried by institutions, which is the practice of power that legitimates its actions, and is carried by practitioners who intervene punctually over territory in a technical way. On the other side, there is the one who is rooted in collective identities, with emotional relationship with territory, that act as a counter power (see also Conan 1994).

The information that came out of the expert meeting, supported by a literature review, is illustrated below. It shows the high level of interrelation of elements that influence identity from a landscape perspective.

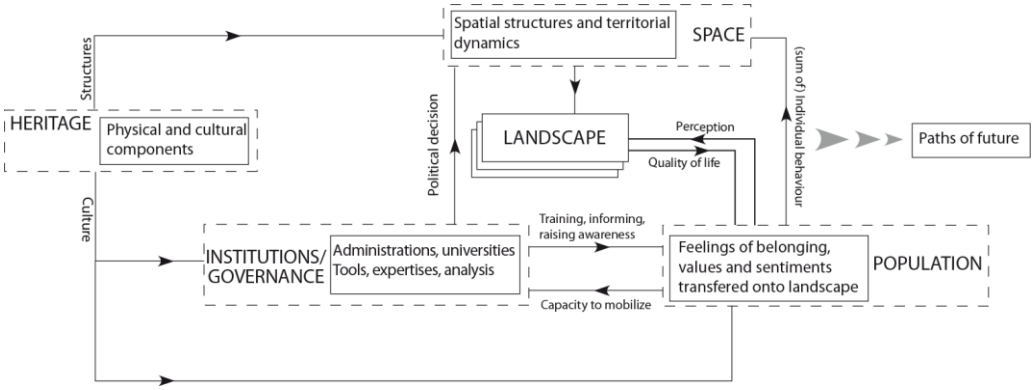



***Figure 1 Elements contributing to landscape identity*** *(Source: own elaboration)*

According to the experts, the European identity of the 3LP landscape goes beyond the territorial information. It appears nevertheless that landscape is a convenient concept to define identity as it encompasses not only physical elements of space but also spirituals, ideological and symbolic dimensions. A place with identity is indeed a place with a recognizable landscape, a place that presents a kind of uniqueness, reveals region's character and history and is perceived by specific groups of people. Landscape uniqueness (identity) refers to the distinctive geographical expressions of its ecological, aesthetic, cultural and historical values (Terkenli 2004) and can be used as a platform for exchanging about identification processes to citizen, practitioners and political players. As constitutive elements and factors of territorial identities, landscapes are the media through which the existing and emerging identities of places and regions are generated, recorded, assumed and claimed (Roca et al.2008). As well resumed by Stobelaar and Pedroli (2011), landscape identity is the unique psycho-sociological perception of a place defined in a spatial-cultural space.

## II.3. Identity of 3LP in regard to its polycentric metropolitan situation as well as territorial capital and potentials within a European context

### II.3.1. Introduction

Before going into ESPON information, a first chapter relates the main dynamics that have occurred in North-West Europe since the Roman Empire whereas a second and third chapter provide an overview on the landscape structure index and the European landscape classification, finally a fourth one informs about European landscape policies.

### II.3.2. The historic position and development of the 3LP landscape

The 3LP landscape is situated between the plains of North West Europe and the middle mountains of the Ardennes and Eifel. The landscape slopes from its highest points in the South East to its lowest points to the North West and is criss-crossed by rivers and streams. In the Pleistocene a band of Loess, at some places 10 meter thick, was sedimented running from the South West (Haspengouw) to the North East (Jülicher Börde) of the 3LP area. The Meuse and its tributaries moulded the landscape into a hilly landscape with valleys, ridges and plateaus (Kerkstra, Vrijlandt et al. 2007). This geomorphological structure of the 3LP is visualised in Figure 2. Besides the middle mountains and the plains, two distinct types of relief evolved, plateaus with a-symmetric river valleys and a ridge landscape in the southern part of the 3LP landscape (see Figure 3).

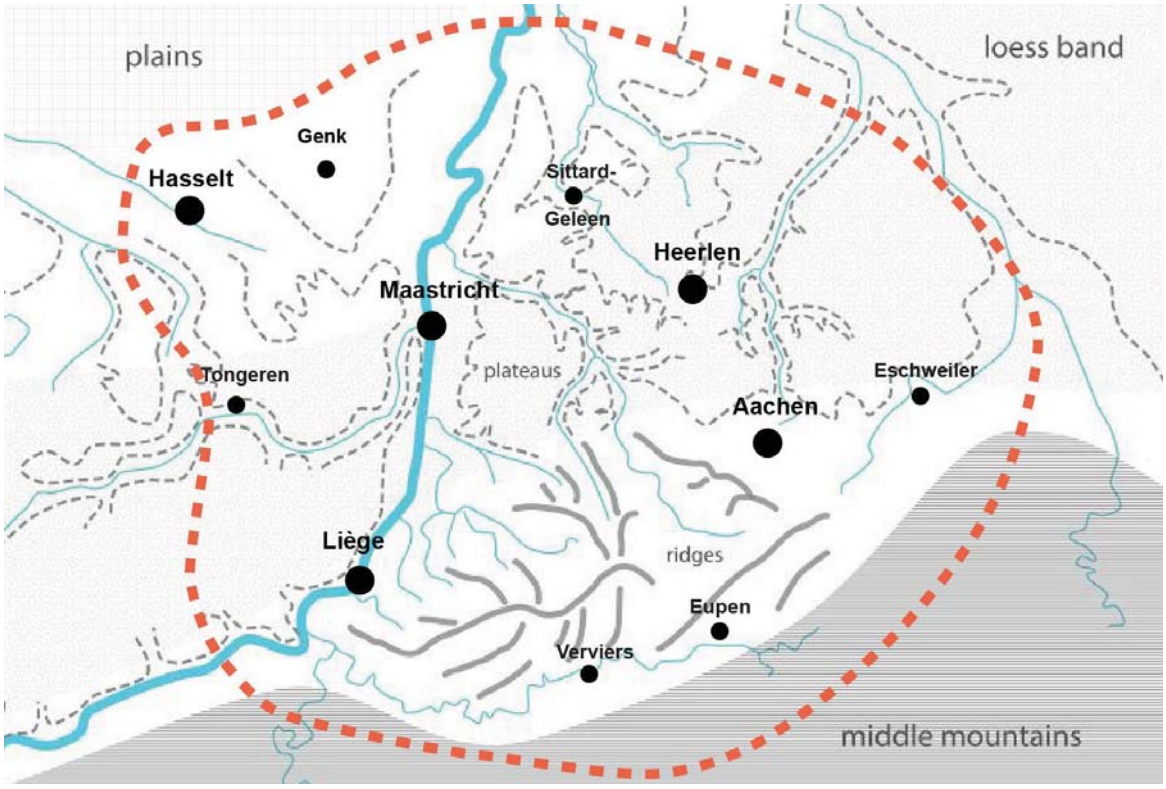



*Figure 2 the Geomorphological structure of the 3LP landscape*

*(Source: own elaboration based on analytical maps in Atlas of Maps)*

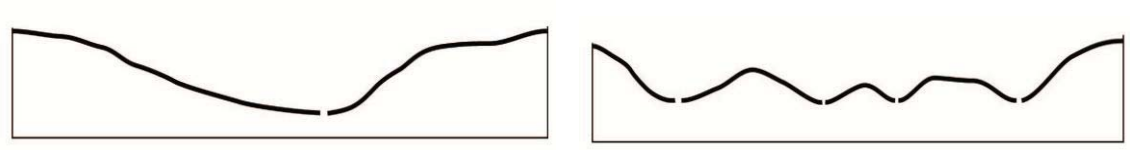


***Figure 3*** ***Schematic cross-section of the plateau landscape (left) and the ridge landscape (right)*** *(Source: own elaboration)*

The 3LP is in the middle of an ancient and densely populated area that can be considered as part of the historic backbone of Europe. Permanent settlement in the 3LP area started in the period of 4500 BC (leersen, Jansen et al. 1994), on the loess grounds, in the Meuse valley and in Haspengouw. These settlements drifted throughout the area based on agricultural needs. The Romans introduced roads and permanent settlements like cities and villages in the landscape. These settlements are separated by a rather short distance (approximately 15km) as the trips were made by horse or by foot. A North-South urbanized axe appeared along the Rhône, Moselle and Rhine valleys (Robert 2011). Many military camps gave birth to cities such as Cologne. The cultural influences induced by this axe continued during the middle age.

The Roman influence also gave an impulse to agriculture in the area (Ubachs 2000). Outside cities, the activities of the “villae” developed agriculture in the area, intensely cultivating the soil, thanks to an abundant and needed work force. The success of agriculture in these days is explained by the fertile loess soils. This agricultural development also started the emergence of open plateaus and more densely occupied river valleys in the 3LP area.

The fall of the Roman Empire allowed feudalism to emerge. The Middle ages are characterized by an important amount of small rural communities who based their activities mainly on forestry (Robert 2011). In the period between 750 and 850 the 3LP area was the prominent region of Europe. It was the centre of the empire of Charlemagne, the Frankish emperor who expanded his empire over extensive parts of Europe. After his death the empire was divided over and over again (leersen, Jansen et al. 1994). Around 1150 the area lost its prominent position in Europe. Quarrels and disputes over power, influence and land, as well as changes in trade and industry caused a patchwork of principalities, counties and dukedoms. The political patchwork lasted until 1795 (leersen, Jansen et al. 1994) when the French Republic ended this situation. Many castles, monasteries and estates in the current landscape testify of this period in time.

During the 12th and 13th centuries, important commercial flows took place between Northern Italy (the Po-plain) and Flanders. Cereals from Venice and Geneva and draperies from Flanders were exchanged in the Champagne fairs (Troyes, Provins, Lagny-sur-Marne, Bar-sur-Aube). Inland navigation was privileged, by using rivers (Pô, Rhone, Saône, Moselle, Meuse, Rhine) or canal (Flanders) and the roman roads were rather neglected and degraded (Robert 2011, Vandermotten et al.2010). Wealth, based

on non-agricultural activities, accumulated and a strong and organized bourgeoisie emerged. The dense city network was reinforced and constituted the motor of the economic development, like in the Rhine area (Robert 2011).

In the 14th century (and already in the 13th), the importance of the Champagne fairs decreased. Several factors added to this decrease: the growing importance of sea routes (Gibraltar), the competition of Paris, the discovery of new passages through the Alpes, the economic and demographic crisis of the Middle age and the growing numbers of in-land conflicts, making the land routes less secure (Robert 2011, Vandermotten et al.2010).

The 16th century is marked by the emergence of colonial empires. The process of wealth accumulation leaded to a selective process of urbanization. A hierarchy of cities emerged, and capitals or trading cities appeared in Europe. In 1500, Paris, Venice and Napoli had over 100 000 inhabitants, Grenada, Prague, Lisbon, Tours, Gènes, Florence, Gent, Palerme and Rome lacked just behind (Robert 2011). The bourgeoisie used the strong royal organizations to start long distance trade operations, and creating a base of the future industrial capitalism.

In the course of the 16th century parts of the 3LP region began to specialize in agricultural production. In the 'Pays de Herve' cattle breeding increased, allowing farmers in South Limburg to trade their surplus of grain to the Aubel market (Ubachs 2000). This specialization probably marks the start of the development of the bocage landscape in the 'Pays de Herve' as hedges were needed to keep livestock in and wild animals out. The rural area though, was still multifunctional at that time, including several rural industries, consisting of groups of workshops using qualified work force.

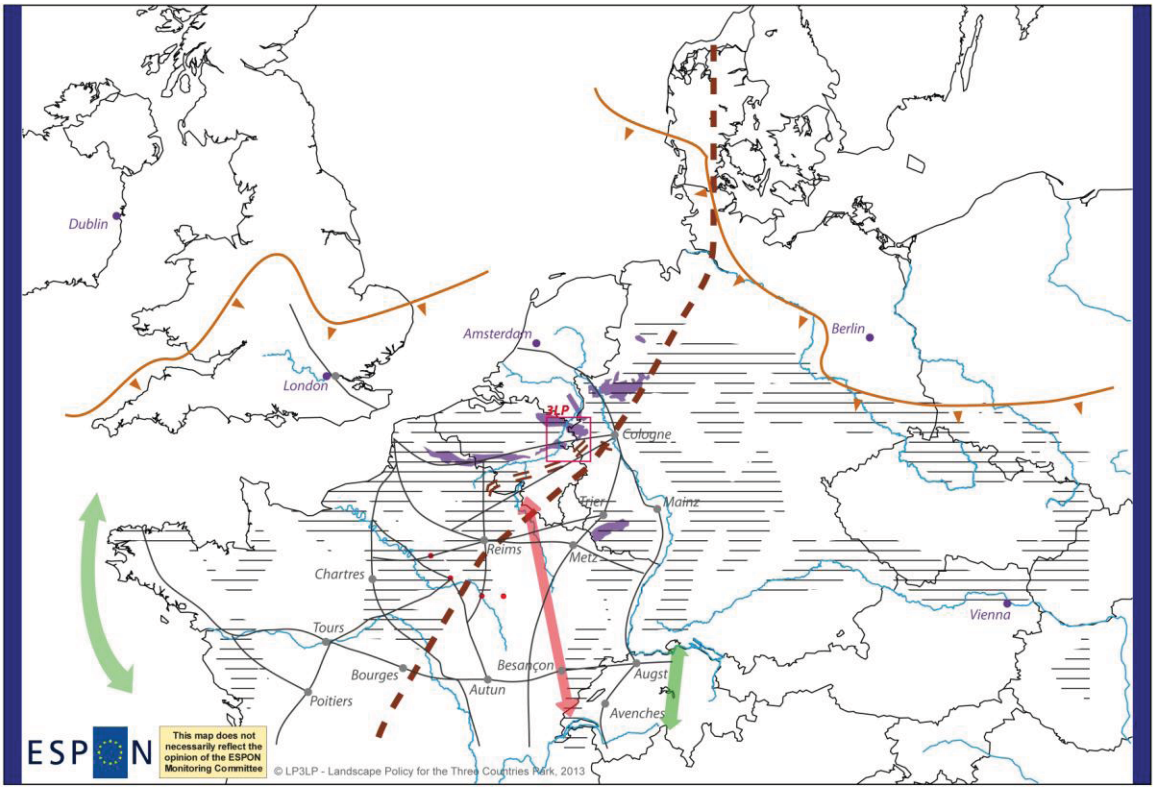
In 1796 Belgium and the Rheinland were merged into one area as part of the French Republic, ending the situation of a dynamic political patchwork in the 3LP region. The treaties of Vienna (1815) and London (1839) divided the 3LP region over three nation states, Germany, the Netherlands and Belgium, also introducing further development of the area within the perspective as hinterlands of these three nation states (Leersen, Jansen et al. 1994).

The French period ended feudal structures and made individual farmers independent of landlords. This created more freedom in the choice of crops and ways of framing. Agricultural production though, was still depending on available manure and animal power. Villages on the agricultural plateaus where therefore surrounded by a ring of grasslands and orchards, fenced with hedges, used for cattle grazing. A second big turn for agriculture came at the end of the 19th century with the introduction of artificial fertilizer, making crop production independent of the available manure and enabling an increase of productivity and a demographical growth. This constituted an important factor for the coming industrial revolution. Another invention at that time was barbed wire. This invention diminished the need for hedges and wooded banks to keep the livestock in. Hedges thus lost their functionality (Dirkmaat and te Plate 2005) and the bocage landscape began to erode.

During the 19th century, the industrial revolution reinforced the urban grid throughout Europe, and displaced the center of gravity from Venice to London. Big manufactures were localized in cities and heavy industries in mining regions. Around Liège and in the Northern part of the 3LP landscape, in the zone from Hasselt/Genk to Maasmechelen, Sittard/Geleen, Heerlen, Kerkrade, Herzogenrath, Aachen, (coal) mining developed. Mining gave an enormous impulse to the urban development in the region, it also left some significant artificial mounts in the landscape. Industrial development impulsed urban development in the 3 LP region further (Leersen, Jansen et al. 1994). Both developments resulted in a polycentric urban structure in the region (Bosma 1993).

This period also induced a rural exodus and the end of rural craft and, as a consequence, a more mono functional profile for rural areas. During the 20th century agriculture production further specialized and increased due to further mechanisation and technical development (Ubachs 2000), also introducing large-scale plots – especially noticeable in the Haspengouw and Jülicher Börde.

The rest of the 20th century is mostly marked by the dynamics occurring after WWII, like the growth of wealth, increased individual mobility and the rise of the information age. The dichotomy between rural and urban areas is disappearing, both in terms of morphology of space and life styles. Suburbanization, which is also occurring throughout the 3LP region, is the symbol of that phenomenon (see below Map 1 for this Chapter).



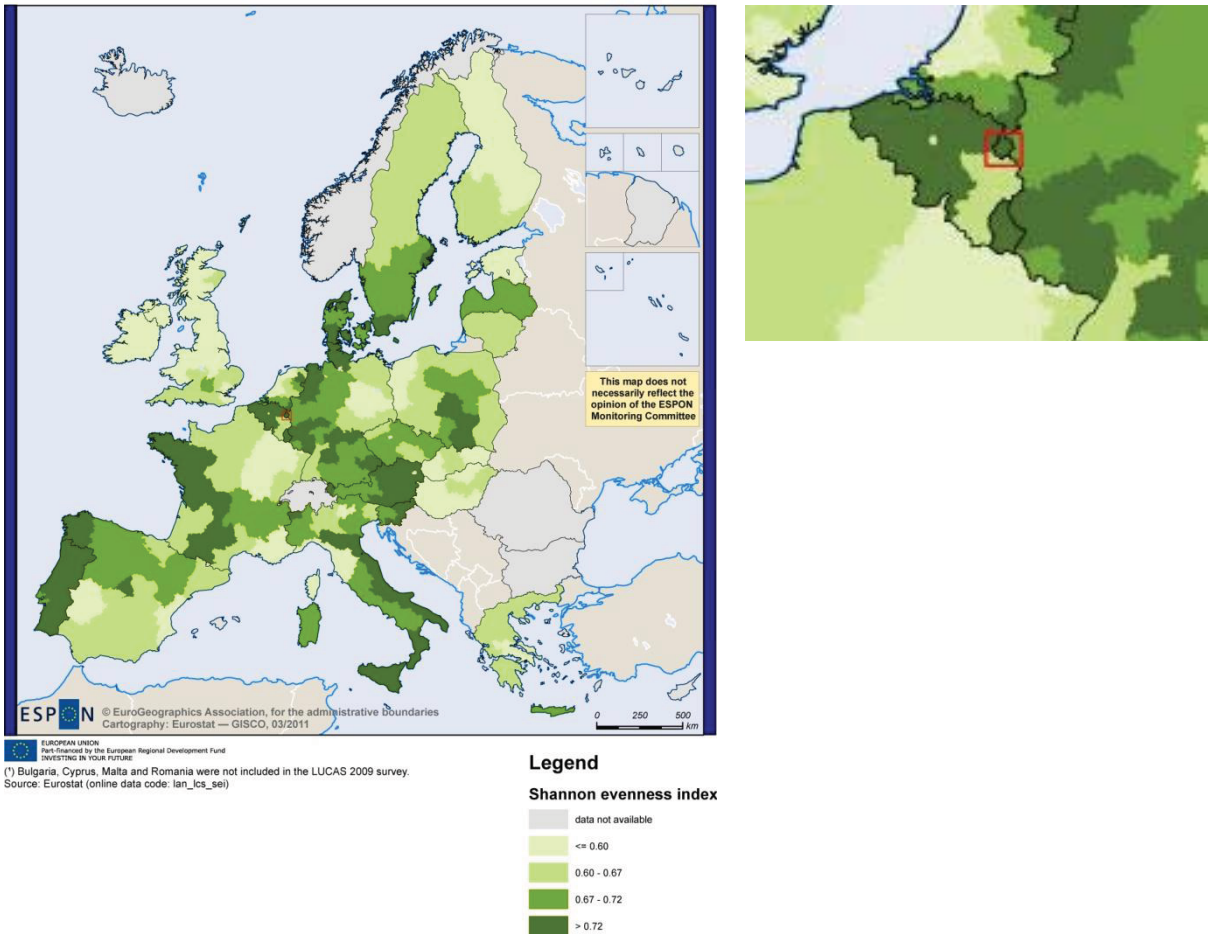

***Map 1*** ***Showing the historical/geopolitical context of the 3LP*** *(Source: own elaboration)*

### II.3.3. Landscape structure index (LUCAS)

There are few landscape surveys on an European scale. Even though the results of the following study have not been used in the framework of the present LP3LP project, it is nevertheless useful to point out the Landscape structure index

Since 2006, the “Land Use/Cover Area frame statistical Survey" (LUCAS) aims at characterizing changes in management and coverage of the territory through a standard survey methodology harmonized at European level. Two phases (photo interpretation followed by a field survey on a reduced sample) have led to a unique in-situ land cover and land use collection based on statistical calculations. The surveys happened in 2006, 2009 and 2012, which will give the possibility to statistically monitor the evolution of the land use/cover.

Likewise, a study started in 2006 that allowed a better exploitation of LUCAS data, especially the 850.000 landscape photos taken during the surveys. The landscape structure, i.e. spatial organization or arrangement of the landscape elements, was characterized through the following elements: landscape diversity, importance of linear features and landscape degree of fragmentation. In the 2009 survey, very detailed sets of data were collected for each of the 234.000 points observed along a straight line of 250m eastward, called “transect”. The study has produced a index, the Shannon evenness index, measuring landscape diversity by giving information on the relative abundance of a type of land cover (does the same type of land cover recur in a transect). It varies from 0 (no diversity, i.e. a single land cover type) to 1 (maximum observed diversity). EU average of that Shannon evenness index is 0.64. The 3LP area is characterized by a Shannon evenness index higher than the European average value (ranging from an index higher than 0.72 to 0.60-0.67), meaning that the area has a very heterogeneous land cover compared to other parts of Europe like Scandinavia, Ireland, UK, etc.




***Map 2 Showing Landscape Structure Index (LUCAS)***

### II.3.4. European landscape classification: a brief overview

Information about European landscapes is diverse and has been more taken into account in the last years, notably because of an increasing significance of landscape as a policy issue at EU level. First attempts are nevertheless ancient and the large number of works dealing with identification and classification of European landscapes reflects that there is no scientific consensus.

Qualitative approaches are a first gateway. Even if they don't always constitute an exhaustive inventory of landscapes or suffer from a lack of spatial accuracy, they form a basis for discussion of landscapes developments. R. Lebeau's (1969) work is one of the major attempts of classification by focusing on agricultural landscapes and leading to 8 categories. According to the author, 3LP is in the category "enclosed landscape and dispersed habitat with predominance of pastures". Meeus (1995) presents similar results by identifying 30 landscapes on the continental scale. It distinguishes six criteria, highlighting diversity of landscapes: landform, economic potential of land use, ecologically sound processes and sustainable use of resources, agri and silvicultural landscapes, specific settlement patterns (as inherited) and scenic quality and visual characteristics. According to that classification, 3LP is comprised in "Kampen" category: enclosed, diversified with a patchwork of woods, heath, swamps and stream valleys cutting poor sandy soils. Vandermotten et al (2010) followed a similar approach by combining physical conditions and cultural histories and identified 18 landscapes within 3 main categories (mediteranean and balkanique Europe, Occidental and medium Europe, Central-oriental, oriental and northern Europe). According to the authors, 3LP is comprised in type "Bocage or semi bocage and animal breeding. Hamlet and dispersed habitat" category.

If the main qualitative approaches agree to consider 3LP as part of a great bocage structure, they also point the proximity, just south, of the wide belt of openfields landscapes, characterized by fertile soils, undulating plains and nucleus villages.

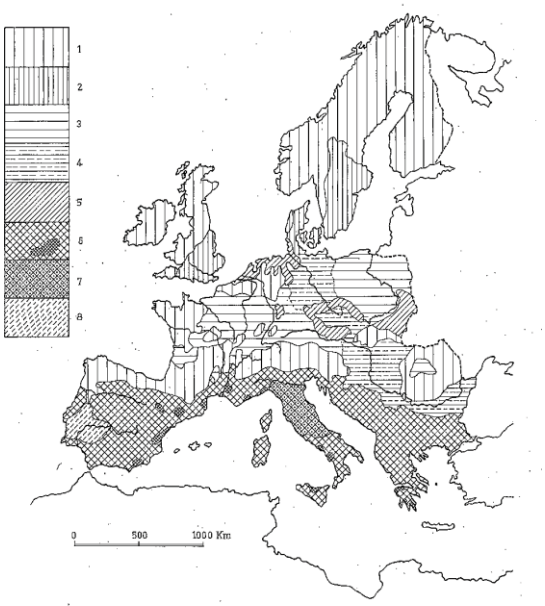



FIG. 14. — *Les paysages ruraux de l'Europe (Russie exceptée).*

1. Paysages d'enclos et d'habitat dispersé, avec prédominance des herbages.
2. Anciens openfields avec habitat groupé ayant évolué vers la dispersion avec remembrement obligatoire et clôture.
3. Paysage d'openfield et d'habitat groupé, avec labours importants.
4. Openfields partiellement ou totalement transformés de certains Etats socialistes.
5. Villages linéaires à grandes lanières, de forêt ou de polder (Wald et Marschufendorf).
6. Champs ouverts céréaliers méditerranéens, avec parfois zones d'arboriculture, habitat groupé et dispersion intercalaire. Taches quadrillées fin : Huertas.
7. Régions de « coltura promiscua ».
8. Grandes propriétés du type « Montado » (blé et jachère dans une forêt claire).

(Principalement d'après DERRUAU et BIROT.)

***Figure 4 R. Lebeau (1969) European rural landscapes***

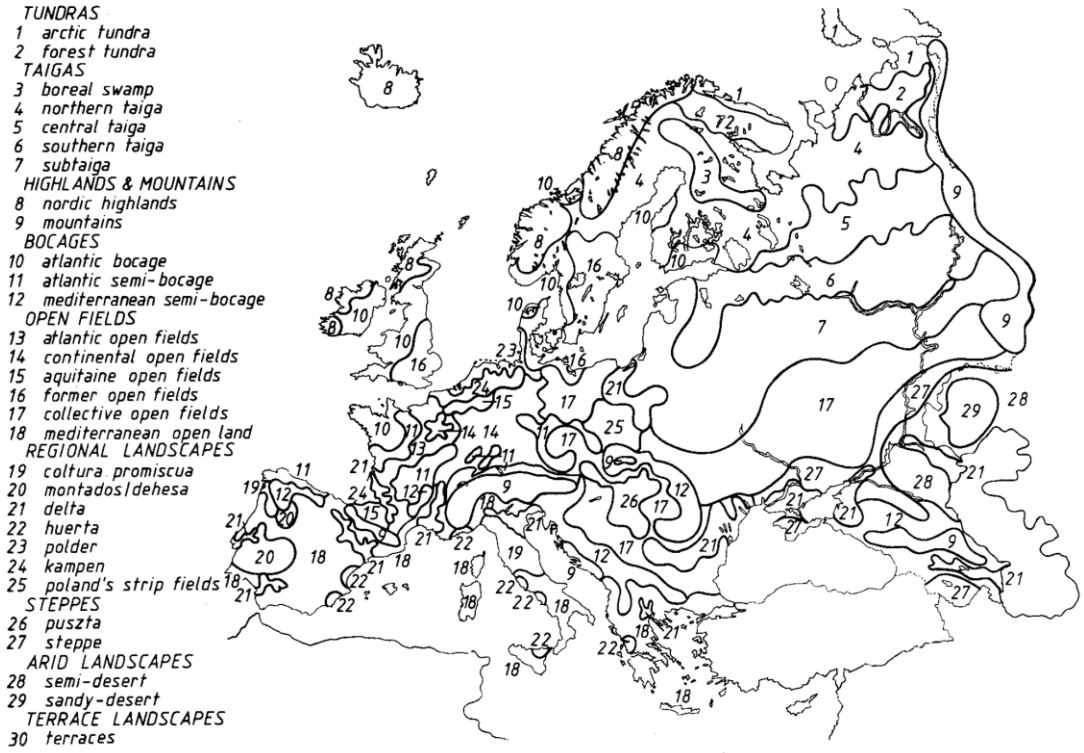



***Figure 5 J.H.A Meeus (1995) Pan European landscape types***

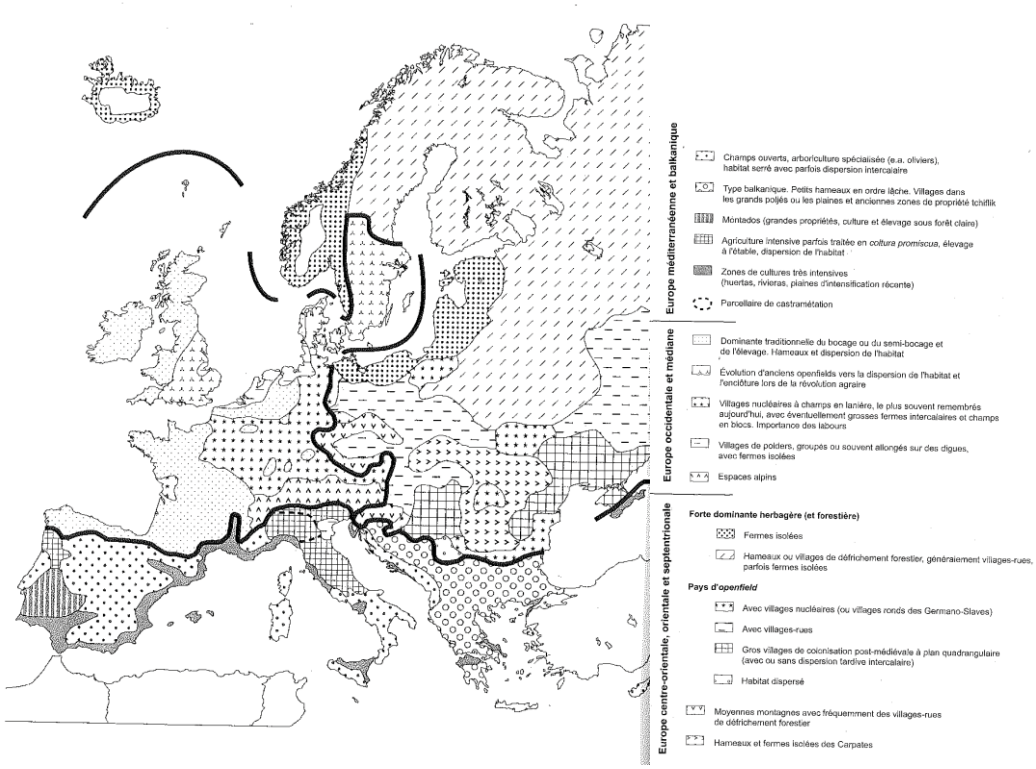



***Figure 6 Vandermotten et al (2010) Main European rural landscape types***

Development of remote sensing and computer processing in the last decades bring new insight, such as CORINE land cover as a primary source of information. Mücher et al. (2010) propose interesting classification through the ELCAI project (European Landscape Character Assessment Initiative) and the Hierarchical European landscape classification (LANMAP). The approach is quantitative and based on segmentation and classification techniques on high-resolution data sets. The classification leads to four levels (climate, altitude, parent material, land cover) and 34 landscapes types in 9 categories (arctic, boreal, atlantic, alpine, Mediterranean, continental, anatolian, steppic, masks). Landscape is considered as resulting from long-term interactions of natural abiotic, biotic and anthropogenic processes (even if the purpose is not to focus on cultural-historical factors). According to the authors, 3LP is part of the Atlantic lowlands.

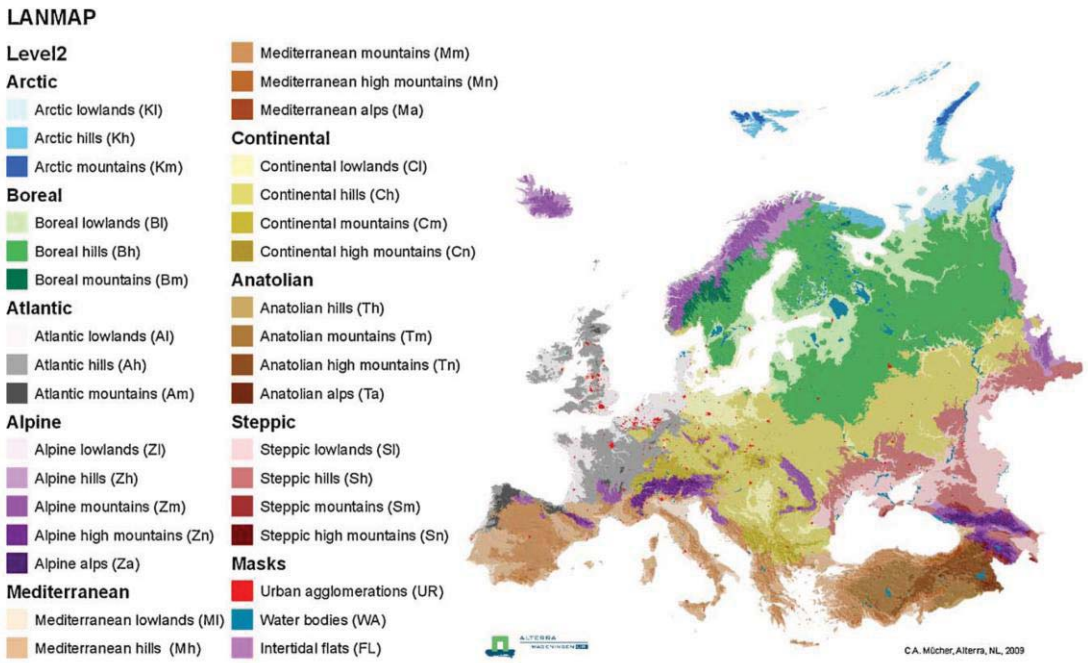



***Figure 7 Mücher et al (2009) LANMAP European landscape classification***

LUCAS project is also to be mentioned (Land Use and Cover Area frame statistical survey - European Commission 2009). Even though that survey does not propose any classification, it informs decision makers and general public about changes in management and coverage of the European territory. The approach gathers land use and land cover data with visual observation of a sample of geo-referenced points by surveyors allowing to go beyond mapping such as CORINE as it provides quantitative statistical results with precision indicators attached to them (Martino and Fritz 2008).

### II.3.5. European landscape policies

Throughout Europe, two major conceptions of landscape emerge (Donadieu and Perigord 2007). The first is the Culturalist (or aesthetical) conception which belongs to human sciences. In that conception, the territory is seen as the result of interaction between men and nature and emphasize is made on evolution of how landscapes are perceived, leading to the identification of historical, aesthetic and symbolic values of a landscape. The second is the Naturalist (or functionalist) conception and is more related to natural sciences (including geographical, environmental and eco-biological sciences). The focus is made on functioning of ecosystems. At the end of 19th century, Culturalist approach is dominant whereas in the second half of 19th we observe a rising of ecological sensitivity, mainly in central and northern Europe leading to policies based on natural, environmental and ecological sciences (Donadieu and Perigord 2007). In the southern part of Europe, architectural and historical heritage are privileged. Culturalist and naturalist approaches tend to merge during second part of 20th century showing different conception of landscape over time (Conan 1994).

In the field of landscape research, first half of 20th century sees a shift from regional monographic studies by geographers and historians toward transdisciplinary applied research that is mainly problem and planning oriented (Antrop 2004b, Donadieu and Perigord 2007). Landscape is increasingly put on the agenda and scientific information is needed to support concrete actions and political decisions (even though practical application and implementation of research findings differ from one country to another) calling for an effective communication and cooperation between academics, practitioners and policy makers.

The above entails a new distinction between countries in terms of conception and management, which is nowadays more to be addressed through “top down-bottom up” rather than “naturalist-culturalist” (Donadieu and Perigord 2007, Pedroli 2009). The top down approach analyzes the objectives of policies related to landscape such as heritage policy, natural and cultural policies. Major results lead to the definition of specific and unique places to be preserved, often using classical tools: state instruments, centralized instruments, legislative instruments. In the bottom up approach, landscape is seen as a factor for improving quality of life, where the whole territory is to be managed, leading to innovative tools: close to citizen, decentralized, incentive, oriented toward every day landscapes. This trend is based on the OECD’s “New rural paradigm”. Some of these tools are associated with a shift from public services to the private or the voluntary sector in what has been termed the “Project State”: multi-level governance, partnership approaches and the use of fixed-term projects as a vehicle for implementation (ESPON EDORA 2011).

The will for integrated landscape management is to be found in the European landscape convention where Article 5 (General measures) stipulates that each member state *undertakes to integrate landscape into its regional and town planning policies and in its*

*cultural, environmental, agricultural, social and economic policies, as well as in any other policies with possible direct or indirect impact on landscape* (Council of Europe 2000). According to Stalder (2002), integrated sectoral policies for landscapes involve the horizontal aspect (landscape measure for each policy area), the vertical aspect (local and regional bodies to take initiative thanks to principle of subsidiarity) and the cross-sectional aspect (participatory approach). Example are to be found in Switzerland (see Stalder 2002) but also in Norway (Brende 2002) where there is an adoption at national level of principle that all sectors are responsible for their impact on the environment and for achieving the common targets of the environmental policy.

In parallel to that, it has to be said that countries are more and more influenced in two directions. On one hand, EU policies and regulations call for preservation of landscape of international significance and on the other hand, landscape policies and their implementation are increasingly delegated to lower levels of governments. As a consequence, Ministries are increasingly taking the position of facilitator (Kolbmüller 2009, Pedroli et al 2009). Government, as supervisor of new land use, is nevertheless still one of the most important driving force (Pedroli et al 2009).

The measures of national Governments involvements in landscape management allow to distinguish different groups. A first group is made of Germany, Netherland, Switzerland and northern countries where the notion of landscape has a long tradition and was early taken into account in planning practice. For instance, landscape research and management has a long tradition in Germany where the term “landscape” was introduced 200 years ago by Von Humbolt (*Totalcharakter von Erdgegenden*: total character of a region) and introduced in planning at federal level in 1976 (Potschin et al 2004). In Switzerland, narrative descriptions of landscape types appear in the 50’ and the recognized threats lead to an official inventory and long term monitoring studies in the 70’ and 80’. Sweden also showed early interest for landscape preservation in the 80’ by implementing inventorial and historical works. Those countries show also today good examples of integrated approach of landscape management. For example, the Norwegian planning act of 1985, recently revised, gives a key role to local municipalities, whereas at national level, a strategy has been implemented for the environmental policies to work with landscape (beside that, all sectors are responsible for their impact on the environment).

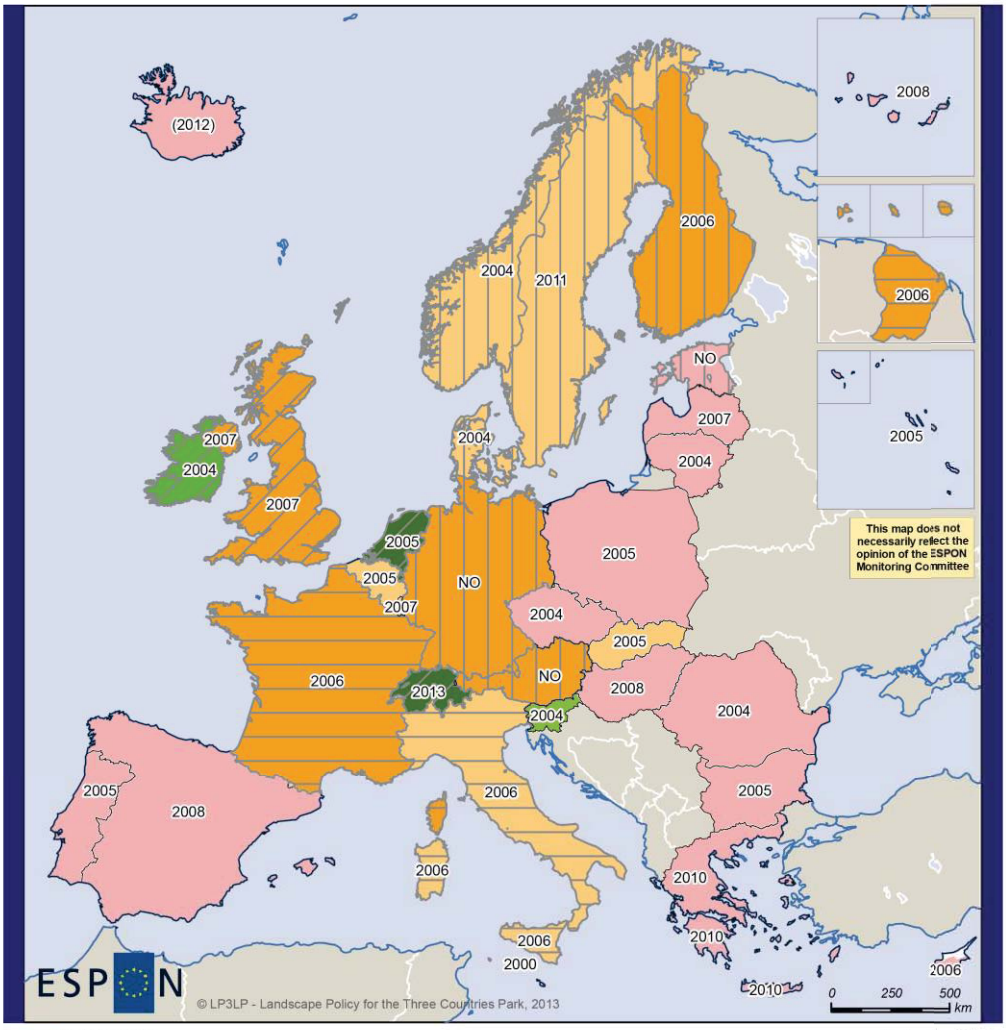
France and Italy are close to this group as they have long history of landscape consideration but are initially more culturalist oriented. In France, landscape as an object of research appears from the 50’ and in planning policies in 1945 (Ordonnance *Perspective et paysages*). In 1993, the law about protection and enhancement of landscape is to be considered as a shift that allows policy makers to better capture contemporary landscape issues and get closer to the ELC philosophy. Italy, which signed the Convention in 2000 like France, is to be distinguished by a lack of national coordination but many initiatives exist at local level.

A second group is made of Spain, Portugal and Greece where landscape appears late and is barely integrated in planning practices. Legislation in force regarding landscape

could follow further development. In Greece for instance, landscape protection was introduced in planning policies in the ’50 but the implementation was not effective. The situation improved in 1975 after the revision of the Constitution but it is only from the 1990 that landscape research and practice is gaining importance (Terkenli 2004, Gourgiotis et al. 2012). Recently, the country started a work of landscape character assessment in order to build strategic lines and priorities of action. The Iberian peninsula only recently implemented works of identification, as a growing number of decision makers are more and more interested in landscape (see Pinto-Correia et al 2004 for Portugal), conducting as well to a gain of knowledge at local level (Andalusia, Asturia, etc.) where typological studies have been carried out (Naranjo 2002).

Eastern countries can be considered as a third group. Consideration of landscape in planning practices is barely consistent until the end of the Soviet period and the politico-social context did not bring landscape as a major issue. Even though, application of landscape research in planning starts from the late 90’ and landscape has a history as subject of study in some countries such as Poland. In Estonia (Palang 2007), the word “landscape” is very young and appeared in the language only in 1906 and used by geographer in 1919. The understanding of the concept is influenced by the German school and therefore is natural science based, especially during the Soviet period. After the break the geographers are more open to cultural geography but the word still refers to nature and so it is concerning the landscape protection who are carried by the nature conservation authorities (especially in the ’60-’90). In the late 1990, the country started to delimit valuable landscape for establishing rules for further management.

# 3LP - EUROPEAN LANDSCAPE CONVENTION AND LANDSCAPE POLICIES




***Map 3*** ***Landscape policies in Europe*** *(source: own elaboration)*

### II.3.6. Polycentrism and City/Countryside relations in ESPON documents

Despite this interest of more than forty years as confirmed by the widely inherited urban reinforcement, there is no common acceptance of the polycentric concept. ESPON has during the Noughties served as a battleground between the "schools" of Delft and the IGEAT (Vandermotten et. al 2008), in attempts to discern what a polycentric structure could be expected to offer. The conclusions are far from unanimous. This chimes with the summary by Simin Davoudi (Davoudi S., 2003), who considers that the imprecision of the polycentric concept is its main quality, allowing it to be appropriated into any context that could be wished. In the regional development taxonomy, polycentrism would henceforth be comparable to the chameleon. It is however difficult to be satisfied with the maintained vagueness in order to try to grasp the functional, morphological and governance reality and that of the establishment of a common project by co-operation… at many levels.

Polycentrism is found at the heart of three European spatial structuring principles. The 1994 CEMAT Conference recommended *"supporting, at the international level, the creation and the development of complementary networks of cities and regional entities, particularly in the border areas"* as well as *"supporting at the national level (…) co-operation and competition between bordering cities and rural areas in such a way as to have harmonious and sustainable planning of the urban areas and their hinterlands"* (Déjeant-Pons M., ed., 2010). Other principles were set forth, all in a sustainable development perspective. They will serve as the basis for the ESDP's fundamental orientations (European Commission, 1999):

- Polycentric spatial development and that of new city/countryside relations,
- Equivalent access to the infrastructures and to the centers of learning,
- Prudent management of nature and the cultural heritage.
- Polycentrism as the founding principle of the European policy is thus directly associated with city/countryside relations and departs from the exclusive field of territorial competitiveness as recommended by the Treaty of Lisbon and subsequently repeated in all European documents.

Nevertheless, and in line with all of the reflections on polycentrism and in various disciplines, several aspects of it can be raised according to whether the analysis framework is the scale, the form, the functions, the interactions, the complementarities, the co-operation, the governance, or the redistribution of the functions. The definition suggested hereafter includes the various attributes that are to be found in polycentrism: *it is a grouping of separate centralities, with or without a hierarchical link, which have common functional challenges and morphological characteristics. They are interconnected by physical or virtual networks and share project governance that is devoid of any hierarchical basis. They surpass the stage of aesthetic polycentrism in order to be enshrined within a complementarity and a redistribution of means and*

*facilities in the form of a founding co-operation, i.e. one with consequences on the organization of the spaces and on the workings of the territories. The degree of the territories' polycentrality is not exclusively measurable in terms of economic, social, environmental or cultural performance, but is a correlation of all of those elements.* (Malherbe A., 2013).

It is therefore on this basis that the workings and the interactions between a polycentric system and some rural territories will be examined, through cross-border or national examples.

In order to continue to nurture the general understanding of the polycentric phenomenon, the results of the ESPON studies need to be referenced. The main conclusions are included hereafter, following a more profound look into the Metroborder, FOCI, Ulysses and EDORA research that are directly related to the problem.

Two contradictory conclusions resulting from the economic geography emerge from ESPON's first studies on polycentrism: for some, polycentrism has a positive effect on growth and enables the territory to be structured (ESPON 1.1.1, 2005): for others, there is nothing to show that polycentrism exists in Europe or that it affects the attractiveness or the development of the areas concerned (ESPON 1.4.3, 2007). The debate has continued thereafter without being adjourned (Burger M. & Meijers E., 2012).

**FOCI**

The **Future Orientations for Cities Study, FOCI**, (ESPON, 2010), offers interim conclusions with economic growth indeed greater in the polycentric areas, even if there are few elements that enable it to be shown. This growth is above all concentrated in the big cities. Critical mass is an important wealth creation lever and acts on the competiveness of its sphere of influence. It is noted that the borders remain an obstacle to the development of interurban relations in Europe. The relations between the city centers and their hinterlands are variable and complex, and depend on their national context. The FOCI study observes polycentrism on the basis of national territories similar to those studied in the Polynet research program (Hall P. & Pain K., 2006). It envisages the observation of polycentrism in this context alone, and not in the cross-border territories.

In the FOCI study, the co-operation typology distinguishes:

- Co-operation on basic infrastructures and services,
- Spatial planning,
- Governance, which is the most accomplished form of polycentric co-operation. It is often multilevel.

The brakes on the construction of a polycentric system include (Page 526 and following):

- Blurred areas of competence with inadequacies between the administrative borders and the financial resources,
- Competition between the partners and the mismatch between the politicians and their functional ties – the urban areas problem,
- Inconsistencies between the levels of power.

Two development scenarios have been imagined: Green Economy / improvement of the European potential - protectionism - with endogenous development in order to escape the worldwide crisis.

It is pointed out, according to the FOCI team, that polycentrism is efficient in a complementarity context. This assertion, which permeates all of the publications in the field of economic geography, where the main criterion is the presence of company-oriented services measuring the urban areas' positioning in the globalization hierarchy, can however be called into question. This acceptance is hardly sustained by an examination of an operation or of the cohesion between medium-sized cross-border cities such as the MAHHL Cities. The polycentrism that is encountered there corresponds more closely to the ESDP's principles of territorial balance and cohesion, while taking the heritage lever into account.

Another approach prefers examining the flows for determining polycentrism's potential. However, measurement of those flows is extremely complex in the cross-border field. Despite the opening of the borders, there is little objective data concerning the actual proportion of inter-city exchanges. So nothing to date proves the existence of any cross-border polycentrism, if the FOCI conclusions are accepted. This conclusion is however nuanced by the Metroborder research

The FOCI research furthermore returns to the question by taking the typology of the Functional Urban Areas (FUA) by examining their integration potentialities (Polycentric Integration Areas – PIA). On the basis of those elements, the FOCI researchers have distinguished three types of polycentrality:

- High level - economic cooperation with a high level of infrastructures, creating a competitive network and a network of hubs and using a high level of service mechanism;
- Low level - daily commuters, low level of transport and other infrastructures and services, allowing resource-sharing between a group of cities and potentially having a critical mass through the exploitation of their complementarities in economic competition;
- Service-oriented - Co-operation in services at a sufficient level to cover all of the population's needs on a sufficient scale for achieving efficiency. (ESPON FOCI, 2010: 533).

The application of the observation method by FOCI on the basis of the distances and the relations between the head offices of the world companies and their subsidiaries and the

population does not quantify the existing relations but identifies a potential already evoked in ESPON's Study 1.1.1 (ESPON, 2005). Moreover, this part of the study relates only to national cases as mentioned above (Greece, Bulgaria, and Romania).

With regard to the FOCI study's section on urban governance policy in relation to polycentrism, there too the results of Study 1.1.1 serve as a basis by including a cross-border urban co-operation grid showing its existence or its non-existence. The selected cases include: the Flemish diamond/Copenhagen - Malmö & Oresund/the Baltic/Vienna - Bratislava - Gyor/Saar - Lorraine - Luxemburg/Liege - Aachen - Maastricht/the Rhône-Alps network. Out of these seven cases, five are cross-border, including the MAHHL Grouping.

The analysis is based on the questioning of players who identify the strengths and the weaknesses as well as the concrete results that have been obtained. The brakes are above all institutional with a disparity of competences which are furthermore limited, which do not correspond to the administrative borders, and which have constraining financial resources. Other difficulties are identified, such as the competition between the partners, their divergent statuses, and the different links between the cities in relation to the workings of their companies. Technical obstacles such as infrastructure interruptions, language, uncoordinated data, unshared identities or varying levels of education are not propitious for the introduction of cross-border networks.

**METROBORDER**

**Metroborder** for its part is trying to identify the polycentric cross-border metropolises, by a crossing approach, by the intensity of the co-operation and by their degree of polycentrality (ESPON Metroborder, 2010). The researchers start from the fact that the potentialities of the cross-border regions are underestimated, which is already included in the founding principles of the Council of Europe of 05 May 1949 promoting cross-border co-operation, which was to be widely shared as from the Sixties (Council of Europe, 1968).

Metroborder has looked more deeply into two cases: the Greater Region and the Upper Rhine, which are rather instances of supra-regional co-operations and has addressed five other examples, three of which are also being investigated by FOCI (Vienna - Bratislava - Brno - Gyor/Helsinki - Tallin/Copenhagen – Lille Eurometropolis /Malmö - Kortrijk - Tournai/Maastricht - Aachen). It should be said that Metroborder is considering polycentrality from various morphological, metropolitan (agreement still has to be reached on what that covers), demographic and functional perspectives. Again, a lack of data precludes a complete understanding.

The definition suggested by the Cross-Border Polycentric Metropolitan Region (CBPMR) should be retained, namely *"political constructions founded on cross-border agreements, which consider the existence of national borders as resources for increasing interaction at the local level and for the positioning of the metropolitan center in world networks. Because the CBPMR are made up of several urban centers, located on both sides of the*

*borders, these political regional initiatives can mobilize various complementarities and assets, on various geographical scales, with a view in particular of reinforcing the potential of a morphological and functional polycentricity"* (ESPON Metroborder, 2010b: 26).

This definition is a mixture of expectation and characterization. It will be retained from it that, for Metroborder, polycentrality is limited to two aspects: morphological and functional, and that the concept of territorial competitiveness is always much present therein. In order to characterize the functional CBPMR, the ESPON 1.4.3 research indicators are used (ESPON 1.4.3, 2007) as well as the ORBIS, BVD and CORDIS data that was used for the FOCI Project for ranking the European cities on the basis of the 3,000 largest companies of the world and their level of establishment in the various countries that were being studied.

The MAHHL Grouping is recognized as an area of institutional cooperation, which benefits from a low flow of cross-border workers (17, 500 to be compared with the 127,000 counted in the metropolitan area of Luxemburg) and well balanced compared to the centripetal employment hubs such as Luxemburg or Basle, with somewhat inefficient cross-border public transport but with a great convergence of the GDP and of the proportion of population of foreign origin.

These two last conclusions would deserve to be discussed and specified because the wealth is unequally distributed in the MAHHL Grouping between the Dutch Limburg and the Aachen Region, which are more opulent, and the Flemish Limburg and particularly the Liege Region, which is still being rehabilitated reconversion. We will return to this point. With regard to the foreign population, its profile remains heterogeneous according to the immigration policies that have been applied at the national level (Italians in Belgium, Turks in Germany, for example).

Metroborder's most significant part is the DELPHI analysis carried out in relation to governance. The governance of the Meuse-Rhine Euregio, which encompasses the MAHHL Grouping, is regarded as being of average and asymmetrical strength. What this means in terms of the integration of urban dynamics will be seen further down in the chapter II.4.4. The MAHHL Grouping is also taken to be a local network of average strength. Recent dynamic cross-border trends have brought nuances to the classification that identifies the Lille Eurometropolis of as an example of institutionally weak symmetrical co-operation whereas it is now recognized as an EGCC with reinforced political leadership.

**ULYSSES**

The latest polycentrism study carried out in the context of the ESPON program is **ULYSSES** (ESPON, 2012), the principle of which is the use of the ESPON research results for measuring the cross-border spatial developments and their correlation with the Territorial Agenda's objectives (European Commission, 2007; European Commission, 2011), in which polycentrism always features well. The method that was used has not been applied to the Meuse-Rhine Euregio but it is nevertheless interesting to be able to examine the results and their possible transpositions.

The analysis includes four indicators: the convergence of the cross-border regions, an explanation of regional behaviors throughout the cross-border regions, the relevance of the regional scale for the analysis, and the reduction of cross-border flows in relation to the respective national flows. The borders are still found to be obstacles to the development of the hubs. Each of the cross-border regions has been mapped by identifying the development hubs (employment, training, logistical, demographic, economic) and the transport routes.

The ULYSSES study's conclusions point out that the border effect remains important in Europe, that the geographical frontier characteristics are still decisive and that the scale of application of the available data influences the result of the analyses. The disparities are still much in evidence in the border regions, but the diversities are assets. Structural funds remain fundamental in the co-operation dynamics.

For the ULYSSES researchers, there is no common spatial development basis between the border regions. For this to happen, knowledge of the territorial tendencies by all of the parties concerned is fundamental but the available data is not coherent and is to a large extent missing. Lastly, in the institutional field, political agendas are conditioning the planning of cross-border projects. Among the major elements of cross-border territorial cohesion, the ULYSSES study targets city/countryside relations. The characterization of the polycentrality of the MAHHL Cities will be judged in the light of these findings that highlight the difficulty, whatever the region, of making the border effects and the discontinuities less distinct.

**ESPON 1.1.2.**

One of the other founding principles of the ESDP relating to the Three Countries Park is to be found in city/countryside relations. Several ESPON studies have envisaged it. The first relevant study deals specifically with that theme (ESPON 1.1.2, 2007). One will retain from it a conceptual precision that maps out its contours, an analysis of the European and national policies that have consequences on city/countryside relations with corresponding initiatives, a typology, the noted interdependences between the two, the advantages of favoring city/countryside relations in regional planning in order to culminate in political recommendations. In the context of the polycentrism/rural-urban crossing, let's dwell in greater detail on the interdependences that have been raised.

It is admitted that the weight of the urban area peripheries impacts the countrysides through urban growth. The organization of the territory is a manifold construction - institutional, functional, morphological and historical - in order to result in its identity. The inherited urban reinforcement remains extremely formative, as is illustrated by the MAHHL Cities. It has furthermore been able to be developed over the centuries only because of its interrelationship with its rural context. In the case of the Euregio Meuse-Rhine (EMR), the countrysides have been regarded not only as a territory of resources for the cities but also, following the neutrality of the Principality of Liege, as an extremely permeable area, with the uncertainties of destruction and instability, for the troops that passed through them.

The study identifies three major sectors influencing urbanization: demographic change, developments of the economic structure and identity, and the behavior of the populations. At least two sectors are missing from this inventory: the development of mobility and the movements of the borders. Five factors are therefore to be studied in the context of the interactions between a polycentric system and its interstices. The result of the conjunction of these factors explains the movements between the two parts with a more important stability under the Ancien Regime, which more regularly suffered huge epidemics with demographic repercussions.

The study mobilizes the Christallerian theory of central places from an historical point of view in order to explain the establishment of the centralities in a territorial balance with their peripheries. The intermediate conclusion proposes that the interdependences be envisaged on various scales according to three variables: socio-economic diversification, territorial interdependence, and the benefits induced by regional planning. The conclusions of the confrontation of these variables to the case studies indicate that metropolization (increase in mobility, home/work in particular, economic transfers/dualization, urban sprawl/polarization, etc.) has a significant impact in the overall competitiveness of the territories as a result of the ensuing interconnections.

Lastly, these conclusions confirm the increase of the long-term interdependence that has been observed. The medium-sized towns have their cards to play in the globalization context by offering new employment opportunities within a good-quality and diversified living environment. Density is also a factor for the maintenance of small-town viability. The rural areas must diversify following the reduced share of agricultural activity. Tourism is often evoked for preserving the viability of those territories. This diversification is historical in the context of the Three Countries Park by the presence of joint activity (craft industry/agriculture) in the farms since at least the 18th century. Furthermore, the tourist sector is already largely established in the Gueule Valley and is tending to be developed over the plateaus as a whole.

It is again difficult to discern the city/countryside dynamics exactly. This is confirmed in the approach developed by the University of Delft and NordRegio in the context of the Interact research (OTB & Nordregio, 2006). This research provides a typological analysis grid in order to examine the effect of urban polarization on the rural areas, including: the home/work relations, the central places of connection and the relations (commercial,

leisure, infrastructures and resources). The rural territory is characterized by six types taken from the ESPON 1.1.2 research, with on the Y-axis the density (high or low) and on the X-axis the rurality index (built-up / cultivated / natural).

**EDORA**

The **EDORA** project looks more deeply into the question of city/countryside relations (ESPON EDORA, 2011). It observes that the city/countryside relations are differentiated between the regions of the various countries concerned with the Three Countries Park project. The diversified territorial policies have consequences on the urban growths and their typology. Dutch Limburg is regarded as a park of which the Parkstad Limburg is the reinforcement. The application of the principle of ABC localization then of decentralized concentration has enabled the urban growth to be limited and the open landscapes to be safeguarded.

Agriculture plays a major in the economy of the Netherlands by being the third-largest exporting country in the world. Farming area preservation is a priority issue there. It should be said that the Dutch government's latest political decisions have authorized a relaxation of the concentration rationale with the objective of using the territory as a reconversion lever by favoring a return to growth, with a risk of urbanizing the agricultural areas.

Conversely, Belgium has not, according to EDORA, developed any particular policy with regard to the city/countryside relationship. It is recognized as being the laboratory of the non-localised city with disparate land occupancy. This generalized urban sprawl has consequences on the rural areas, which are more fragmented.

It should be noted that the Herve Country, the Walloon part of the Three Countries Park, illustrates the resonance of the heritage marked by a loose establishment of farms as of the 18th century (Dumont, 1994) and of the public transport policies applied as of the second third of the 19th century (Fairon, 1912). Indeed, mobility in Belgium has been focused on the person rather than on the financing of the infrastructures via corporate taxation, as has been the case in France. The labor subscription has allowed to the worker to remain in his village. The Flemish Limburg also corresponds to this description. Urban sprawl began there with industrialization. Mining has caused an urban sprawl in the entire coal corridor between Hasselt and Heerlen.

Germany's profile is predominantly urban, following the example of Belgium and Holland. The whole country is benefiting from demographic growth, with a reduction of the population in the rural areas. Urban polarizations traditionally concentrate the employment. The Rhineland-of-North-Westphalia has an unemployment rate within the German national average, with a proportion of less than 8.8% for the Aachen Region. The main economic activities in the rural part are in the food-processing sector.

The founding principle of the German territorial development policy is the large-scale common responsibility between the cities, the metropolitan areas and the rural areas. Seven model projects have been selected in order to test this policy. It is a pity that the

Aachen Region is not a part of it. Lastly, there is a considerable difference between the two former parts of Germany (FRG/GDR) with a family farming structure in the West and a more industrial structure in the East. Within the German agricultural dynamics, the large-farm sector is decreasing in the Land of Rhineland-of-North-Westphalia, which is particularly vulnerable to climate changes in the fields of water and health.

**Cross Synthesis**

It emerges from the various results of the ESPON polycentrism studies that it is difficult to pass from the stage of updating the potential to that of measuring the concretization and the quantification of the functional relationships in a polycentric system. The data is extremely incomplete and little coordinated, which contributes to recourse to little diversified measuring instruments. This contributes to a certain standardization of the results. The approach of creating a relatively exhaustive atlas of the whole of the cross-border region embarked upon in the Eurométropole (the Lille Metropolis Agency et al, 2012) and which has followed the work of the Conférence Permanente Intercommunale Transfrontalière (COPIT), should inspire the resumption of a cross-border observatory on the MRE.

It will also be retained from the aforementioned studies that the border break is still much in evidence, with territorial dynamics that are still largely national or regional. The volition of being able to bring institutionally and functionally closer together the hubs that are still suffering from this break and which are furthermore on the borders of national or regional territory has not been really concretized.

Lastly, with regard to the city/countryside relations in a polycentric system, it appears that demography remains the main issue with its related activities (economy, leisure, and schooling) as well as the mobility that is associated therewith. Population growth is consuming more territory in Belgium than in the two other countries of the Meuse-Rhine-Euregio. The elements identified by the polycentrism research can also be applied to the city / countryside relations problem. Particularly, the fact that there is no coordinated strategic development plans in existence at that level.

### II.3.7. Four territorial dynamics identified in ESPON documents

As asked in the specification, the following lines develop the territorial context of the 3LP based on the ESPON reports. Extracting the ESPON information in the framework of the 3LP project is a difficult task as it imposes an exercise of interpretation. ESPON results have indeed to be considered from the landscape perspective, meaning that only the territorial dynamics that have an impact over landscape must be analyzed. In parallel, specific attention is paid to particular dynamics that occur in the 3LP regions in order to allow comparison with other European regions. As ESPON information is diverse and complex, it was decided to define 4 categories that would summarize the main relevant dynamics. The four categories are the following (Figure 8, followed by explanations at greater detail):

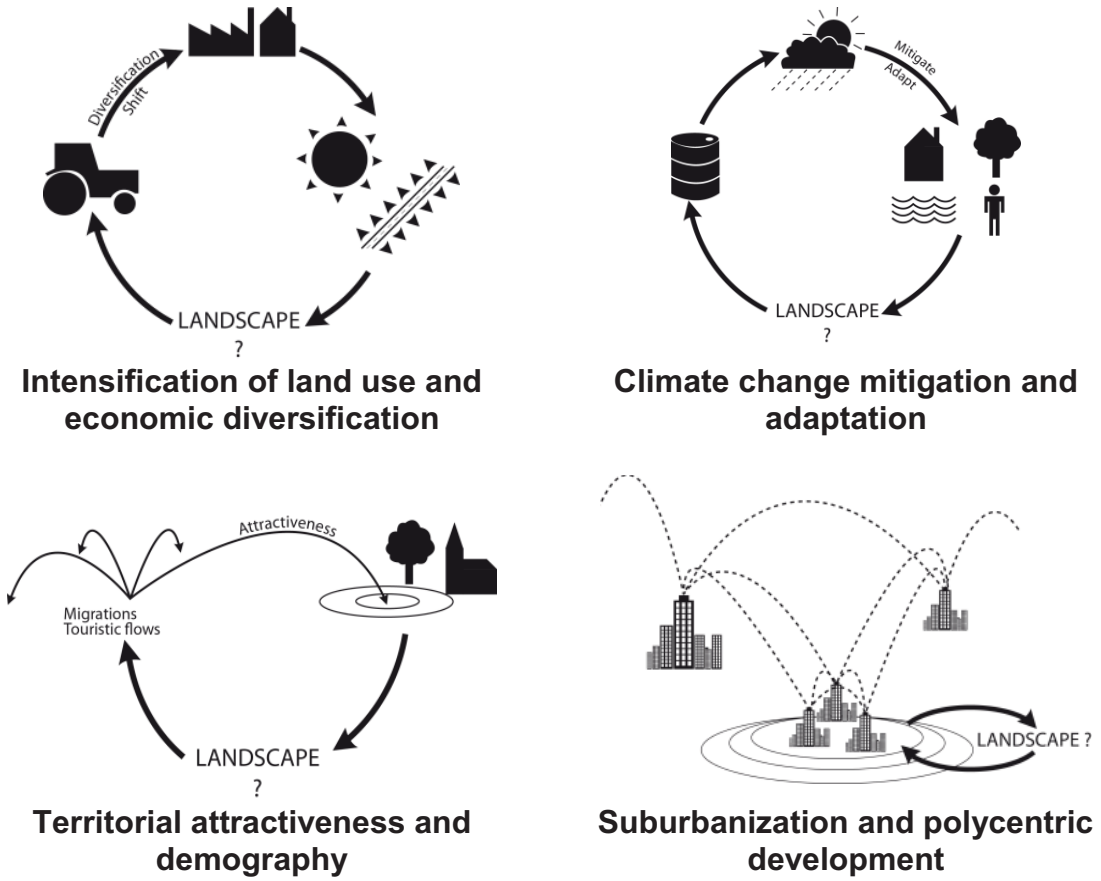



***Figure 8 Diagrams representing the four categories***

## Acting between intensification of land use and economic diversification [1]

The European landscape convention acknowledges the fact that the transformation of landscapes is accelerated by the main sectors of economy (agriculture, forestry, industrial, mineral production, tourism and recreation), by regional and town planning, transport, infrastructure and at a more general level, by changes in the world economy. Territorial Agenda 2020 is stressing the importance of the diversity of territories, the need for a place-based approach to policy making, the integrated functional area development in order to protect and develop cultural and natural landscapes. The "Roadmap to a Resource Efficient Europe", Flagship initiative under the Europe 2020 Strategy, aims at reducing land take for housing, industry, roads or recreational purposes to zero at the horizon of 2050.

In that respect, the landscape issues are related to the dynamic relationship between economic activities and land use, i.e. land cover and intensity of land use. The latter represents the most acute change in land use in Europe. Between 1990 and 2006, the share of artificial surfaces has increased by 8.8% to reach 4.4% of the EU territory. The territorial dynamics contributing to the land artificialization are the residential development in extension of existing urban areas or in relation with communication infrastructures, the development of new infrastructures (transport, industries, agriculture and leisure). These dynamics lead to increased territory fragmentation that alters the efficiency of the green and blue networks, to a standardization of the townscape (town entrance, commercial centres, residential areas, motorway junction) leading to a loss of identity.

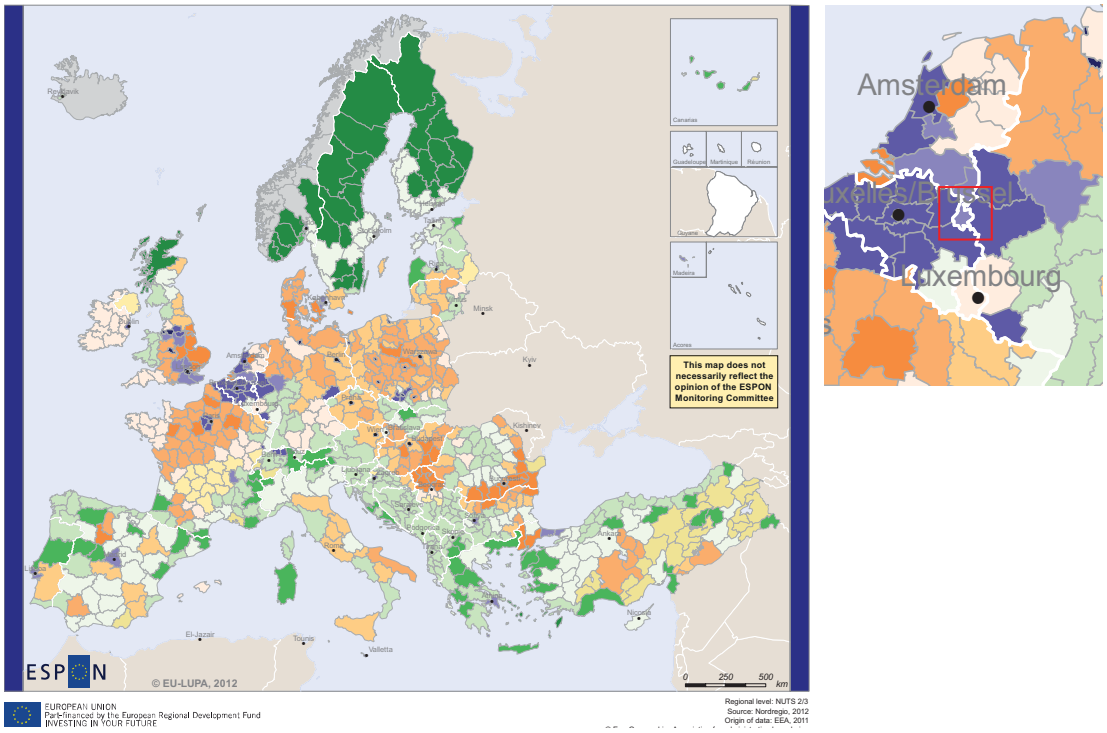
In the non-urban areas, even though the overseas competition for food and fibre has been resisting thanks to agricultural price support policies, the shift in balance away from primary activities towards secondary and tertiary activities is at work for many decades in most European regions. Less competitive farms are further compensating their incomes through product differentiation, niche marketing, commodification of public goods and also the provision of rural leisure and tourism services. Land, landscapes, natural environment but also wider culture and heritage assets become important factors of local diversification. In some regions, this "countryside consumption" may play a major role in the local economy and goes beyond farming pluriactivity. Trends like the standardization associated with globalization, the modernization of agriculture and of local industries along with counter urbanization endanger the supply of authentic experience of natural and cultural assets. This issue is particularly crucial in regions experiencing a high pressure of urban sprawl.

Based on the CORINE Land Cover classification (CLC) as well as the Land cover Flows (LCF), the EU-LUPA typology maps several land-use related characteristics such as the prevailing land use type and exploring the land use changes in terms of their amplitude,

[1] Based on EU-LUPA, EDORA

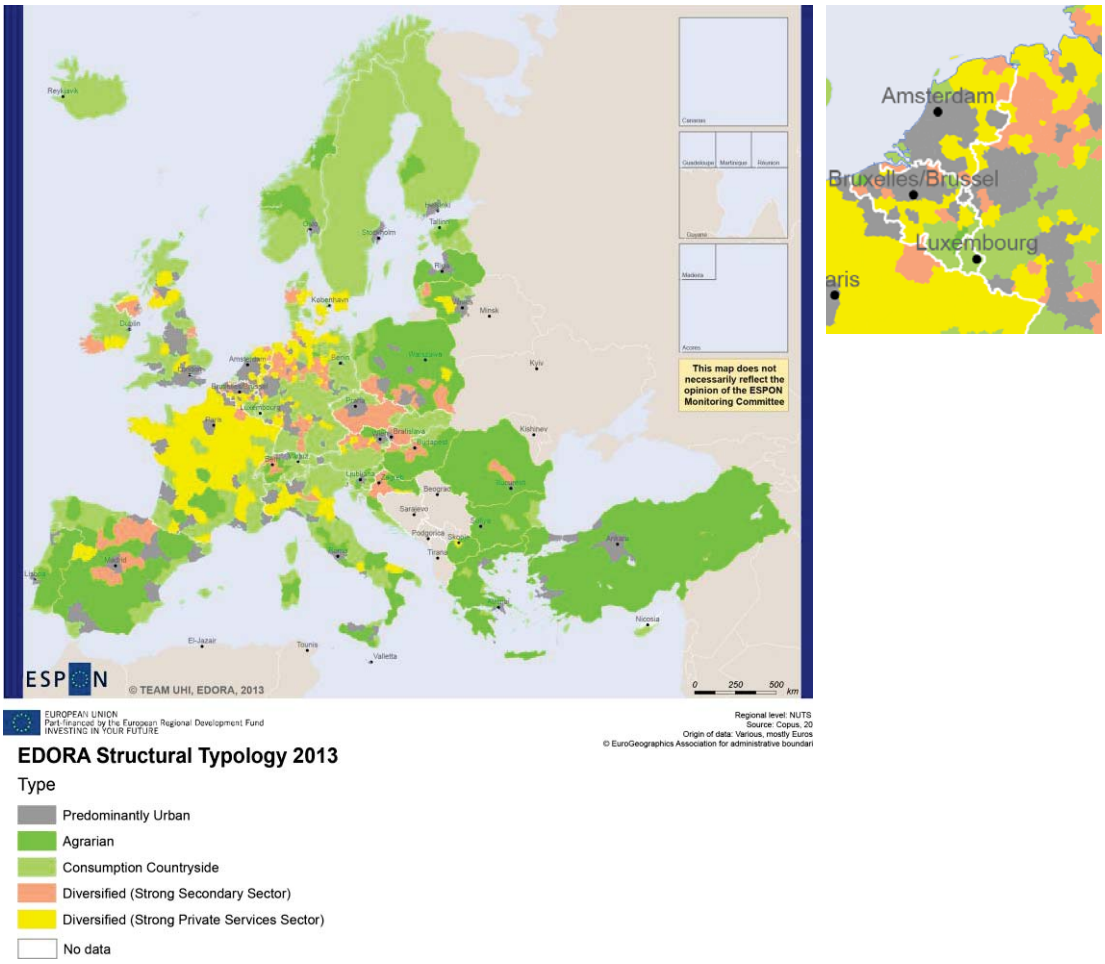
the types of change and if they are leading to an intensification or an extensification of land use.

Several conclusions arise from these results: the 3LP is located in the very few European NUTS 3 regions characterized by a high urban and infrastructural related land. All NUTS3 regions of the 3LP are part of the “suburban areas” category except Zuid Limburg (NL) which is part of the “suburban and periurban areas” category. The “suburban areas” category is characterized by 20.8% of artificial surfaces (16.6 % for the “suburban and periurban areas” category) and a predominance of agricultural land (around 55% of the land) and forests and semi-natural areas (from 19% for the suburban category to 25% of the land for the suburban/periurban category).




***Map 4 Prevailing characteristics of land use in Europe (1990-2006), EU-LUPA, final draft report p29***

Regional ESPON typologies as well as EDORA typology consider the 3LP territory as a predominantly urban region. It is however located at the direct boundary with less urbanized areas to the south: a first crown of intermediate urban-rural areas characterized by a diversified economic activity: most the products and services are issued from the secondary sector and private service sector. A second crown, more rural but still related to the polycentric pattern of cities, is located further south and its main economic orientation is countryside consumption, i.e. tourism activity, access to natural areas and a high share of pluriactive, diversified and multifunctional small scale farming.

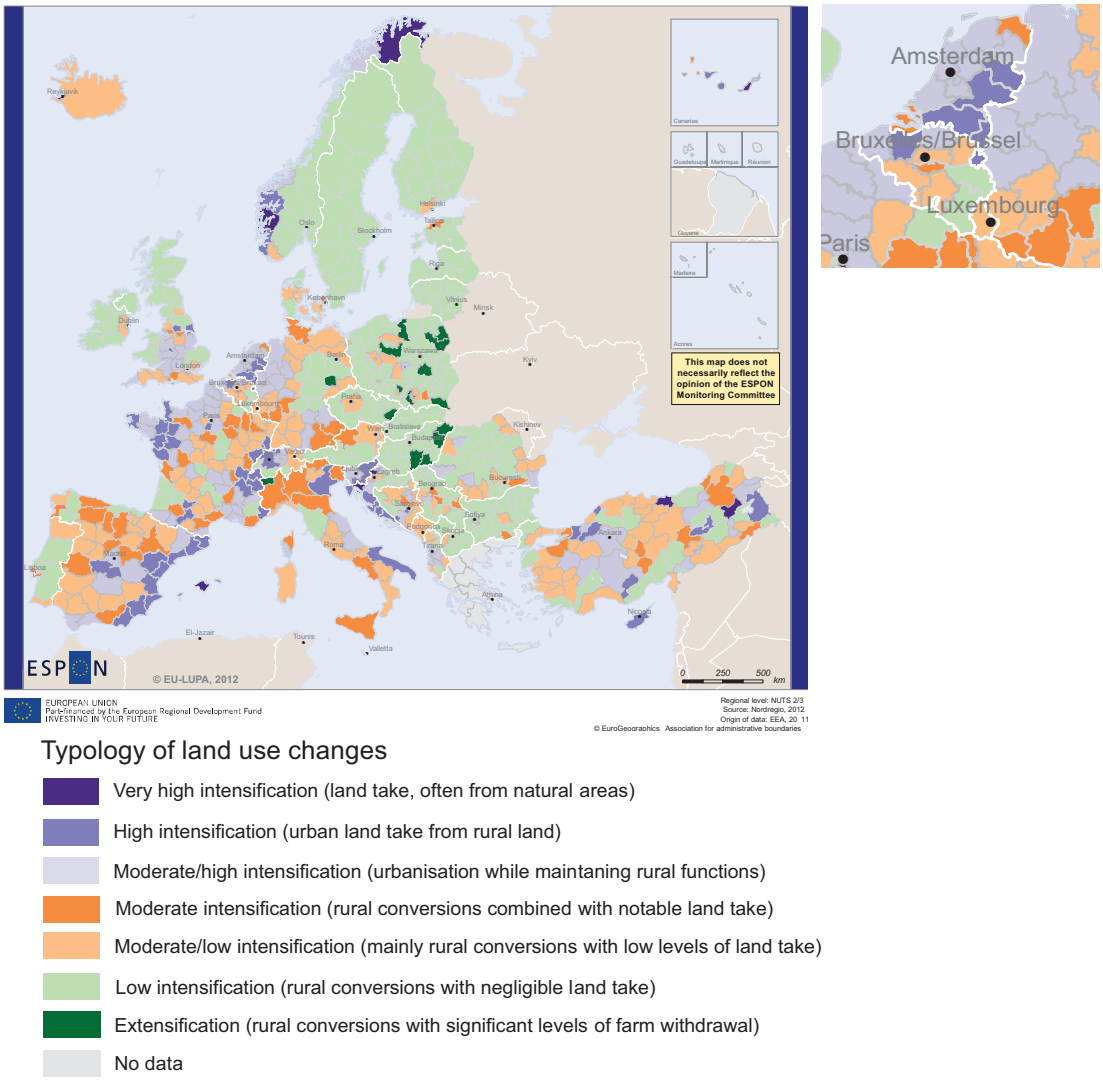



***Map 5 Structural types of the Intermediate and predominantly rural NUTS 3 regions, EDORA, final report p19***

Based on the Corine Land Cover, EU-LUPA defines an intensity index. It starts from the assumption that the ordering of the CLC is representative of land use intensity[2]. It is thus possible to characterize the level of land use intensity and its evolution across time (land

[2] To illustrate that concept, CLC 111 (continuous urban fabric) is classified as the most intensive land use and CLC 34 (glacier and perpetual snow) is classified as the most extensive land use.

use “intensification”). The scale of land use intensity goes from “minus 0.35” (High extensification due to forest and agricultural changes but specifically the withdrawal of farming) to 4.69 (Very high intensification with artificial surfaces mainly replacing natural areas). The processes at hand in the 4 NUTS 3 regions of the 3LP are of different nature and intensity.




***Map 6 Land use change typologies (2000-2006), EU-LUPA, scientific draft report p84***

Four NUTS3 region straddle the 3LP area : Zuid-Limburg (NL), Limburg (BE), Nordrhein-Westfalen (DE) and Liège (BE). The land use characteristics of the regions are given hereunder :

Considering the 1990-2006 period, Zuid-Limburg (NL) is part of the Land use change type “Very high intensification due to specific areas of residential and economic sprawl” – Cluster 9. Only 9 out of the 561 NUTS 3 regions are part of that type and their land use changes are dominated by urbanization process accounting though for a low average amount of land change, only 1.1 % of the region. The average intensification of land use is high (2.45) and the dominant land cover flows are:

- Lcf3 sprawl of economic sites and infrastructures (0.44% of the region)
- Lcf2 urban residential sprawl (0.26% of the region)
- Lcf5 conversion from forested & natural land to agriculture (0.15% of the region)
- Lcf4 agricultural internal conversions (0.13% of the region)

Limburg (BE) and Nordrhein-Westfalen (DE) are part of the “Medium high intensification due to diverse urban processes” – clusters 1 and 4. Some 107 out of the 561 NUTS 3 regions are part of that type and their land use changes are dominated by 4 equal land use changes totalizing a share of land change of 2.5% of the region. The average intensification of land use is medium (1.09 to 1.4) and the dominant land cover flows are

- Lcf2 urban residential sprawl (0.36% to 0.52% of the region)
- Lcf3 sprawl of economic sites and infrastructures (0.53% to 0.58% of the region)
- Lcf4 agricultural internal conversions (0.26% to 0.50% of the region)
- Lcf7 forests creation and management (0.56% of the region)

Liège (BE) is part of the “Medium intensification dynamic mix between agricultural and forest changes with urban sprawl” – cluster 7. Some 87 out of the 561 NUTS 3 regions are part of that type and their land use changes are dominated by 2 land use changes: agricultural internal conversions (lcf4 - 0.8% of the region) and forest creation and management (lcf7 – 1.5% of the region). The total percentage of land change is important (3.6%) but the intensification is low (0.6). The other important land cover flows are

- Lcf2 urban residential sprawl (0.17% of the region)
- Lcf3 sprawl of economic sites and infrastructures (0.37% of the region)
- Lcf5 conversion from forested & natural land to agriculture (0.25% of the region)
- Lcf6 withdraw of farming (0.2% of the region)

In conclusion, the evolution of land use of the 4 NUTS 3 regions the 3LP is part of is characterized by an important artificialization of the land (land uptake from non-urban land by residential buildings (lcf2) or by economic sites and infrastructures (lcf3)). The values of average land change during the 1990-2006 period vary from 1.1% in the clusters corresponding to Limburg (BE) and to Nordrhein-Westfalen (DE) to 0.7% (Zuid Limburg) and 0.54% (Liège (BE)).

The changes concerning agricultural areas (agricultural internal conversions (lcf4) and conversion from forested & natural land to agriculture (lcf5)) are present in all 4 regions but vary in intensity, from very low in clusters corresponding to Zuid-Limburg, medium for Limburg and Nordrhein-Westfalen and important in Liège.

The changes concerning forests (forest creation and management (lcf7)) but also withdrawal of farming (lcf6) follow the same trend than the changes concerning agricultural areas.

The main impacts of land use intensification on the core qualities of the 3LP are numerous. In terms of relief, intensification of land use and especially the sprawl of economic sites and infrastructure, is putting a pressure on the fringes of urbanized areas and flat areas like valley floors or plateaux, close to main road networks. The 3LP is located in a predominantly urban area with a predominantly rural area with countryside consumption-oriented economy further south (with an urban-rural diversified economic activity area as a transition). Competing activities (intensive agriculture, housing development, infrastructures and commodification of public goods) need to find their balance within and between each of these areas. Urban development is usually occurring at the detriment of greenfield sites instead of reusing urban land[3]. This process, even though it accounts for a small share of the region, has a negative impact on the green character of the landscape and on water management hence reducing flood control.

## Climate change mitigation and adaptation[4]

The fossil fuel society we are living in is already responsible for many landscape changes (communication network, urban and industrial sprawl, intensification of agriculture, etc.) that are occurring at a significant rate. It has another less predictable impact on climate that will affect unevenly the whole EU territory.

The anthropogenic greenhouse gas emission contributes to global warming and climate change. This contribution along with natural climatic variation lead to changes in temperature, precipitation, wind humidity combined and also in the intensity and frequency of extreme events.

Climate change can only be prevented by cutting greenhouse gas emissions and thus entering in a global low-carbon economy. This strategy is called mitigation and is therefore the first imperative part of the challenge. But, as climate change is already happening, an unavoidable complements but in no way an alternative to mitigation measures is needed: adaptation actions. They are aiming to reduce risk, to increase coping capacity and to build adaptive capacity (infrastructures, technology, institutional capacity and efficiency, etc.).

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[3] this challenge has been pointed out in the Leipzig Charter on sustainable cities (2007)

[4] Based on ESPON Climate, RERISK

The White paper has adopted a phased approach with a first phase (2009-2012) focusing on developing the knowledge base on climate impact and vulnerability[5] and an integration of the adaptation into EU policies. The second phase is starting in 2013 and will define a comprehensive EU adaptation strategy. Even if most adaptation measures should be taken at national, regional or local level, coordinated EU action will be needed in certain already integrated sectors like agriculture, water, biodiversity, fisheries and energy or when the impacts transcend the boundaries of individual countries. The challenge of climate change has been widely publicized in the reports of the Intergovernmental Panel on Climate Change (IPCC), or the Stern Review and EU White Paper "Adapting to climate change: Towards a European framework for action". Climate change is also part of the 5 main targets of EU2020 – the 20-20-20 targets (GHG reduction, energy from renewables and increase in energy efficiency). At the international level, the EU is involved in the Durban Platform for Enhanced Action process, aiming at defining a global legal framework for climate action covering all countries. This new framework will be drawn up and adopted by 2015 and implemented from 2020.

Economic activities especially sensitive to climate change are agriculture and forestry because of significant changes in quality and availability of water resources and higher probability of extreme climatic events. The main concern for agriculture in southern Europe arises from water shortages which will lead to both high yield variability and shrinkage of the usable agricultural area. In comparison, Northern Europe agriculture will be less intensely affected but will nevertheless have to face higher risk of flooding, erosion, nutrient losses and depletion of soil organic matter, higher risk of pest and disease. Some positive effects may even be experienced like an expansion of appropriate areas for crop cultivation, higher crop production and opportunities to cultivate new crop and varieties. (ESPON EDORA, 2011).

Higher temperature combined with changes in the seasonal distribution of precipitation (decreasing rainfall in summer, increasing rainfall in winter), extreme climatic events like storms will strongly affect ecosystems: modification of the distribution of plants and animals, of the growth patterns (forests) causing a highest vulnerability to pests and wind damage, development of invasive alien species leading to new ecosystems, modification of the distribution of forest and wild fire risks, etc.

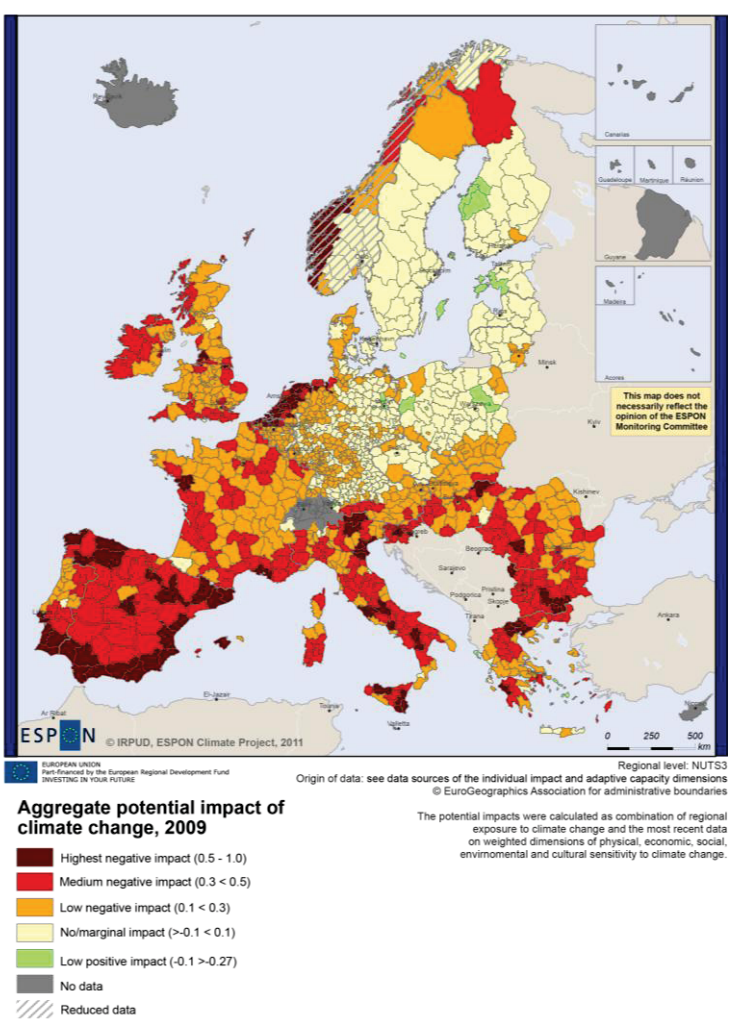
As stated in the ELC Meetings, tourism (summer and also winter tourism) being highly dependent on specific climatic conditions may also be affected negatively or positively according to the region. The energy sector will be highly affected in both demand (households and service sector heating and cooling) and supply (decreased precipitation and heat waves are also expected to influence negatively the cooling process of thermal power plant).

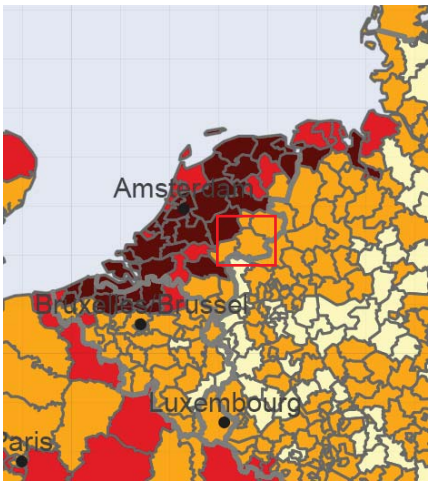
According to Ribeiro et al. (2009) two particular sectors stand out, namely health effects of climate change and landscape management in terms of flooding, sea level rise, soil

[5] The vulnerability of a region to climate change will be based on its exposure, on its sensitivity to climatic events and on its adaptive capacity.

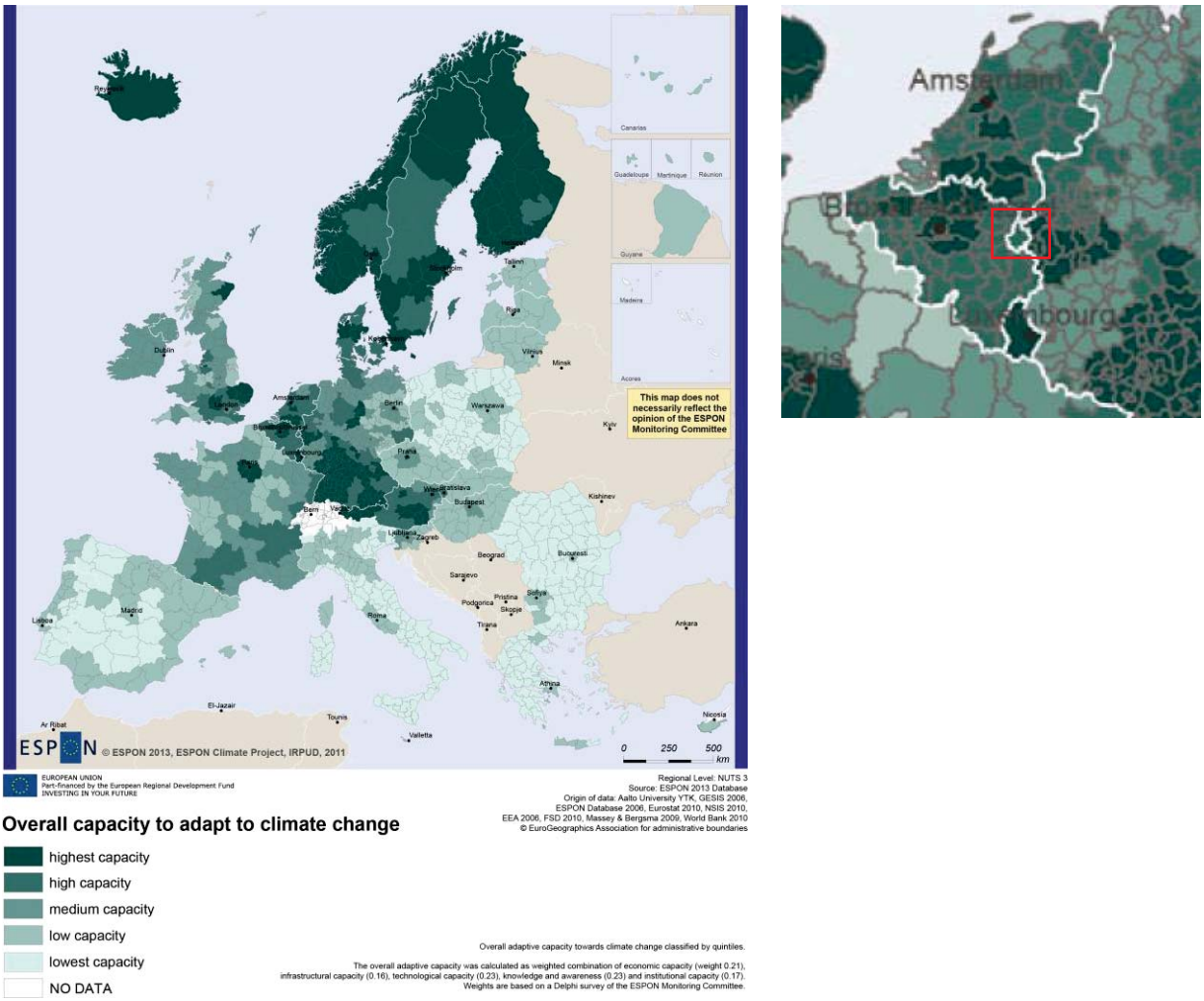
erosion, drought and fire hazard. The interactions between climate change and European landscapes and ecosystems are numerous and complex. Apart from direct impacts of climate change like coastal flooding, river flooding, retreat of glaciers, disruption of ecosystems, other types of interaction include the efforts to mitigate and to adapt to these changes by human action and also the interactions between these impacts with other effects of human land use (nature protection, urban sprawl, agricultural intensification).

In the recent years, some alarming climatic events have affected the 3LP : floods, drought, fire, presence of new alien species. According to ESPON Climate, there is a European North-South gradient in terms of climate change exposure, with the 3LP being moderately exposed to most of the climatic variables such as temperature, precipitation, evaporation, river inundation, coastal inundation. The aggregated potential negative impact for the 3LP is marginal to low. Combined with a high capacity to adapt to climate change, the 3LP is categorized in the regions having no or marginal vulnerability to climate change. The implementation of these adaptation and/or mitigation projects will affect regional landscape: renewable energy production affect landscape in an obvious way like windmills in Germany and Belgium, solar panels or in a more subtle way like biomass production (Energy Wood Eifel project). Some projects are focusing on the issues of water management by rewetting valley floors among other actions (Aquadra project).



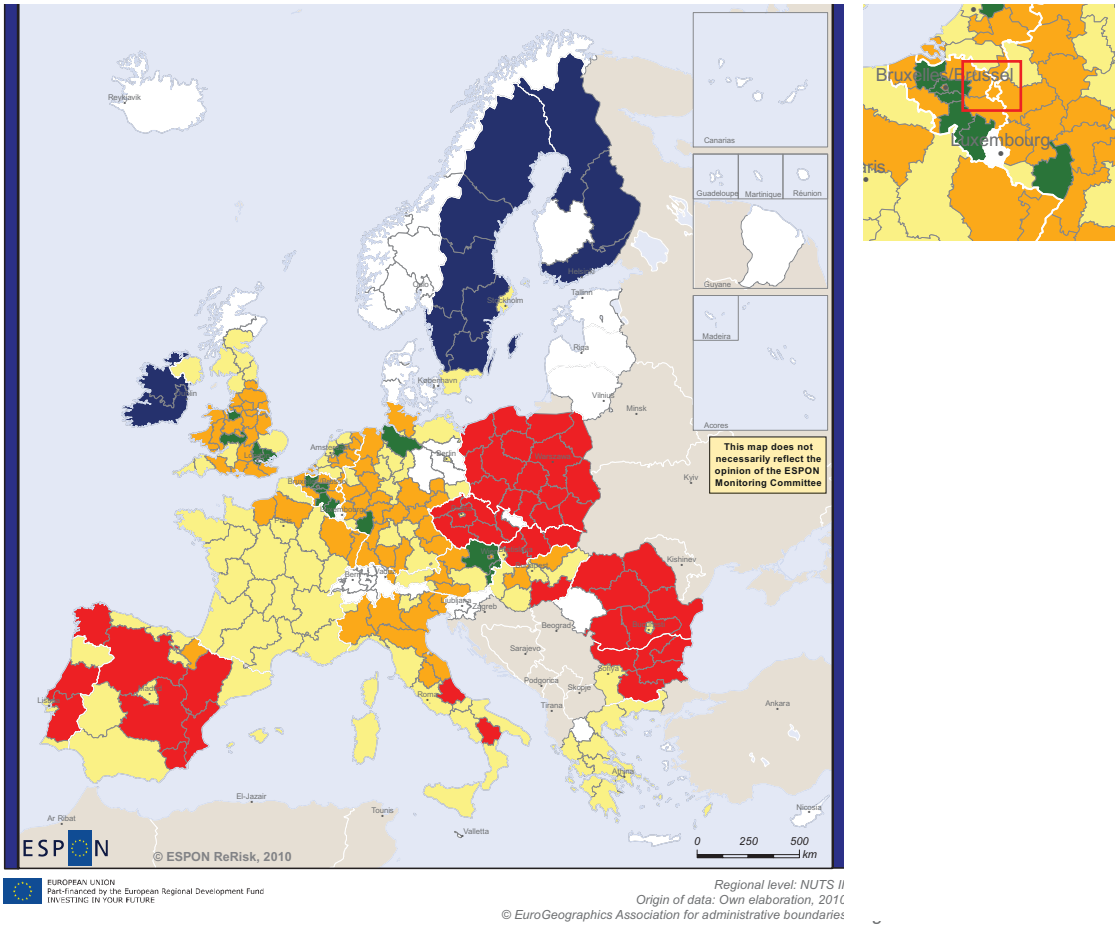




***Map 7 Aggregate potential impact of climate change, ESPON Climate, final report p19***




***Map 8 Adaptive capacity of European regions in regard to climate change, ESPON Climate, final report p21***

Another important issue linked to the fossil fuel industry is the vulnerability of our societies to the rise of energy prices. It has been assessed in ESPON ReRisk research against three factors: specialization of the region in high energy spending industries, region's dependence on motorized transport (both employment and transport use) and the region's social vulnerability (people having problems paying their energy bills). According to the Rerisk typology, the 3LP is attached to the category called "well-off with troubles ahead": those regions are located in the most densely populated regions of central Europe, highly industrialized, characterized by a medium level of employment in high energy spending industries that used to be a cornerstone of the economies, but are now in the process of being replaced by more knowledge-intensive activities, higher than average number of workers commuting between the regions, high level of disposable income. Some regions are rural and semi-rural in relation to coastal, mountain or close to major urban centers, providing potential for tourism and second homes. The regions of that type have a few options for alternative energy as they are characterized by both low wind power and low photo-voltaic (PV) potential.




**Regional typology**
(Clustering process results from nine indicators on energy poverty)

- With problems and potential
- Well-off, with trouble ahead
- Struggling, looking for jobs and a brighter future
- Wealthy and commuting
- Cool and windy, but working
- No data

***Map 9 Regional typologies of Energy poverty, ReRisk, final report p44***

Even if the EU adaptation framework is developing a European adaptation strategy for 2013, most of the European countries have already developed a National Adaptation Strategy (PEER 2009, EU CLIMATE ADAPT). Because certain impacts transcend borders of individual states, such as with river basins, strategies and actions are also planned across countries in the EU. The European Commission (DG REGIO) has defined and agreed with its Member States, 13 regions for transnational co-operation.

3LP is part of the North-West Europe (NWE)[6]. In that context “Sic Adapt !”, a Strategic Initiative Cluster (SIC) has issued policy recommendations based on the analysis of adaptation tools and measures implemented by eight Cluster projects across four fields of action:

- Built environment (urban and regional)
- Water environment (rivers, urban water management, coastal / marine)
- Natural environment (forest / nature / agriculture)
- Social environment (society / behavior change)

The analysis of the measures, defined as specific location oriented, operational, often sector-specific actions with tangible results, gives an idea of their action fields, their spatial scope and target groups. Two third of the project’s measures are focusing on the issues of river flooding / heavy rainfall and one third on the issues of drought and heat/heat wave. Wind, storm, fire, sea level rise are seldom addressed by the projects. The types of landscape targeted by these measures are equally split between urban areas/city centers, river catchments and a group gathering rural areas (village and agriculture) and, in a lesser extent, forest and suburban areas.

The issues raised by the energy paradigm and the strategies about climate change should have in the following years a major impact on landscape in most EU regions. Concerning the 3LP, these issues tackle all of its core qualities.

Extreme climatic events like storms and heavy rains will impose a better protection of soils against erosion: improvement of the soils carbon content, extension of cover crop on agricultural land, less tilling on slopes, development of hedges on slopes, protection and restoring bogs, swamps and mires that act as efficient carbon sinks. In that respect, water management is a major issue in the 3LP area. Historically, the experience in water management is a strong asset of the 3LP. Several approaches are adopted and have all very important impacts on landscape: from the construction of dams to more integrated strategies like rewetting of valley floors and delocalization of agriculture activity.

The modification of growth patterns, of the distribution of plants including alien invasive species, animals but also of pests and diseases may affect the local ecosystems in a scale that is difficult to foresee. It may however induce profound modifications of the current green structure.

In line with the new energy paradigm, the competitiveness of industries with high energy costs may be at risk in a context of high energy prices and lead to factory shutdowns. A strategy to preserve the industrial heritage has to be implemented in order to preserve the buildings, avoid looting of their content and ensure the conversion of the site.

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[6] INTERREG North West Europe (NWE) is a cooperation zone of eight countries: France, Belgium, Netherlands, Luxembourg, Germany, United Kingdom, Ireland, and Switzerland. URL : http://www.nweurope.eu/

The smart, sustainable and inclusive growth objective leads to improve aspects like buildings energetic performances, density of housing development to promote public transport and reduce the need for commuting, integration of sustainable and resilient principles in urban design. Landscape will benefit from some of these new orientations, like the objective of restraining urban sprawl. Other orientations will modify the urban and architectural local identity.

## Demographic change and territorial attractiveness [7]

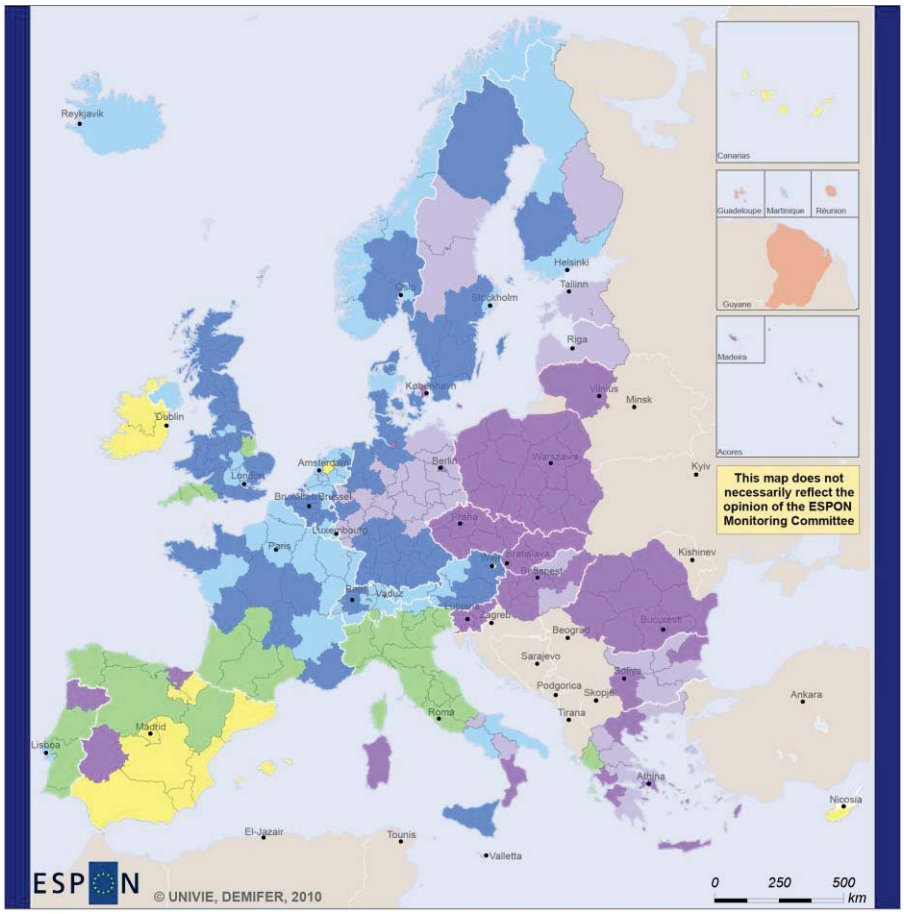
Demographic trends in Europe are expected to be an important challenge in the coming future as highlighted notably in the DEMIFER project. The most important force behind European population change is international migrations where at the regional level, changes through migrations consist also of internal migrations between regions within individual countries. Contemporary societies are indeed characterized by an increasing human mobility, especially in recent decades. The old pattern of migrations from poor to rich countries has changed toward a mobility shaped by connection between places rather than by borders between states and taking place within a series of global networks (transnational companies, informal economic network, diaspora, scientific network…). Other challenges, still in a demographic perspective, are the decreasing population growth, increasing proportions of the elderly and the declining population. Those dynamics strongly influence labour markets, healthcare expenditure and social security systems i.e. regional economic growth and competitiveness.

Human mobility and migrations vary according to regions since their territorial assets and actors differ. The main orientations of European territorial development policies go toward a more balanced development of the regions in order to reduce disparities (Europe 2020, 5$^{th}$ Cohesion report, ESDP). The ATTREG project shows that there is no simple relationship between increases in attractiveness and economic growth. Much depends on the forms of territorial capital present and how they are utilized. In that perspective, landscape quality must be seen as a factor of attractiveness as it is assumed that characteristics of places depend (among other things) on its constituting natural and environmental, social and cultural components. The environmental capital is richer in regions characterized by high standards of landscape management. Landscape is therefore considered as a response for enhancing attractiveness and being part of competitiveness. A region with outstanding cultural features (good universities, high levels of quality of life, aesthetically inspiring and well-preserved landscapes) is capable of attracting the top skilled workers and the best creative talents; on the other hand, these contribute to further growth and diversity of the cultural fabric of the region. The landscape diversity that is characterizing the 3LP can be conceived as a factor of attraction that can be utilized to generate growth. Attractiveness through landscape has

[7] Based on ATTREG, DEMIFER, ESPON 1.3.3, METROBORDER, TIGER

to be managed, and is a concept that shapes the territorial governance process itself, most notably the mobilization process.

In 2005, the overall demographic status of the 3LP, based on the DEMIFER typology, was equal to “euro standard” (the typology is based on four key variables: the share of the age groups 20 to 39 years and 65 years and over in 2005, as well as the annual average natural population increase and net migration rate during the period 2001 to 2005). Close to the average of ESPON space, the age structure is slightly older, a stagnating natural population balance and a positive net migration rate are prevalent. These regions are mainly found in Northern and Western Europe. Peri-urban rural regions of which 3LP is part of, have managed to attract large number of people throughout the period 2001-2007. Net migration for that period place the area in an intermediate position as it is the case for the whole central and densely populated part of the European “Pentagon” of London, Paris, Milan and Hamburg. If taking into consideration also the total visitor arrival rates, and according to the ATTREG regional typology, 3LP is described as a region with average net migration and visiting flow rates, along with 157 regions in Europe where net migration rates and arrivals rates are positive but small. METROBORDER results are in the same line, stating that Aachen-Liège-Maastricht MUA population (Morphological Urban Area) increased from 1 577 649 in 2001 to 1 588 592 in 2006 (+0.1%) and the FUA population (Functional Urban Area) increased from 1 990 946 in 2001 to 2 005 498 in 2006 (+0.1%). It has to be noted that during the past 15 years, growths between the three countries have become different with each other’s, as Dutch municipalities lost population. The demographic growth of 3LP is far behind other CBPMRs (Cross Border Polycentric Metropolitan Regions) such as Lille (+0.8%, +0.8%), Vienna-Bratislava (0.8%, +0.7%), Luxemburg (+1.5%, +1.1%), or Geneva (+1.3%, +2%) but better than Saarbrücken (-0.5%, -0.4%), Basel (-0.4%, -0.2%) or Katovice-Ostrava (-1.1%, -1.7%).





EUROPEAN UNION
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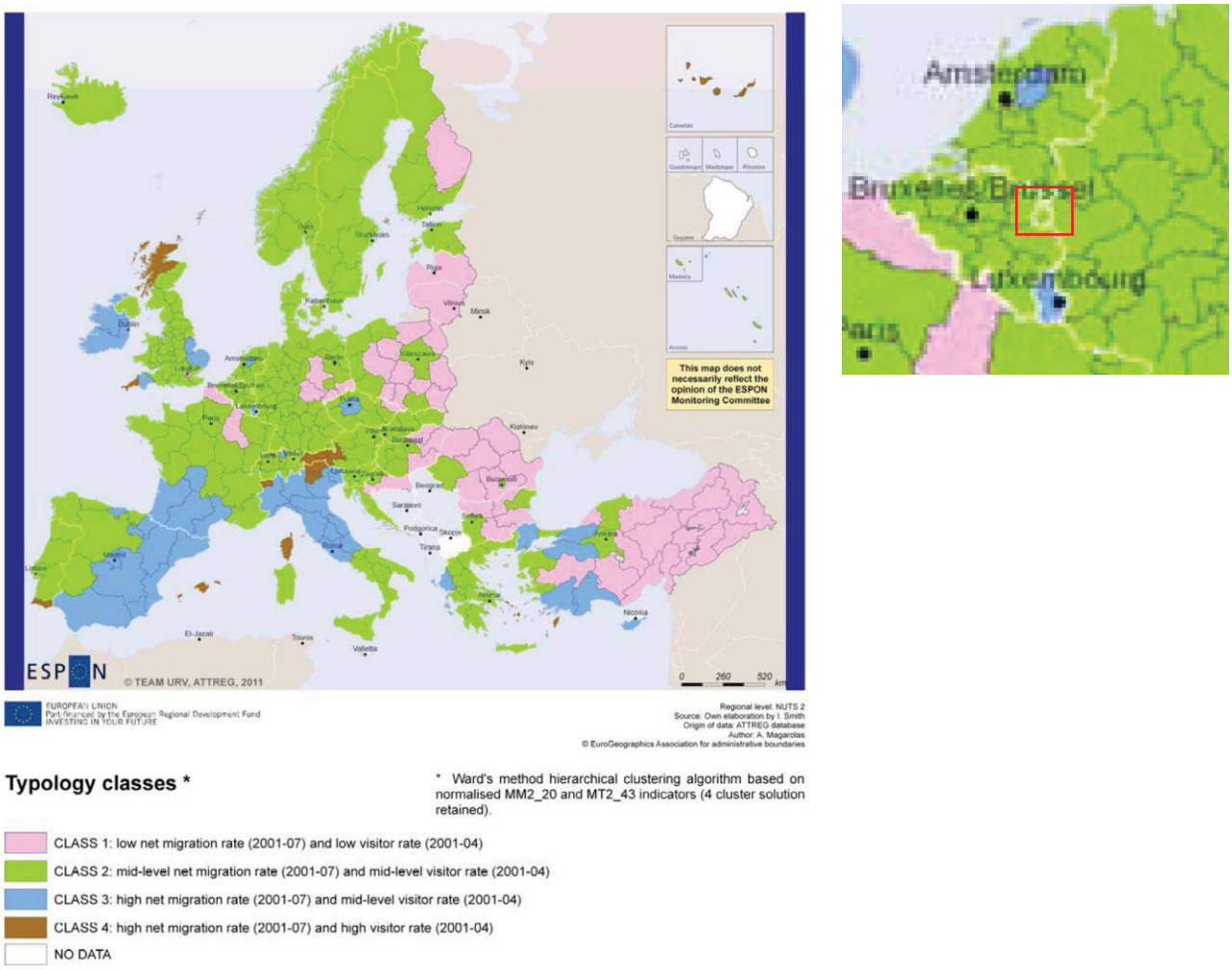
Regional level: NUTS 2 except UKI, NUTS1
Source: ESPON 2013 Database, 2010
Origin of data: Eurostat, NSI, 2008-2009
© EuroGeographics Association for administrative boundaries

NO DATA

| Type | Classification | Cases | Population | | Age group 20-39 (%) | | | Age group 65+ (%) | | | Natural population increase (per 1000) | | | Net migration (per 1000) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Thousands | % | avg | min | max | avg | min | max | avg | min | max | avg | min | max |
| 1 | Euro Standard | 79 | 127 915 | 25,41 | 25,68 | 22,57 | 28,72 | 17,46 | 15,33 | 20,30 | 0,01 | -2,67 | 2,47 | 3,43 | -2,11 | 9,36 |
| 2 | Challenge of Labour Force | 61 | 116 768 | 23,20 | 30,43 | 28,33 | 33,84 | 14,51 | 10,60 | 18,96 | -0,78 | -4,76 | 2,89 | 0,08 | -7,35 | 9,19 |
| 3 | Family Potential | 55 | 104 557 | 20,77 | 28,15 | 24,80 | 36,32 | 14,57 | 11,13 | 16,96 | 3,72 | 1,06 | 9,00 | 2,12 | -3,51 | 9,59 |
| 4 | Challenge of ageing | 33 | 63 838 | 12,68 | 26,87 | 21,52 | 31,19 | 20,83 | 18,51 | 26,51 | -1,74 | -6,19 | 1,43 | 9,42 | 4,14 | 16,99 |
| 5 | Challenge of decline | 38 | 50 167 | 9,97 | 26,32 | 21,47 | 30,04 | 19,49 | 15,89 | 22,55 | -3,39 | -10,35 | -0,[illegible] | -1,20 | -11,25 | 3,70 |
| 6 | Young potential | 15 | 38 543 | 7,66 | 32,26 | 29,36 | 35,86 | 14,45 | 8,70 | 19,03 | 3,61 | -0,15 | 9,[illegible] | 17,10 | 9,96 | 26,30 |
| 7 | Overseas | 5 | 1 555 | 0,31 | 30,40 | 27,02 | 32,[illegible] | 9,04 | 3,71 | 11,81 | 13,56 | 8,40 | 25,[illegible] | -1,78 | -8,18 | 9,07 |
| EU27+4 | ESPON Space | 286 | 503 342 | 100 | 27,82 | 21,47 | 36,[illegible]2 | 16,63 | 3,71 | 26,51 | 0,33 | -10,35 | 25,[illegible]8 | 3,16 | -11,25 | 26,30 |

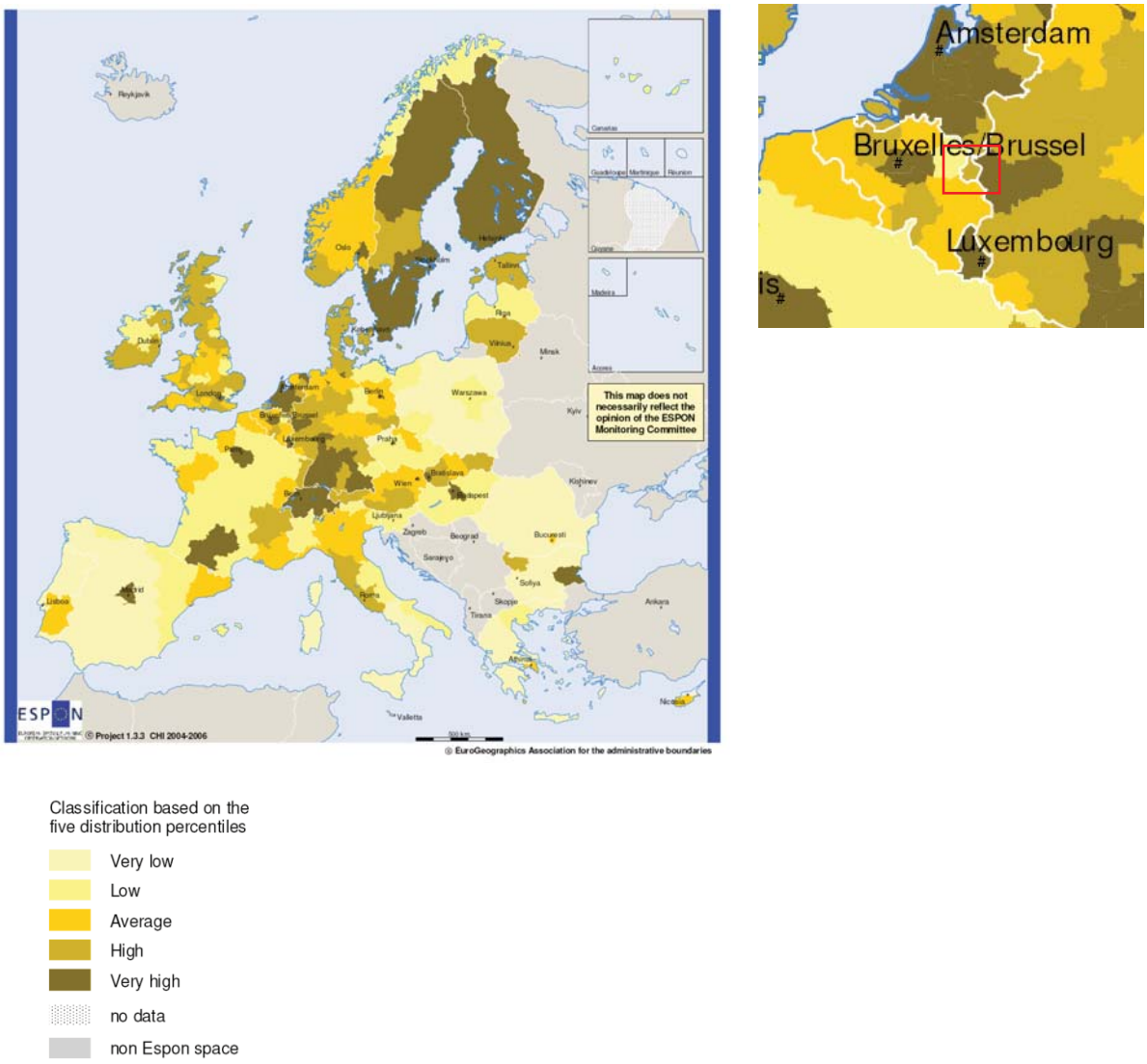
In 2005 | Average 2001-2005

***Map 10 Typology of demographical status in 2005, DEMIFER final report p10***



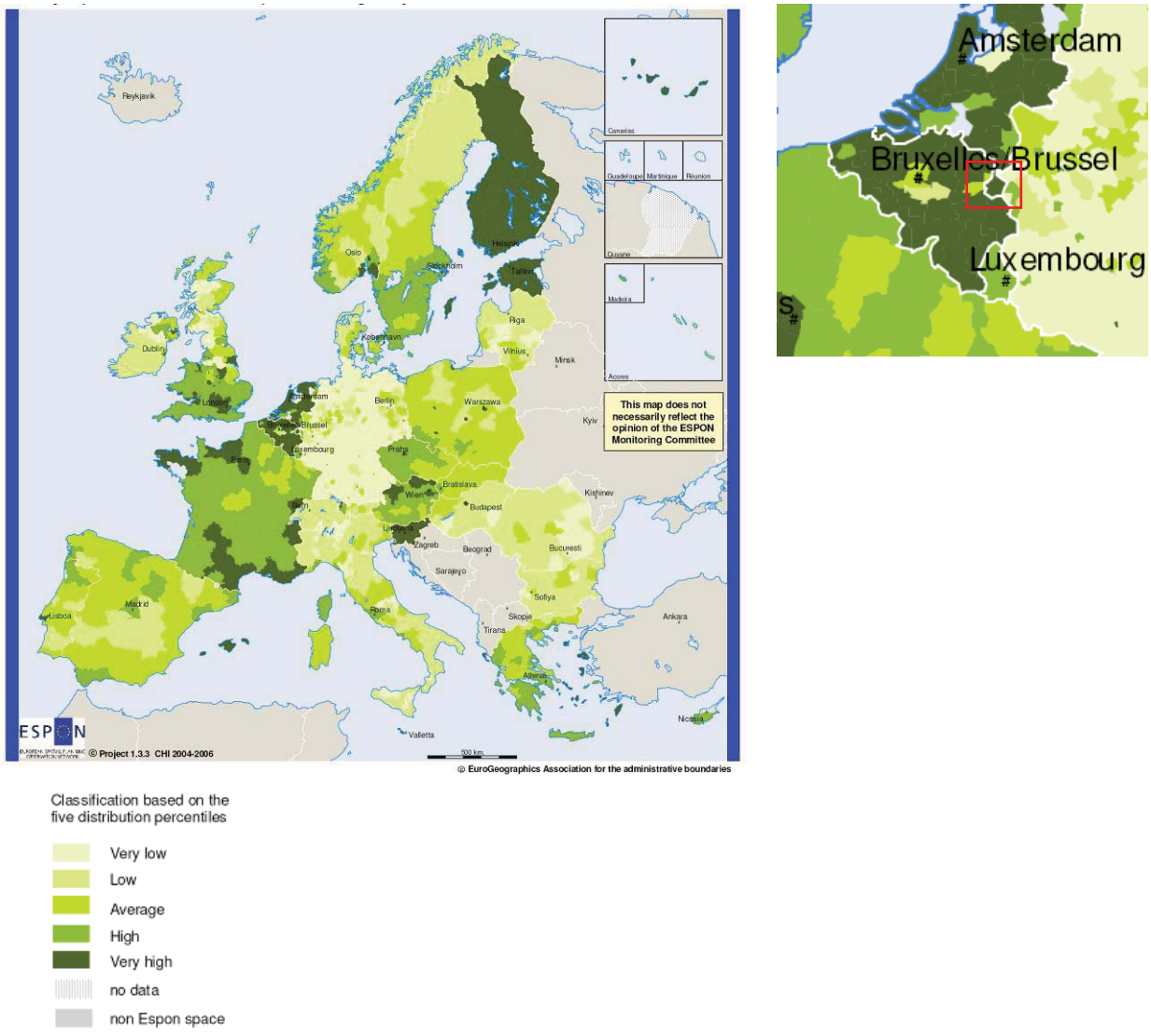

***Map 11 Regional typology by types of flows attracted, ATTREG final report, p58***

According to the ATTREG project, attractiveness can be weakened if attraction of flows is not embedded in local context. ESPON 1.3.3 project gives interesting elements by introducing the notion of Cultural Heritage and Identity (CHI). According to the authors, CHI can be considered as the result and the engine of the social and economic dynamics of the community rather than a static set of features of the territory. It implies that CHI does not simply "exist" but it has to be continuously (re)-produced, (re)elaborated through cultural/social practices and is therefore intimately linked with civil society. The potential of (re)production is evaluated against the "intellectual capital" of the region, that is the extension of the "capacities" on which the region can count to further its heritage and identity or, else, to dynamize it and valorize it. Mapping the share of local workers engaging in cultural professions is a way of estimating how embedded culture is in local production system. 3LP gives a diversified picture where German and Netherland sides show respectively very high and high values, Belgian part is low to average.

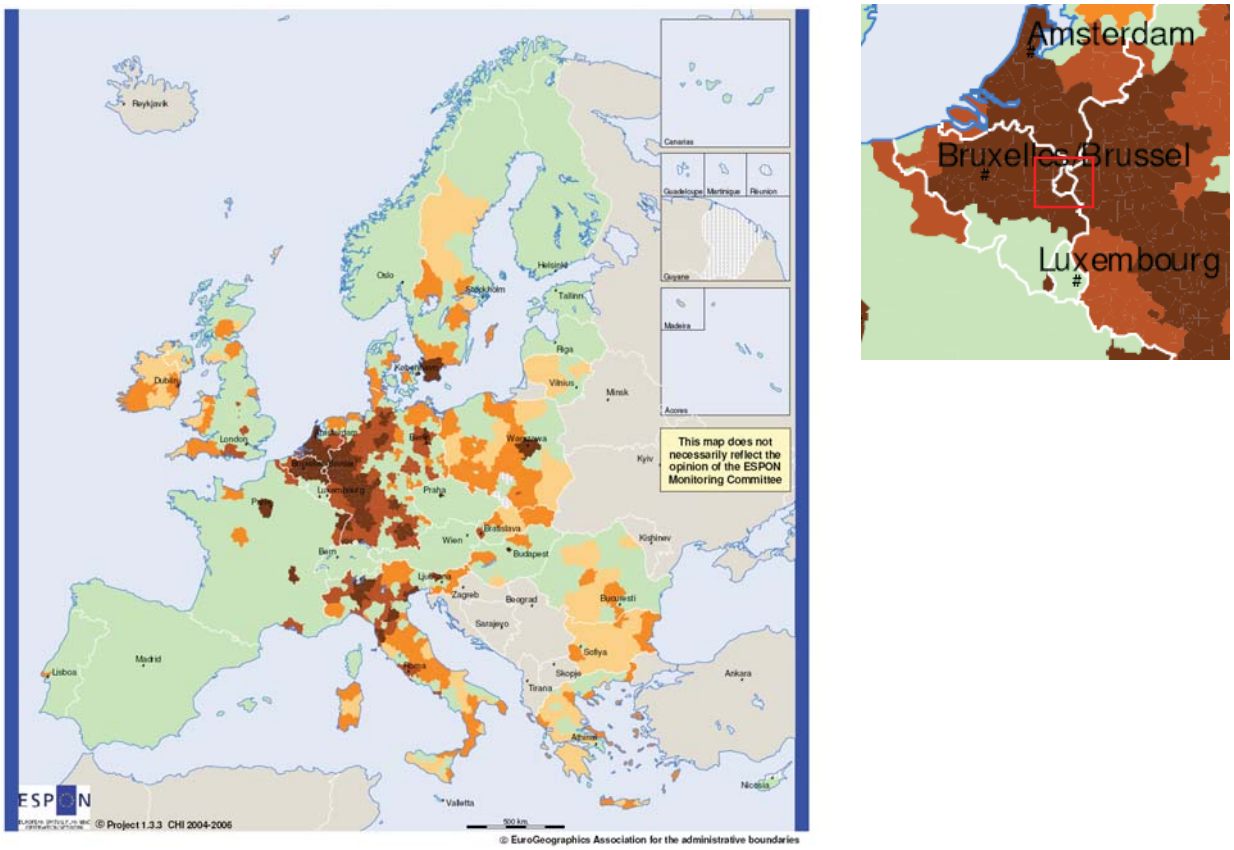



***Map 12 Culture related jobs as a share of local active population, ESPON 1.3.3, p20***

Benelux has a long history of protection of environment, culture and cultural landscapes, showing therefore a high density of protected cultural landscapes and heritage conjuncts. Confronted with the user pressures (both local population and tourists, see ESPON 1.3.3 typology), the 3LP is located between an area of low to very low pressure (Belgium and Netherlands) and an area of very high pressure (Germany). When confronted to the potential multimodal accessibility (see ESPON 1.3.3), central Europe starting from Denmark, Belgium, Netherlands and towards Switzerland to North Italy is characterized by a high to very high accessibility and a high density of tangible heritage.

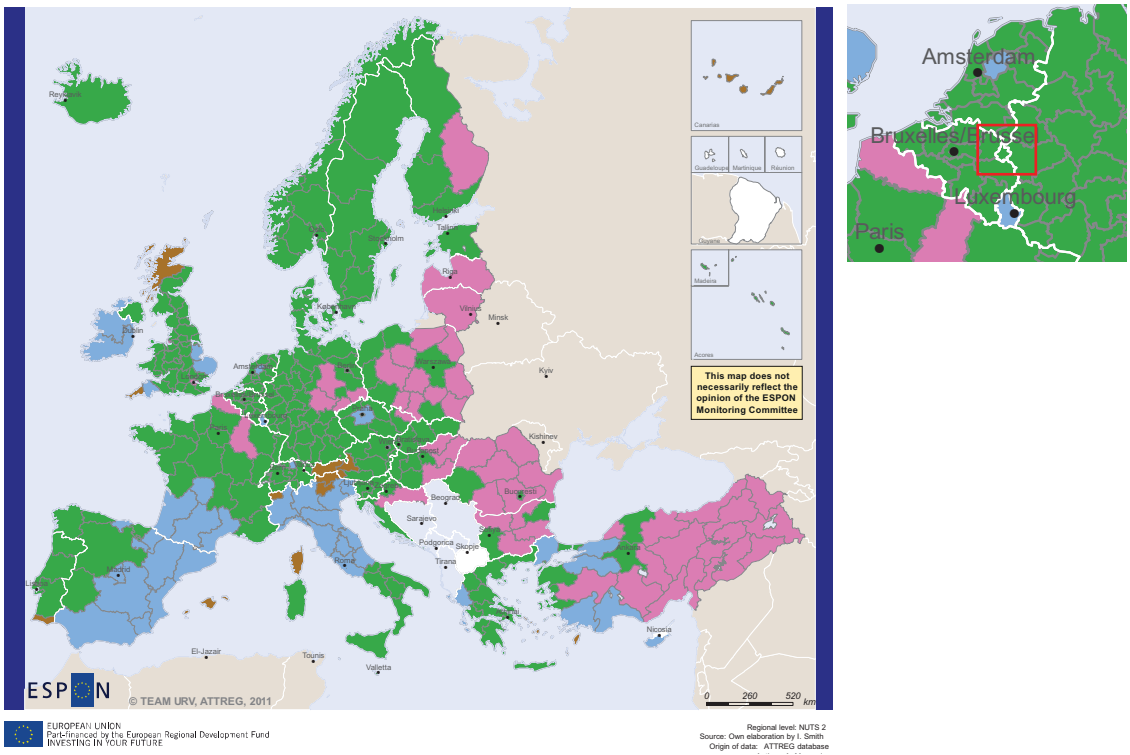



***Map 13 Density of protected cultural landscapes and heritage conjuncts, ESPON 1.3.3, Final report, p111***




***Map 14 Relation between multimodal accessibility and heritage density, ESPON 1.3.3, Final report, p.29***

By combining all components of territorial capital (environmental, economic and human, anthropic, social and cultural, institutional), 3LP is described in the ATTREG typology as a "dynamic region in transformation" whose main source of territorial capital is the socio-cultural one but also enjoy high levels of environmental capital, resulting potentially attractive for a certain type of lifestyle migration. The Belgian side is more a region in economic transition that do not score too well in terms of environmental and socio-cultural capital but offer adequate level of infrastructure and economic stability.




***Map 15 Regional typology by endowments of territorial capital (2001-2007), ATTREG final report p65***

The overall demography of 3LP is euro standard with a stagnating natural population balance and a positive net migration rate. In terms of visiting flow rates, they are positive but small, even though there is a cultural and natural attractiveness as well as a high accessibility. The touristic infrastructure of the 3LP to accommodate these flows is of variable quality from one place to another: the tourist accommodation facilities, the transport network (public transport, cycling routes network, public access and accessibility to cultural heritage, etc.) are witnessing important differences. These touristic infrastructures benefit from thoughtful land planning and landscaping interventions.

## Suburbanization and polycentric development [8]

Urbanization and metropolization is a key element for understanding current territorial dynamics and trends. It has been highlighted in many ESPON reports and in the major European policy documents (ESDP, Territorial Agenda, Europe 2020 strategy). In the framework of this project, the phenomenon has its importance as it deeply impact landscape directly through the urban forms of agglomerations or indirectly through related infrastructure (mainly transports inducing new settlement). 3LP area is concerned by the phenomenon as it is situated in the core of the densely populated and urbanized European "Pentagon" (London, Paris, Milan, Munich and Hamburg), which is the result of a long historical process.

Large cities are more and more seen as focal point of competitiveness, mainly regarding their insertion in international economic networks. They are considered as central nodes in a globalizing world. Their degree of insertion are however not to be considered here as it might get out of the scope of this project, but it sounds important to shed light on the core-hinterland relationships as those dynamics are more at stakes in terms of landscape dynamics and more specifically the 3LP territorial context. In terms of physical process, the relationship between cities and hinterland is illustrated by urban sprawl, which is the most important visual effect of metropolization, leading often to homogenization of landscapes and shrinking of agricultural land. Morphological form of cities is a key issue in terms of landscape, in addition to be the driver of urban environmental sustainability (environmental stress on air quality, noise, generation of waste).

In a demographic perspective, a link can be made between position of cities in urban hierarchy and migratory process: they attract young people and expulse older active. In small cities, this process occurs at regional level and is reduced to suburbanization whether in large cities, it occurs at the national and international level.

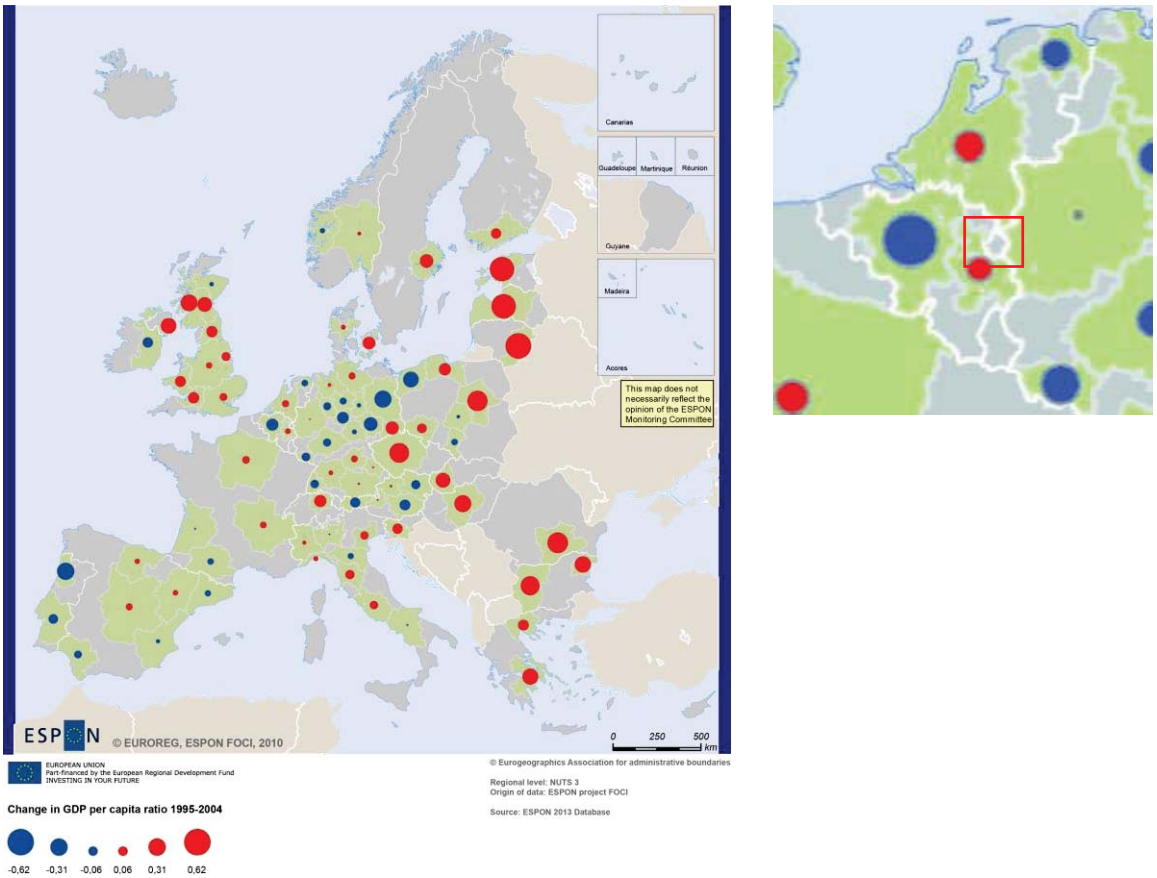
The 3LP geographical context imposes to consider polycentricity through settlement of several agglomerations and cross border cooperation between three countries. Those elements are of paramount importance for this project and have been studied in several ESPON researches (more specifically the METROBORDER project).

From the beginning of the reflection on the developmental perspective of the polycentric cross-border structure of Maastricht, Heerlen, Aachen, Liège (MHAL) in 1989 and 1990, it has been recognized that the urban areas would be the drivers of that space. This polycentric MHAL structure is to be found in the main strategic and orientation documents, at every level. The ESDP for Europe in 1999, the outlines of the Benelux Countries' spatial structures (1998), the SDER for Wallonia (1999), the RSV for Flanders as well as the German (LEP) and Dutch (POL) schemes.

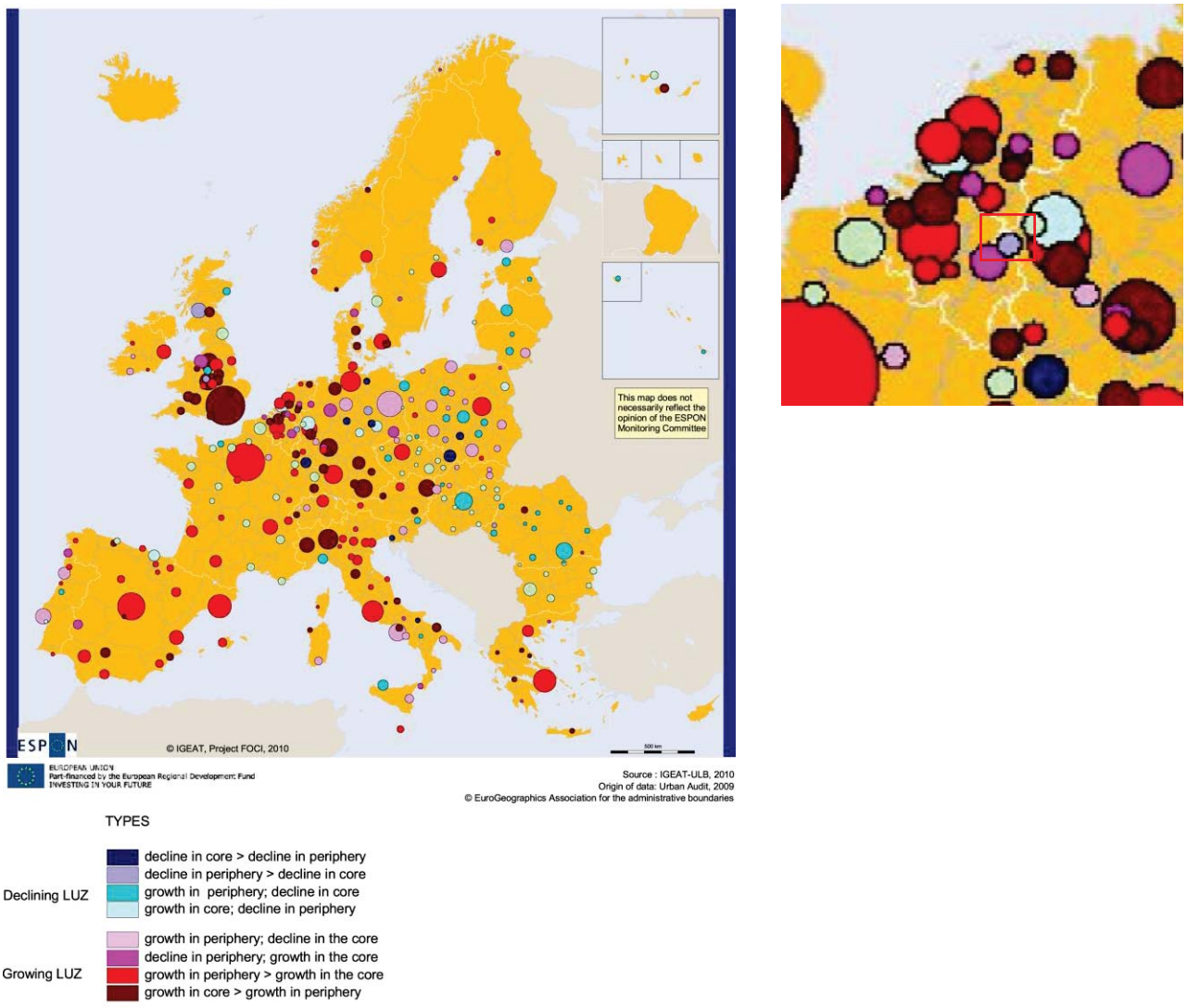
[8] Based on METROBORDER , FOCI, DEMIFER, TIGER

It appears that borders can be considered as an asset and that the potential of cross border regions has been underestimated so far. The importance of polycentric cross border organization in terms of economy and demographical weight make them comparable to large domestic cities.

The 3LP shows a very mixed and complex image as the area seems to enter the fourth phase of urbanization, the “re-urbanization” phase, in line with the rest of the dense and central parts of Europe. In that phase, cities are characterized by their population growth in both core and peripheries, with often higher rates in the core cities. Liège and Aachen have indeed a growing Large Urban Zone (LUZ) but the rates between core and periphery don’t show the same values (decline in the periphery of Liege and growth in the one of Aachen). On the opposite, Maastricht seems to face a decline in the core and in the periphery. Smaller agglomerations of the 3LP (where data are not available in ESPON report due to the scale), are probably facing the so-called “counter urbanization” phase where a shift takes place to the urban periphery and beyond, towards the small and medium-sized town of less urbanized metropolitan surroundings, while the core area loses more people and jobs than the suburbs gain.




***Map 16 Change in the disparities in the development level between the metropolis and its regional hinterland in 1995-2004, FOCI final report, p.47.***



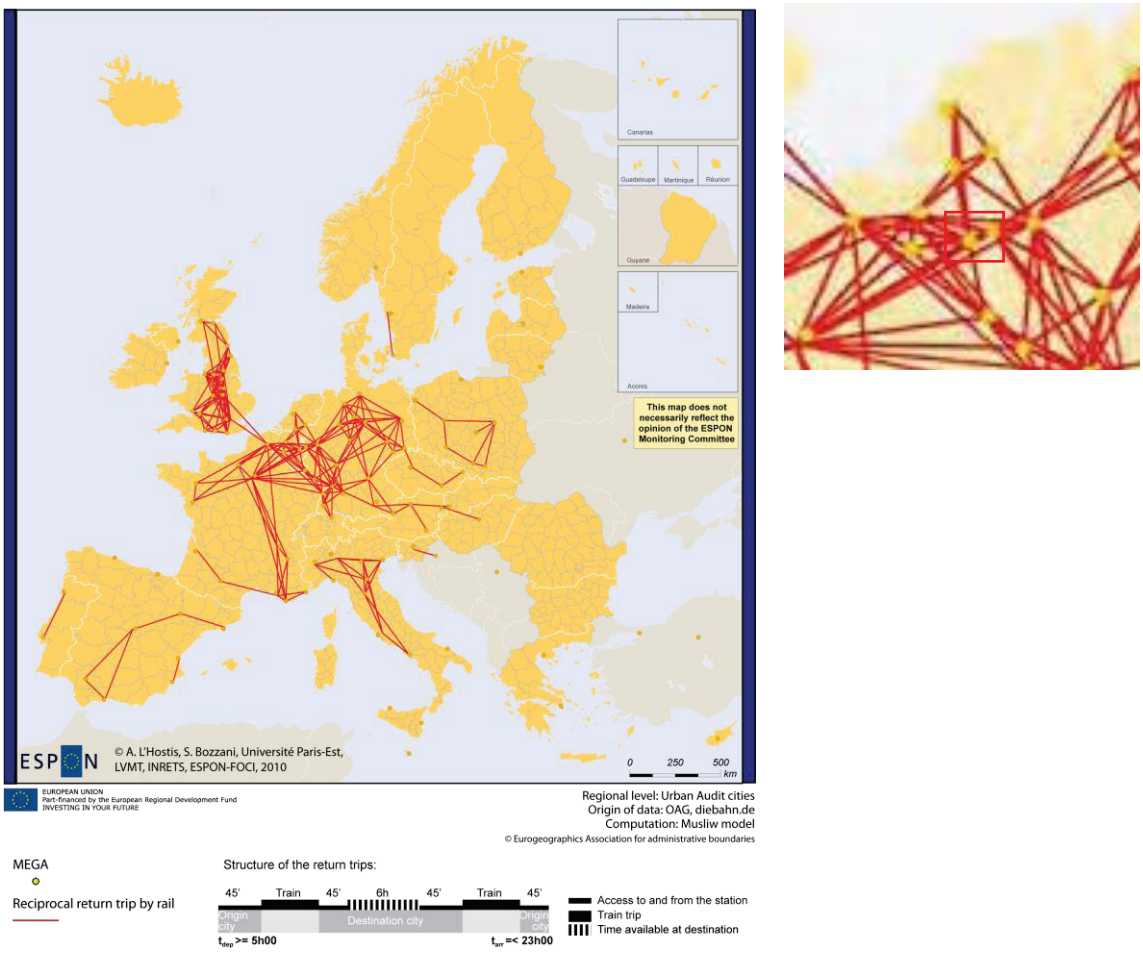

***Map 17 Change in the intra urban dynamics in European LUZ, in the years 2000, FOCI final report, p26***

In terms of Metropolization process (economic control, political function and connectivity), the MAHHL region (which 3LP is part of) shows a low score at EU level, as illustrated by the GaWC image - i.e the presence of economic headquarters and decision making. It can hardly be compared with other CBPMRs (Cross Border Polycentric Metropolitan Region) such as Copenhagen/Malmö or the Greater Region who perform better due to their economic position, political function and presence of airport.

In terms of functional integration (based on the interaction and convergence between both side of the border), the MAHHL region shows an asymmetric profile. Generally meaning, we note that interactions are weak. There is a slightly positive annual growth (1.1%) in cross border employees between 2000 (16 587) and 2006 (17 695). This may be explained by the fact that rates and regulations of taxation vary strongly between countries inciting people to establish themselves to the country where they work. On the

other hand, convergence within MAHHL area (based on similarity of GDP per capita and foreign citizenship of residents) is strong.

Accessibility is to be used for structuring the urban regions, as a factor of competitiveness and to facilitate access to services. As highlighted in the FOCI project, 3LP is in the core of a very high contactability area, whether by rail or air but where the former can compete with the latter.




***Map 18 City network contactability by rail between MEGAs – return trips between 5h and 23h, FOCI scientific report p.141***

In terms of governance, it has to be said that the geographical delimitation of the 3LP is not clearly defined which make difficult choosing the institutions that should be involved in the process. Phase C of the project brings more information about the governance aspects but we can already point as obstacles: the multilevel mismatch (asymmetric organization of competences on different political and administrative levels on either side of the borders) and the lack of involvement of municipal and economic actors. The geographical diversity characterizing the 3LP can play as an asset or as an obstacle to a clear cross border strategy.

## II.4. European cross border regions having an identity comparable with the identity of 3LP in a European context

### II.4.1. Choosing the cross border regions

The different components of the landscape identity are to be compared to other regions in Europe. Choice is made to compare the 3LP with other cross border polycentric metropolitan regions (CBPMR) in line with the METROBORDER project findings. Within the 28 European cross-border regions coming from ESPON 1.4.3, 15 have been identified as being metropolitan to a certain degree, and reduced to 11 regions when taking into account the additional criteria of polycentricity. Each of those CBPMRs has several urban cores forming the morphological urban area (MUA) and several functional urban areas (FUA).

The densely populated node is approached by considering at first all the municipalities (NUTS-5 level) with more the 650 inhabitants/km2. Then all the contiguous municipalities with this threshold of density, as well as the municipalities not reaching the threshold but enclosed by the others, were added to define central or morphological urban areas (ESPON 1.4.3, 2007). All the municipalities with more than 20.000 inhabitants are also taken into consideration, whenever they have a clear concentrated morphological core.

The functional urban areas allow to go beyond morphological character of the city by seeing it as an employment core surrounded by a labor pool (which seems relevant in a commuting and suburbanization context such as the 3LP). That labor pool is defined as a set of municipalities that send workers (generally more than 10%) to a core city (a MUA, which is also defined as a set of municipalities). Therefore, the FUA = MUA + Labor pool. The population number is minimum 50 000.

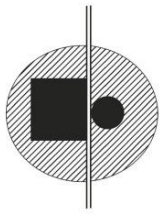

***Map 19 3LP and other CBPMR and non crossborder polycentric parks (MUA in black and FUA in color - ESPON 1.4.3, ESPON Metroborder)***

| Name of CBPMR | Countries | Type of transborder FUA (ESPON 1.4.3) |
|---|---|---|
| Aachen-Liege-Maastricht | BE-DE-NL | 7 |
| Katowice-Ostrava | PL-CZ | 7 |
| Wien – Bratislava metropolitan area | AT-SK-HU | 7 |
| Lille transborder metropolitan area | FR-BE | 7 |
| Copenhagen-Malmo | DK-SE | 6-7 |
| Nice-Monaco-Sanremo | FR-IT-MC | 3 |
| Saarbrücken – Forbach | DE-FR | 2-5 |
| Luxembourg metropolitan area | LU-DE-FR-BE | 7 |
| Basel | CH-FR-DE | 7 |
| Strasbourg | DE-FR | 7 |
| Genève | CH-FR | 2 |

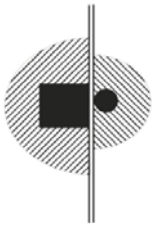
***Table 2 Types of cross border polycentric metropolitan areas***

The definition of each type of transborder FUA is explained below.

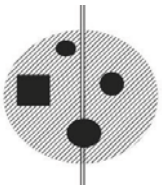
Type 2: a metropolis or large city, with a morphological area extending across the border in the neighbor country, through suburban areas or small cities, more included in the FUA of the main city.



Type 3: a metropolis or large city with contiguity in the neighbor country to smaller cities with their own FUA or sending quite few commuters to the main city in the other country.



Type 5: a metropolis or large city, with its FUA extending in the neighbor country, possibly with a scattered network of secondary centers.



Type 6: two metropolitan or large cities on each side of the border, with tangential MUAs.

Type 7: two or more metropolises or large cities, on each side of the border, with tangential FUAs.

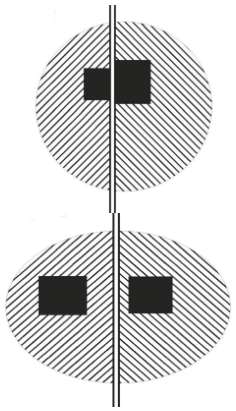
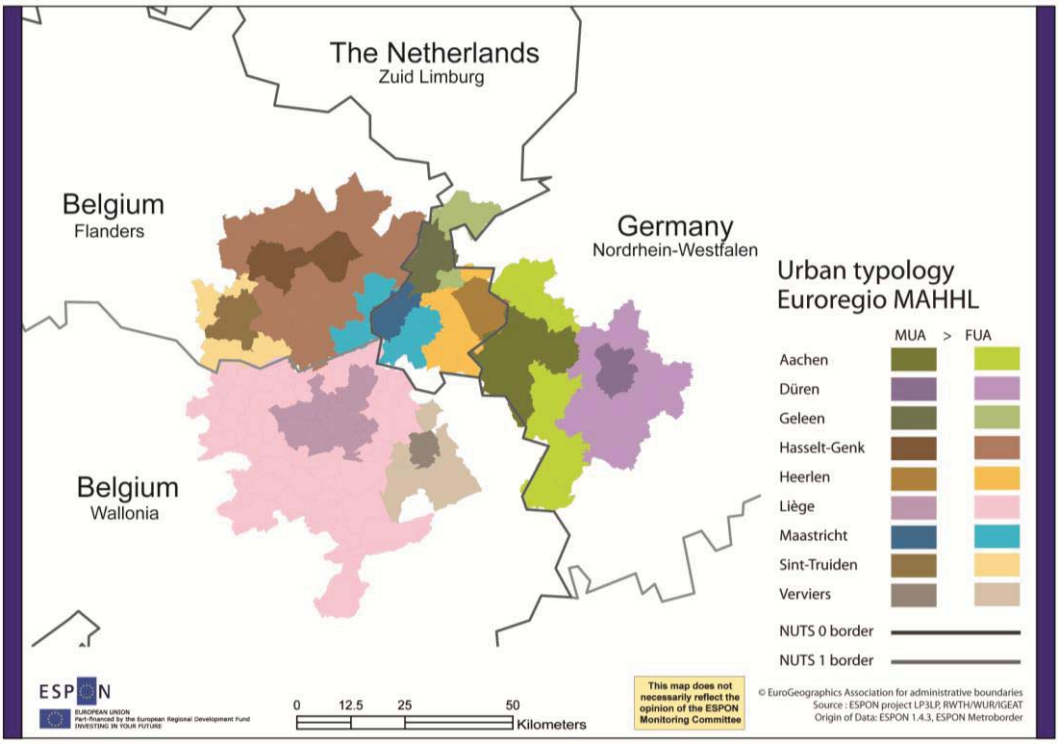


***Figure 9 Definition of each type of transborder FUA (ESPON 1.4.3)***




***Map 20 FUA and MUA in the MAHHL region (ESPON 1.4.3)***

After selecting the regions, each of them is now analyzed through the 4 European dynamics that the 3LP is facing (see dedicated chapter). The aim is to understand how similar other CBPMRs are to the 3LP - at least for one of the dynamics. In other words, which regions are experiencing similar territorial dynamics than the 3LP? Answering that question implies to go back to the ESPON reports used for the definition of the dynamics. Each CBPMR is characterized by the key maps. A CBPMR is considered as facing the same dynamic if it fits in the same typologies than the 3LP. After doing so, it will be necessary to understand how those regions mobilize landscape as a lever of territorial development and/or cooperation. Emphasize is also to be made on relationship between urban areas (organized in a polycentric pattern) and rural area.

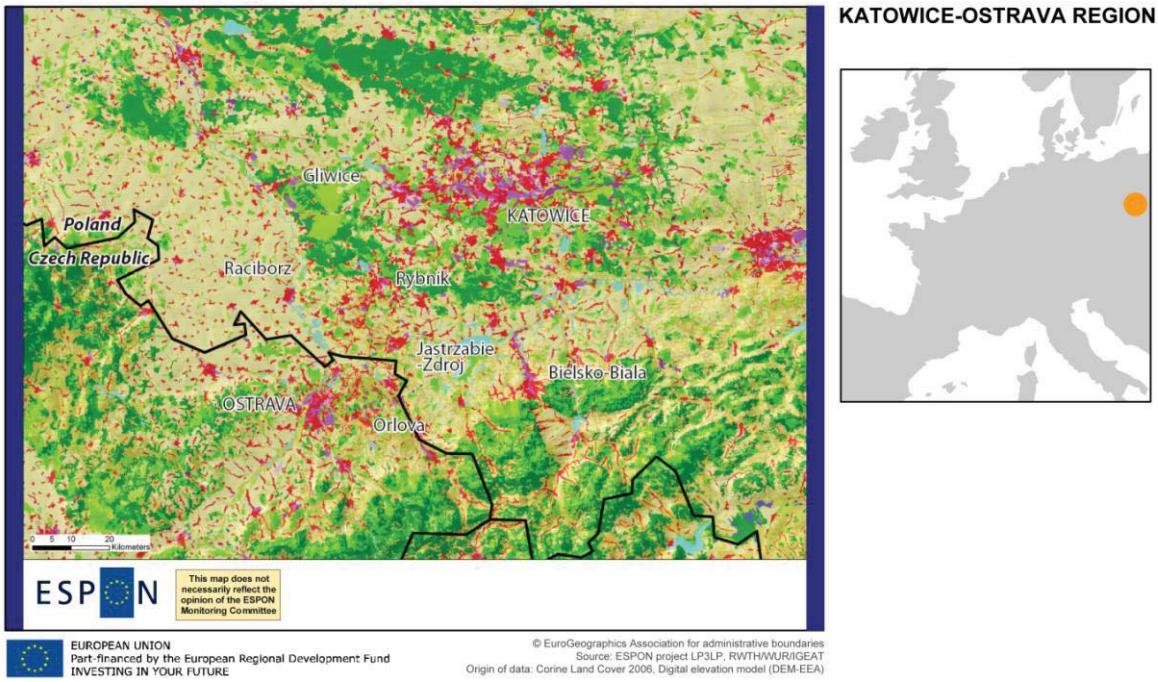
| Name of CBPMR | Dynamic 1: Intensification of land use and economic diversification | Dynamic 2: Climate change mitigation and adaptation | Dynamic 3: Demographic change and territorial attractiveness | Dynamic 4: Suburbanization and polycentricdevelopment. |
|---|---|---|---|---|
| Katowice-Ostrava (PL-CZ) | +++ | ++ | ++ | +++ |
| Wien – Bratislava metropolitan area (AT-SK-HU) | +++ | +++ | +++ | +++ |
| Lille transborder metropolitan area (FR-BE) | +++ | ++ | ++ | +++ |
| Copenhagen-Malmo (DK-SE) | ++ | ++ | +++ | + |
| Nice-Monaco-Sanremo (FR-IT-MC) | ++ | +++ | ++ | + |
| Saarbrücken – Forbach (DE-FR) | +++ | +++ | ++ | +++ |
| Luxembourg metropolitan area (LU-DE-FR-BE) | +++ | ++ | +++ | +++ |
| Basel (CH-FR-DE) | ++ | +++ | +++ | + |
| Strasbourg (DE-FR) | ++ | +++ | +++ | + |
| Genève (CH-FR) | + | ++ | +++ | + |

***Table 3 Similarity of CBPMRs with the 3LP according to identified European dynamics (+ = weak, ++ = medium, +++ = strong)***

Each region faces the 4 dynamics more or less intensively. The five regions that are the most similar to the 3LP (i.e, that gather the highest number of crosses) are highlighted in grey. Due to geographical proximity, it has been decided to group the Saarbrücken-Forbach region with the Luxemburg metropolitan area, forming together the core of the "Greater Region" (for full discussion on delimitation of the Greater Region, see ESPON Metroborder, 2010, p22).

## II.4.2. Comparison of the 3LP with other cross border regions

### Katowice-Ostrava (PL-CZ)



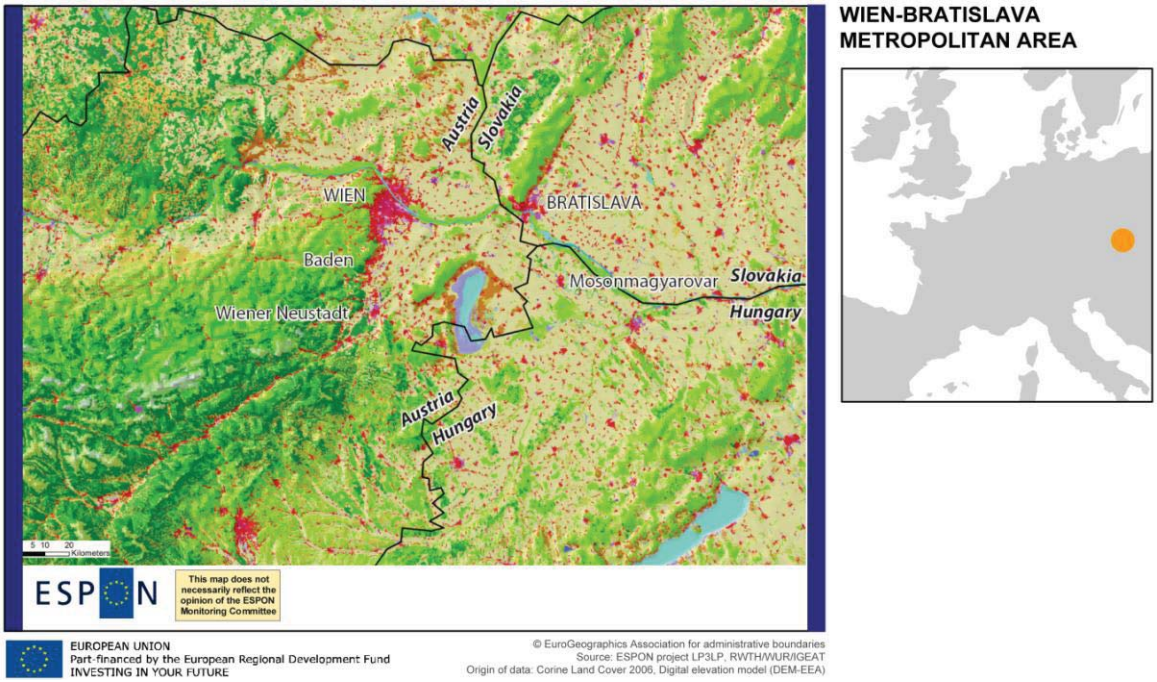

***Map 21 Katowice-Ostrava region - Source: Corine land cover, Digital elevation model (DEM-EEA)***

This region shows similar profile for dynamic 1 and 4. In terms of land use, it is characterized by the urban core of Katowice, surrounded by an important suburban area (forming the largest urban area of Poland and one of the most important of Europe). An intensification of land use is observable, which result in a mix between agricultural and forest changes with urban sprawl. The Czech part is more dominated by diverse rural forest coverage with dispersed areas of permanent crops, pastures and arable land. There, the intensification of land use is more dominated by forest conversions. The polycentric structure is obvious for the whole area, even if less marked in the Czech part.

The region shows nevertheless divergences with 3LP, mainly due to its socio economical profile. The migration and visitor rates are below the EU average and the demography of the region is characterized by a high share of population in young working ages and a slight population decline, driven by a negative natural population development ("Challenge of labour force" in the DEMIFER typology). The heavy industry, which caused the urban expansion in the 19$^{th}$ century, is still very present (employing large number of people), making the region more exposed to coming global dynamics (such as climate change and energy paradigm) than the 3LP and the transition to economic alternatives very difficult. The level of disposable income is also below EU average.

Even if facing two dynamics commonly with 3LP, strong and inspiring initiatives to overcome them by using landscape as a lever are still to be found.

**Wien – Bratislava metropolitan area (AT-SK-HU)**




***Map 22 Wien-Bratislava metropolitan area - Source: Corine land cover, Digital elevation model (DEM-EEA)***

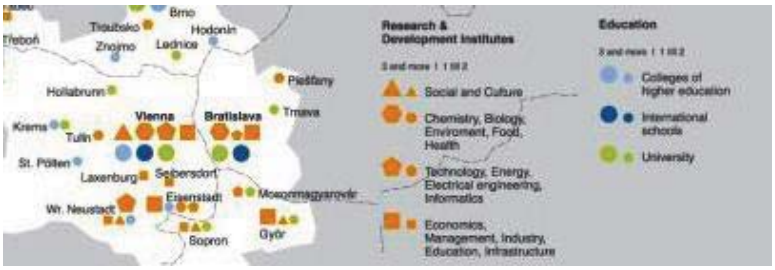
The Wien – Bratislava area faces the four same dynamics than the 3LP. The land use is mostly made of rural arable land (except urban cores, notably Wien). The land use intensification in Slovakia and Hungary is mainly due to agriculture and forest changes whereas in Austria, it is the result of a mix between agricultural and forest changes with urban sprawl. The demographic and socio economic profile of Austria is quite similar to 3LP (low level of long term unemployment and high level of disposable incomes) whereas Slovakia and Hungary show a high share of population in young working ages and a slight population decline, driven by a negative natural population development ("Challenge of labor force" in the DEMIFER typology). The Austrian part shows also an important level of workers commuting to other regions thanks to a good accessibility (private and public transport network). The FUAs of Vienna/Bratislava have a population of 3.6 million inhabitants with a strong polarization of employment and communication infrastructures on the two Twin Cities. The average density is 160.2 inhabitants per square kilometer. The difference of GDP between the two border regions, Austrian and Slovakian, is highly marked: 60.3 points on a European average corresponding to 100 (ÖIR, CA & Regional Consulting Associates, 2007: 16-17). The urban areas are the economic locomotives on both sides of the border (172.9% for Vienna and 115.4% for Bratislava on the basis of a European average still of 100 whereas for the whole of the Austrian border region values of 146.8% are attained, and for the Slovakian 86.5%). This disparity is also found in the MRE context (but less pointedly) between Liege and the two other cities: Maastricht and Aachen. Metropolitan functions are present in both capitals.

The region is a sub-grouping of the strategic territory of the Danube region defined by the European Union as a macro-region of 115 million inhabitants. Two capitals are

connected by the Danube, Vienna and Bratislava. The rural territories are relatively preserved from urbanization, which is concentrated on the two capital hubs.

Interesting initiative of collaboration between Wien and Bratislava can be observed, where landscape is recognized as a major element for territorial development.

The enhancement of the landscape is one of the co-operation's priorities, with amongst other assets the cross-border Neusiedler See-Seewinkel nature reserve with its 20,000 hectares. The Danube is of course the spinal column between the two cities. The frontier cycle network between Austria, Hungary and Slovakia has been particularly developed. It equates with one of the engines of the MRE in terms of soft mobility, with circuits on both sides of the borders. An important partnership[9] has been constituted around a co-operation project, composed of universities, NGOs and the two countries' (AT and SK) federal and regional authorities. This co-operation was triggered by the enlargement of the European Union to include Slovakia in 2004. A desire for synergy harmonization and reinforcement is much in evidence in the projects developed in the INTERREG 2007-2013 context. The co-operation territory includes two capitals (Vienna and Bratislava) ²and two main project areas (Carpathes astride the border and the Danube connecting those two major hubs). Vienna and Bratislava are regarded as Twin Cities. The territory is at the heart of the "Centrope" macro-region, itself incorporated into the CADSES area and Weinviertel-South Moravia-West Slovakia Euregio (founded in 1997). The Euregio includes the Austrian districts of Gänserndorf, Hollabrunn, Korneuburg and Mistelbach, the Slovakian districts of Bratislava and Malacky, and the autonomous region of Trnava (Trnavský kraj) with the Senica and Skalica districts in the west of the Zahoria Region.




***Map 23 Territorial Coopération map (source: Oïr, CA, Regional Consulting Associates, 2007)***

[9] **Slovak-Austrian cross-border cooperation programme 2007-2013 -** http://www.sk-at.eu/sk-at/en/2-1_overview.php

Several languages are spoken there, two official ones (Slovak and German) and several languages of the minorities (Hungarian, Rumanian, Croatian) with a greater permeability of the territories for those minorities (OÏR, CA & Regional Consulting Associates, 2007: 30).

The cross-border cooperation between Slovakia and Austria is targeted upon:

- Economic encouragement with the development of the small and medium enterprises fabric, tourism, culture and cross-border trade;
- The protection of the natural and cultural resources and risk prevention;
- Links between the urban and rural areas;
- The opening-up of isolated areas;
- The development of co-operation exercises in the health, culture and education sectors;
- The integration of a cross-border labour market.

These six themes convey the two priorities: (1) educational and competitive region (2) accessibility and sustainable development.

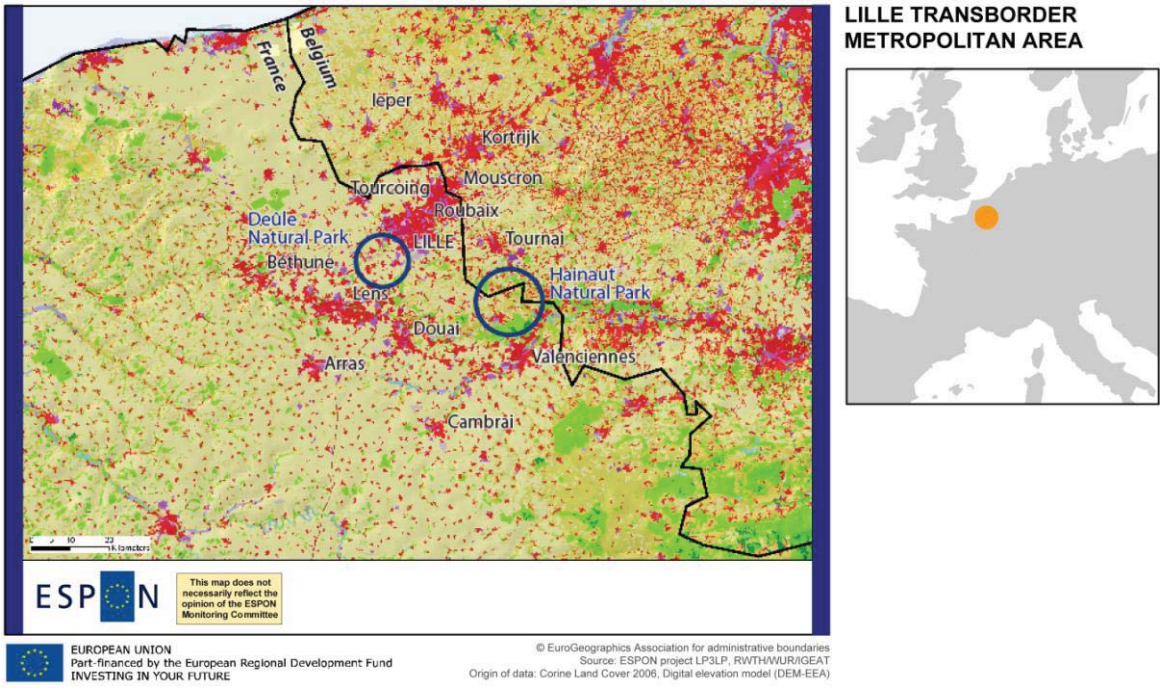
The second priority emphasizes the need for polycentric development based on an urban/rural balance (OÏR, CA & Regional Consulting Associates, 2007: 58). In order to assess the success of the INTERREG project, connection indicators (infrastructures, networks, and so on) are being mobilized as well as some transverse indicators of sustainable development targeting urban areas (centralities), rural areas and city/countryside relations.

The environment and the landscape are two levers that are recognized by the partners. The landscape qualities of the open spaces between Vienna and Bratislava are assets that have been taken into account in the cross-border INTERREG projects. The relationship of the main hubs with the rural territory is fundamental. The cross-border environmental protection and landscape enhancement approach is another strong element of the co-operation objectives via, in particular, the networking of the Natura 2000 areas. Lastly, the Danube between Vienna and the Slovakian border is protected as a nature reserve.

It should be said that agriculture still constitutes an important economic pillar in the region. The rural areas have been subject to protection in order to decelerate the urbanization and to preserve the agricultural areas.

It will be retained from this experience that the emphasis placed on polycentrism and its relationship with the rural areas has been applied to various projects, including the development of an urban forest in Bratislava. The search for balance between the urban and rural areas is the project's major element.

**Lille transborder metropolitan area (FR-BE)**




***Map 24 Lille transborder metropolitan area - Source: Corine land cover, Digital elevation model (DEM-EEA)***

The Lille metropolitan area is similar to the 3LP concerning dynamics 1 and 4. The whole region is considered, at EU level, as a suburban area. The intensification of land use is due to urban sprawl, both residential and economic. The complex polycentric structure of cities with open rural areas makes the region similar to the one of the 3LP. In addition, two natural parks have been implemented: the Deûle Park and the Hainaut Cross Border Natural Park. Their strategies are developed in the following lines.

The Deûle Park has set four objectives:

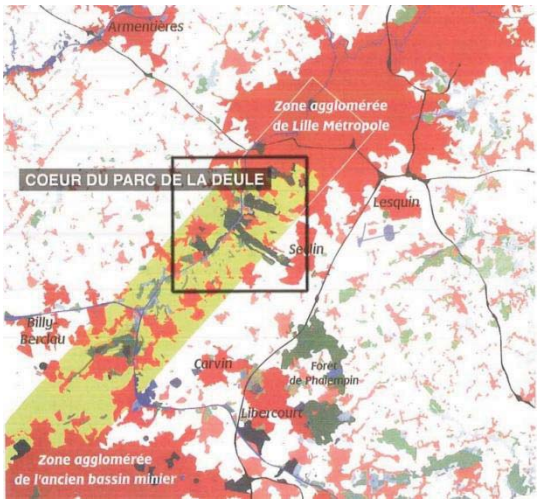
- To create a green lung for the Lille metropolis so that it can achieve an area of green space per capita equivalent to the other metropolises (15m² for Lille versus 26m² for Brussels);
- To protect the capture of agricultural activity areas;
- To upgrade the landscapes;
- To connect the Lille agglomeration to the mining basin conurbation by a considerably wide green corridor.

The park networks various centralities of different sizes: the Lille metropolis and the agglomerated mining basin with Lens and Douai as the centrality. It is covered by several Territorial Coherence Schemes (SCoTs):

- The SCoT of Lens/Liévin/Hennin/Carvin includes fifteen facilities (hypermarket, Hospital, schools, sports clubs and so on) but no higher education establishment;
- The SCoT of Douaisis includes the formative facilities of its territory, including the Faculty of Law of the University of Artois and the Mining Engineering School;
- The whole of the mining basin is included in the Lands of the North Interscot (formerly “Scarpe - Artois”).

There are numerous interrelationships between Lille and the mining basin. The territory of the Lands of the North Interscot is characterized by “a multi-polarity structure with no dominant city. Nevertheless the public transport networks have not yet been sufficiently upgraded by efficient connections with the Lille metropolis.” (Dupont A., 2007-2008).

The polarization of Lille is extremely strong and the Deûle Park brings an element of territorial connection and balancing by containing the urbanization, by improving the inhabitants’ recreational areas and by instituting territorial cohesion.




***Map 25 The Deûle Park as polycentric liaison (source: ADU)***

The Hainaut Cross border Natural Park (HCBNP) is located between Lille, Tournai, Mons, Valenciennes and Douai. It combines the nature parks of the “Plaines de l’Escaut” (Belgium) and the Scarpe-Escaut (France). The HCBNP therefore does not have the same status as the 3LP, which has only weak recognition or protection of its natural spaces and landscape. The Walloon side for example presents few areas that are recognised by Natura 2000.


***Map 26 Location of the Hainault Cross-Border Nature Park: Source www.observatoire-paysages.pnth.eu***

The two parks began to co-operate in 1983. The HCBNP covers 70,000 hectares with 250,000 inhabitants as against 221,500 hectares with 1,928,000 inhabitants for the Three Countries Park, which corresponds to 21% of the surface area and more than half of the MRE's population. It does not include the towns located in its circumference, which is contrary to the objectives of the Three Countries Park, which delineates its circumference at 5 km around the urban nuclei of the MHAL Cities. It is centered on the observation of the landscapes of the two nature parks following the example of the actions conducted in the context of the Herve in the Future project. The perimeter of the HCBNP encompasses only the southern part of Picardy Wallonia that is included in Eurometropolis via the communes of Rumes/Brunehaut/Antoing/ Péruwelz/Beloeil/Bernissart.

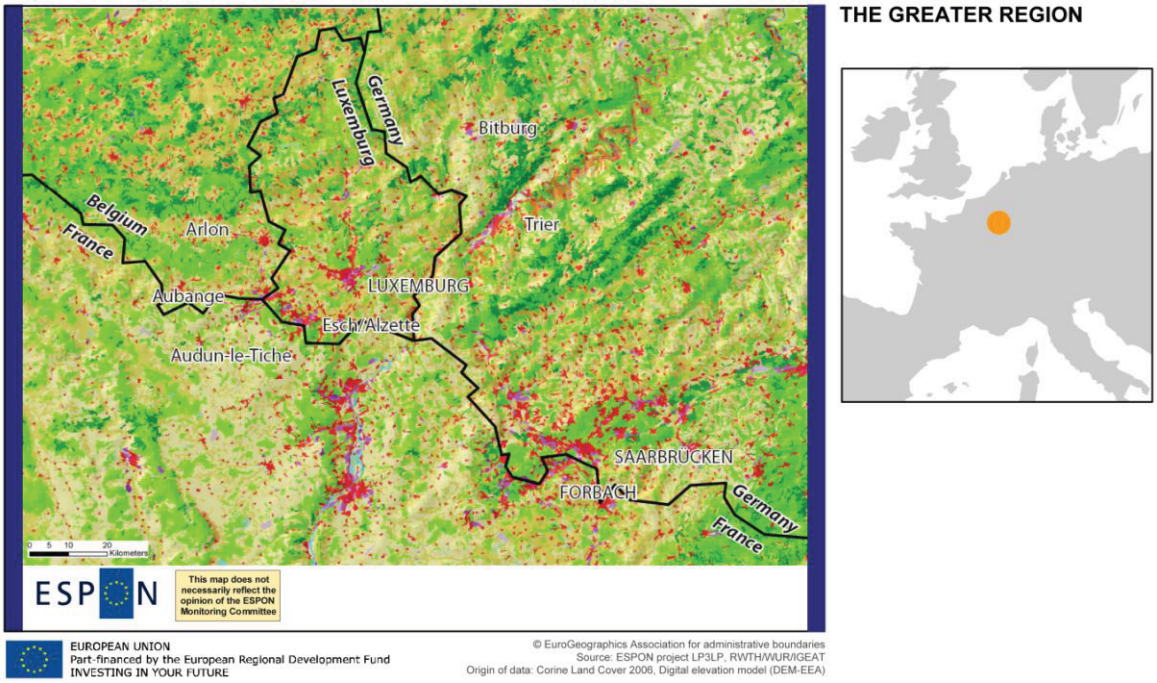
The HCBNP project is, above all, oriented towards raising the inhabitants' awareness of these landscape qualities, and that of all of the parties involved. The economic development policy encourages environmental agricultural practices. The upholding of the production units aims to preserve the region's rural nature. The support obtained thanks to the Interreg IV project has enabled the players to be structured and grouped around the cross-border project, which has been formalized in a contract between the two nature parks (Plains of the Scheldt and Scarpe-Scheldt).

The city/countryside relations in a polycentric system are not found in their park program. It focuses on the protection of the landscapes and the biodiversity, and on eco-efficiency, both by the encouragement to use short circuits and by eco-construction, as well as on the protection of the natural and built-up heritages.

References to the urban area rationales are found in measure 2 of the 2010-2022 Charter of the "Scarpe-Escaut" Regional Nature Park adopted on 30 August 2010. In the "Developing Another Urbanization" section, the Charter lays down this objective: "To Control the Urban Sprawl and the Development of the Infrastructures". Polycentrism can in this perspective be perceived as a reaction to a threat (urban growth) or as a lever (reinforcement of the hubs).

In conclusion, the HCBNP does not incorporate the polycentric dimension. It is perceived as an entity concerned only with the growth of its surrounding urban hubs. It is comparable to the territorial rationale of the Upper Veluwe.

### The Greater Region (LU-DE-FR-BE)




***Map 27 The Greater Region - Source: Corine land cover, Digital elevation model (DEM-EEA)***

Similarities between the Greater region and 3LP is first to be found in dynamic 1 (land use intensification and diversification). Even if the region shows very different patterns of land use according to countries (from rural to suburban areas), the intensification is observable, and mainly through urban sprawl process, even if limited in the Belgian part. This process is to be linked to the dynamic 4 (Metropolization).

Few cross border initiatives that focus on landscapes are to be found in the region. The Euro district Sarre-Moselle is to be cited. The region is in an economical reconversion and aims to implement an integrated strategy for the whole conurbation, based on synergies between areas of each sides of the border. In 2010, after a long process initiated in 1997, a European Grouping of Territorial Cooperation (EGTC) was created in order to implement cross border governance. A shared vision for the future of the Sarre-Moselle region was created and focuses on the fields of territorial development, transport infrastructure, research and education, energy and environment, economy and employment, tourism and culture.

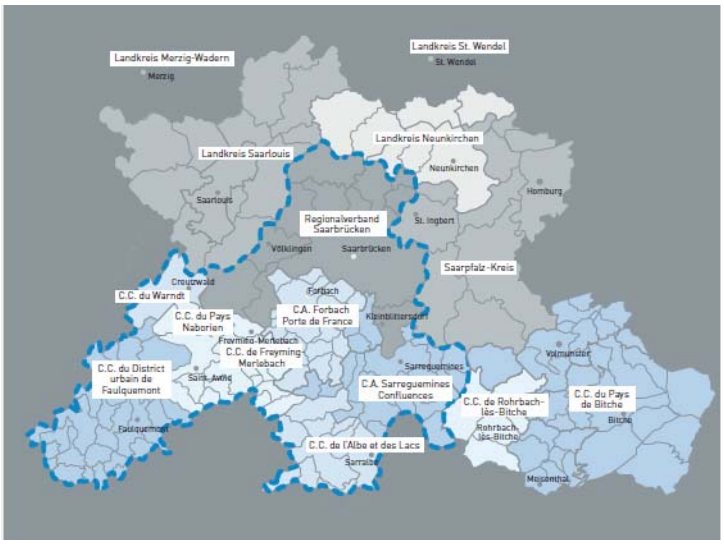



***Figure 10 Perimeter of the Eurodistrict Saar Moselle (dotted blue line).***

***Source:*** [www.saarmoselle.org](http://www.saarmoselle.org)

The three missions of the Eurodistrict are:

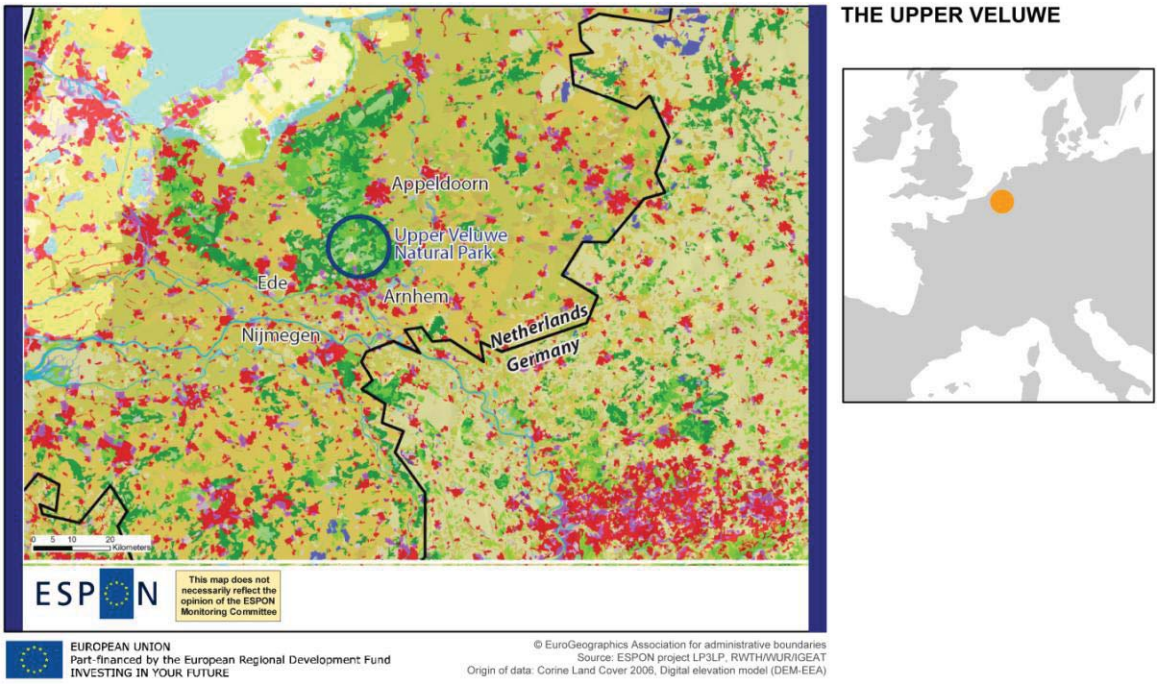
- Elaborating cross border projects of common interest and assist its members in implementing them.
- Support and promote cross border citizen networks that contribute to the realization of Eurodistrict initiative.
- Implement a territorial marketing of the Eurodistrict and promote its interest vis-à-vis regional, national and European institutions.

Even if landscape is not specifically tackled in the strategy, it is integrated in some projects such as “Bande bleue” (INTERREG IVa). This project aims at developing an integrated vision of the Sarre river based notably on a spatial analysis of landscape features.

### II.4.3. Comparing 3LP with two non-cross border regions

In addition to the previous comparison, two cases are developed. Even though they do not show a cross border situation, they might be of interest because of their territorial profile. Each shows a polycentric organization of cities in relation with an open rural area. The two cases are the Upper Veluwe (NL) and Central Tuscany Agricultural Park (IT).

**The Upper Veluwe (NL)**




***Map 28 The Upper Veluwe - Source: Corine land cover, Digital elevation model (DEM-EEA)***

The Upper Veluwe National Park is the only park created by the private sector in the Netherlands (Kroller-Muller), and it has kept a foundation-oriented management structure. The park establishes a natural border with the peripheral hubs without establishing any functional relationships. Several polycentric operational rationales are at work. The FUA of Arnhem is the only one listed in the ESPON nomenclature (ESPON 1.4.3, 2007). The other polarities have not been included and are therefore not regarded as Functional Urban Areas.

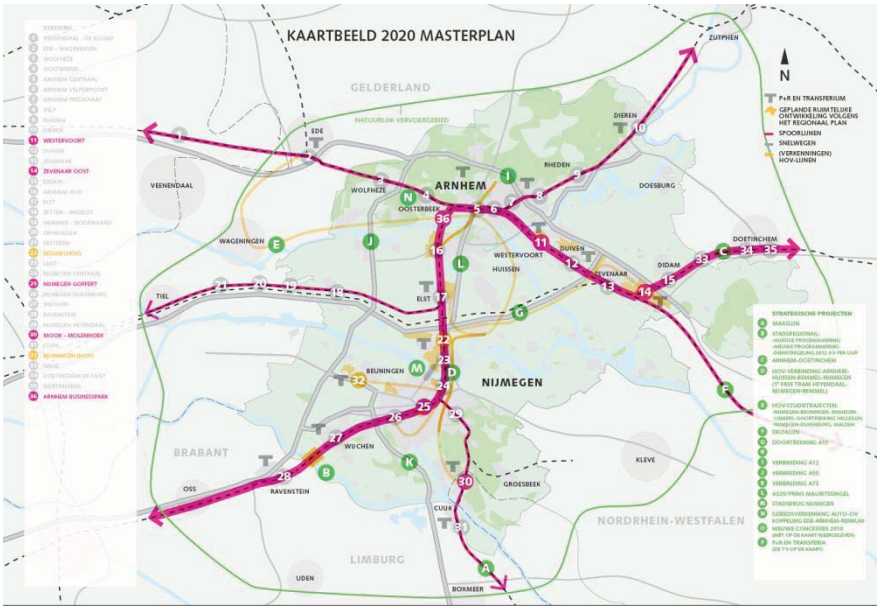
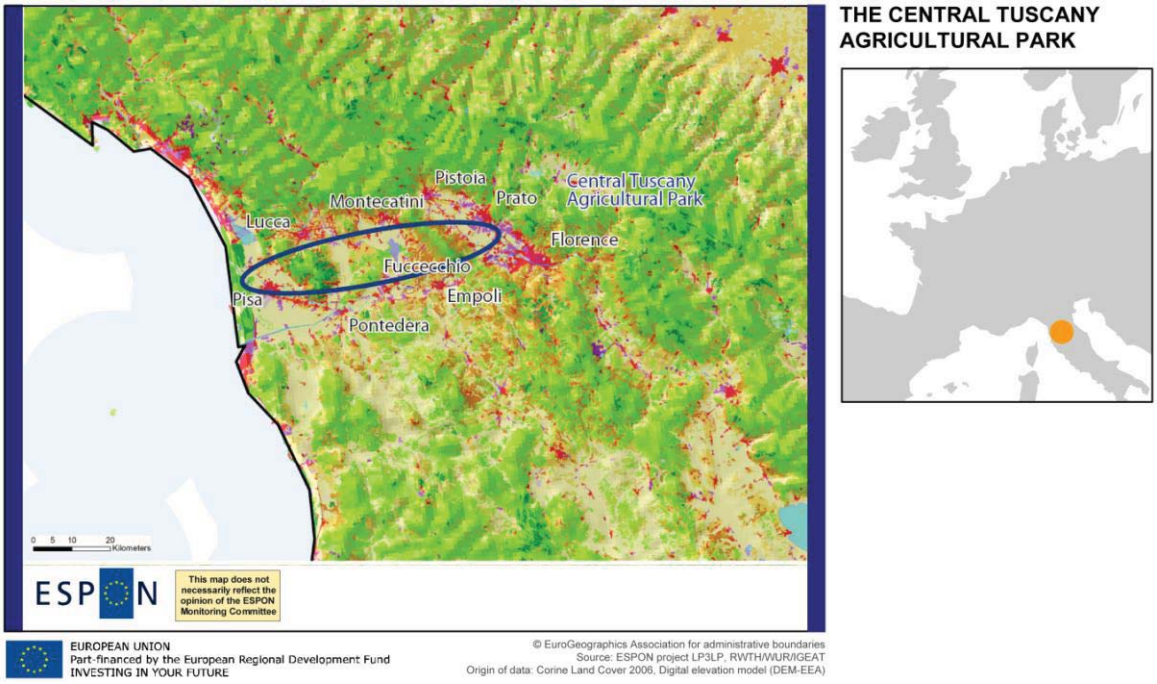



***Figure 11 Masterplan public transport up to 2020 (source: Stadregio Arnhem/Nijmegen & Twynstra Gudde adviseur en managers, 2008).***

The park functions as an isolate rejecting the urban structures on its periphery. This break occurs both institutionally and functionally. Apeldoorn is isolated from Arnhem, which focuses its polycentric development on Nijmegen within the Stadregio Arnhem Nijmegen. The strategic mobility plans are enlarging the Stadregio's area of influence towards the south, forsaking the north of the park. The territory is recomposed in an urban area rationale on two major hubs (Arnhem and Nijmegen) structured around the Rhine.

**The Central Tuscany Agricultural Park (IT)**




***Map 29 The Central Tuscany Agricultural Park - Source: Corine land cover, Digital elevation model (DEM-EEA)***

Tuscany is recognized as a polycentric area historically consisting of a fabric of small and medium-size companies (Burgalassi, 2010). This structuring has been implemented with the objective of minimizing the distances between the employment hubs and the labor pools. The Tuscan polycentric system has been consolidated in the regional plans (Regione Toscana, 2005), which make it one of their main objectives (Burgalassi, 2010). A conurbation between Florence, Prato and Pistoia has been identified as of the Fifties. On this basis, several plans have followed one another until the recognition of this grouping as a metropolitan area in 2000. Schemes are being studied in order to set its objectives and to organize its territory.

The polycentric agricultural park concept is deployed over “the polycentric urban bioregion” (Fanfani et al., 2009). The bioregion is understood to be compost for the reproduction of the local biodiversity. Furthermore, the agricultural park serves as a tool for the conservation of the polycentric structure of Central Tuscany in order to prevent the latter from becoming a single great conurbation. The agricultural park project meets this objective by restoring the historical landscape, by promoting peri-urban agriculture, and by developing tourism and local food-processing. In addition, the exploitation of renewable energy resources via the biomass is encouraged. Participative land management groups have brought the farmers together and have allowed the pooling of tools for the benefit of the smallholdings. Innovative solutions have been suggested in order to preserve the agricultural activities by introducing part-time work with staggered timetables.

The Central Tuscany Agricultural Park project has set up a dynamic favoring the protection of the open space and its memory in the face of urban growth. The interdependences between the cities and the rural territory are woven by resorting to a process without intermediaries. It should be noted that there is however evidence of a demographic decrease, which does not compromise its polycentric structure articulated around effective transport networks (road and rail) (Perrin C., 2009).

Central Tuscany is also envisaged in some studies at various levels that do not intersect one another. The landscape unit, identified as homogeneous, is consequently found to be fragmented in the territorial forecasting documents.

### II.4.4. Discussion over the 3LP urban rural relationship

Periurban Parks exist in order to allay the noted competition between the growth of urban areas and the protection of agricultural areas. They are also the crossroads of the connections within a polycentric area with mobility infrastructures that are structured to varying degrees. The challenges facing open spaces are to preserve recreational spaces for the urbanized areas while enjoying endogenous and exogenic economic development based on a territorial substrate which feeds them on the basis of the present or desired dynamics (agriculture, stock-breeding, forestry, decentralized energy production plants, economic and residential activities, and so on and so forth). They must also prioritize the transport services and connections between the hubs that surround them. The open space in a polycentric system in which city/countryside relations are balanced is an area of resource, articulation and respiration.

The Three Countries Park in its relations with its bordering cities has not yet found its niche in a balanced city/countryside relationship within a polycentric structure that is currently but weakly asserted. The paper will return to this analysis by clarifying it and by setting forth avenues for enhancing the positioning of the Three Countries Park's role in its relationships with the urban polarities. It should be specified that the relations between the hubs and the central area have evolved in the course of time with a stronger intensity and city/countryside dependency, which were more marked during second half of the 19th century up until the first two-thirds of the 20th century. The public transport networks covered and structured the territory to a greater extent at that time than they do now. The concentration of labor-intensive steel and mining employment hubs obliged important relations between the peripheries and the centralities, such as, for example, the movements from the Belgian and Dutch Limburg labor pools towards the industrial region of Liege.

The open space's challenge in polycentrism is indeed to give it a cohesive role while controlling urban growth. That cohesive role should not be limited to the recreational use of the aforementioned territory but should find a balance between the mobility infrastructures, an extensive and intensive multisectoral economic activity, and the organization of residential growth in balance with the traditional village morphology.

It remains to be seen whether the rural area will allow polycentrism to be consolidated on a metropolitan scale by supporting inter-centrality exchanges or whether on the contrary it will be an end-point for each city dweller who will draw his or her reservoir of air from it without crossing it in order to enter the neighboring centrality. Is it necessary to quantify the type of polycentric otherness that is encouraged by the rural area or must it first be positioned endogenously in order then to be able to radiate over the urban areas that surround it?

To do this, the city/countryside relations should be clarified. The ESDP expects from this principle (Zonneveld et al., 2007):

- The upholding of the public transport services, particularly in the declining rural regions;
- The promotion of partnerships for reinforcing the functional regions;
- The incorporation of the metropolitan cities' peripheral countryside's within spatial development strategies favoring the quality of life;
- The promotion and support of co-operation between small and medium-sized towns;
- The promotion of economic networks between rural and urban SMEs.

We are going to see that these objectives are far from being achieved. Ignorance and distrust between the cities and the rural areas, and vice versa, are still much in evidence.

From the beginning of the reflection on the developmental perspective of the polycentric cross-border structure of Maastricht, Heerlen, Aachen, Liege (MHAL) in 1989 and 1990, it has been recognized that the urban areas would be the drivers of that space. This realization dawned first of all on the Dutch government with its fourth regional planning report, which was published in 1991 (Marcou, 1997). It recognized the Maastricht/Heerlen conurbation as the urban hub of the Dutch South. The incorporation of the Parkstad Limburg around Heerlen into the Plus Regio[10] urban system in 2006 confirmed the importance of this zone for the Netherlands' development. However Maastricht and its region were no longer included within the Plus Regio mechanism but were nevertheless identified as an important part of the urban structure of MAHHL (Maastricht/Aachen/Heerlen/Hasselt/Liege). In 1991, the ALMA university cooperation program between the universities of Aachen, Maastricht, Liege and Hasselt also saw the light of day. Several exchange projects have been set up since then and are generating polycentrism of a different form. After having been put on the back burner until 2005, the ALMA network's activity is focused on an annual conference on a biomedical theme (Biomedica Fair) and on targeted exchanges between Maastricht and Liege on particular curricula (HEC Management School / METEOR /Faculty of Law).

[10] The Dutch Act of 24 November 2005, " Wet Gemeenschappelijke Regeling Plus", instituted eight urban areas.

Objective 2 of 1993 perspectives concerning the development of the MHAL area includes, under the heading "Reinforcing Functional and Administrative Cohesion Within the MHAL Region", the following principle: *"Owing to the fact that internal European borders are becoming blurred, the MHAL Region as a whole can increasingly be regarded as an entity of almost three million inhabitants, concentrated in a homogeneous polycentric urban structure of urban areas, surrounded and separated by attractive green areas and open spaces."* (International Coordination Commission, 1993: 7).

Several documents and studies therefore concur in recognizing the MHAL Grouping as a polycentric structure within the overall North-West European structure. This analysis had already been set forth in the analyses of the Conference for the Regions North-West Europe (CRENWE) in the Fifties environment and developed at the time of the CRENWE of 04 February 1970, which had taken place in Maastricht on the theme of the "Hasselt-Liege-Maastricht-Aachen Area"[11]. The MHAL Grouping's potential was recognized by the CRENWE right from the foundation of its first structure in May 1955.

The first CRENWE report furthermore was devoted to the common problems encountered in the interregional complexes such as Aachen, Liege and the Belgian and Dutch Limburgs, where the examination of the pros and cons of cross-border cooperation has been studied. The European Economic Community devoted a first study to cross-border cooperation between Liege, Maastricht and Aachen at the end of the Sixties. By this first study, the Community recognized that this area was exemplary[12]. In 1967, the CRENWE classified the "Land Without Borders" of Liege-Maastricht-Aachen with its 2.5 million inhabitants in Rank 5 behind three Rank 4 conurbations, which for it were: the Randstad (7 million inhabitants), the Rhine/Ruhr Region (11 million) and Central Belgium - North of France (7 million).

On the strength of those foundations, the polycentric MHAL structure is to be found in the main strategic and orientation documents, at every level. The ESDP for Europe in 1999, the outlines of the Benelux Countries' spatial structures (1998), the SDER for Wallonia (1999), the RSV for Flanders as well as the German (LEP) and Dutch (POL) schemes, confirm the interest of developing a polycentric metropolitan structure on the basis of the existing hubs.

Polycentrism has been habitually characterized either on its form (discontinuous centralities not forming an urban area or a conurbation (Morphological Urban Areas - MUAs)), or on the mobility inside an area consisting of several centralities (Functional Urban Areas - FUAs). The measurements that are applied are done so on the basis of aerial photographs and/or a cadastral SIS map for the purpose of identifying the distances between the built-up areas (morphological polycentrism). Either they are done

[11] Conference of the Regions of North-West Europe, fourth study day, "Development of North-West European Area, Three Case Studies" - Hasselt-Liege-Maastricht-Aachen Area, the Report of Study Group 1 composed of experts from the Belgian Provinces of Liege and Limburg, the Dutch Province of Limburg and the " Regierungsbezirk Aachen". Maastricht, 04 February 1970.

[12] CRENWE, Development of the Rhine/Meuse/Scheldt Area, Study Day, 1967, Page 20.

so in the case of functional polycentrism on the basis of the home/work commuting flows, the complementary or competitive activities and the demographic weight. The observation of polycentrism starts almost systematically from a basic premise rather than a critical analysis which determines the potentialities within a reinforcement of the morphological and functional polycentric areas (ESPON 1.1.1, 2005; ESPON 1.4.3, 2007).

These two main categories must be conjugated for a better understanding of territorial recomposition by means of polycentrism. In this case, we will adopt the four interurban polycentric models suggested by Robert C. Kloosterman and Sako Musterd (Kloosterman et al., 2001): the physical form, the shared governance, the functional relations, and the presence of a common identity. The type of facility included in each centrality should be added to these four models.

The following table 4 classifies a sample of polycentric regions (Deûle Park, the Upper Veluwe, Central Tuscany) versus the Three Countries Park that is endowed with a central or axial open space. The three selected examples are potential polycentric urban systems within certain Member States. Two cross-border cases will nurture the reflection thereafter.

The three cases are included within larger groupings: Lille Metropolis or Eurométropole for the Deûle Park, Stadregio Arnhem Nijmegen for the Upper Veluwe Park, Tuscany for Central Tuscany and the MRE for the Three Countries Park. The polycentric groupings constitute the reinforcement of a sub-region where an interlocking of the scales is prevalent. The strong polarization of the metropolitan centers. This interlocking of scales is one of the difficulties of granting open spaces a central place in the structuring of a polycentric system.

No scheme (SCOT, displacement plan in the case of the Stadregio, strategic plan of the Florence /Pistoia/Prato conurbation) coherently covers the planning objectives integrating the polycentric mechanism as a whole. The open space is either a break element that prevents a territory project from encompassing the peripheral towns, or an element of endogenous development with no strong relationship with the urban polarities. The case studies are developed in greater detail hereinafter.

With regard to the governance, in the envisaged examples, the Deûle Park is the only one to be itself constituted as a mixed syndicate with a management structure of the inter-communal variety in order to relieve common city/countryside relationship challenges. However, supracommunality remains an inevitable element allowing the implementation of a shared strategy between the rural and urban communes in the inclusion of the rural territories within a polycentric context. This is a condition sine qua non for the recomposition of the territories on an interdependent basis as hypothesized from a morphological analysis.

All of the presented cases are divided into two main tendencies. The first consists of a pro-active approach of establishing a polycentric system by opening up the hubs by their

connections to the public or road transport networks (Wien – Bratislava metropolitan area (AT-SK-HU)/ mobility plan between Arnhem and Nijmegen). Other polycentric systems have an inherited structure with efficient networks (Tuscany, Deûle, 3LP).

The other tendency is characterized by an attempt to decelerate urbanization and the conquest of the rural territory by strong regulatory protection (HCBNP, Upper Veluwe). Rurality is then regarded as a sanctuary to be preserved. The hubs are rejected from the outside and their connectivity is not encouraged.

In the case of the MRE, a certain mistrust or disinterest is perceptible concerning the articulation of urban/rural areas. The players encountered in the Cities of Maastricht and Liege do not perceive the added-value of the central rural territory in the polycentric structuralization. The territory is more to be organized by formative axes (the Meuse, the Gueule) than by areas (3LP).

In 2003, the Three Countries Park's Developmental Perspectives were trying to limit the urban extension inside the park. The Herve of the Future Project shared this concern and recommended slowing down the urban sprawl while discriminating in favor of endogenous economic growth.

Nevertheless the MAHHL Cities are at the intersection of this protective tendency (sanctuarization / brake on urbanization). They benefit from highly important connectivity, which has been further developed by the installation of heavy infrastructures such as the EuregioBahn or by future ones such as the Spartacus project for a tramway between Hasselt and Maastricht. The importance of the networks sustains the thesis of an important polycentric potential. However, the present dynamics, with a stronger development of the west-east than the north-south axis, confirm the heterogeneous co-operation between the partners noted in the Metroborder study (ESPON Metroborder, 2010). Another source of imbalance is illustrated through the dissimilar GDP per capita (the wealth being concentrated on the Maastricht/Aachen axis). By the same token, the FUAs have a variable population rate (223,000 inhabitants for Maastricht and 742,000 inhabitants for Liege). The available income per capita indicator in 2004 was €9,827 for the Province of Liege (without the MD), €14,885 for the Belgian Province of Limburg, €11,930 for the Dutch Province of Limburg and €16,884 for the Aachen Region[13].

By the same token, it should be pointed out that the leadership is not located in the most populated urban area. Maastricht has a dynamism stronger than Liege with large-scale urban transformations, strong growth of its metropolitan functions (the increase amongst 2006 - 2011 university students was 37% in Maastricht - 15,916 students in 2011 versus 25% in Liege - 20,000 students in 2011 and 19% in Aachen - 35,782 students in 2011)[14].

The resonance of the mining basin and the historical urban reinforcement also make it a fragmented territory.

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[13] Source: E.I.S. (2007).

[14] Sources: E.I.S. (2007) ; Universities; NRW Institute of Statistics (www.it.nrw.de/presse/pressemitteilungen/2012/pdf/264_12.pdf)

In the north and the south-west there are incomers from the mining towns: the Hasselt/Geelen/Alsdorf axis materialized by the Grünmetropole project and the Land of the Slag Heaps, the end of the Sambre/Meuse basin finishing on the Herve plateau in Blegny. Between these two basins, the historical cities are found in a triangle similar to that of the Tuscan configuration.

The polycentricity/city/countryside triptych has difficulty in functioning on a scale such as that of the MAHHL Cities. City/countryside relations, following the example of those of Fordism and the agrarian society, are positioned as the enjoyment of territorial resources (agriculture, recreational areas, production areas and energies) by a dense population in the vicinity. The rural populations, in a two-way relationship, benefit from the close polarity in order to sell their production and to use the available services (welfare, teaching, administrative, commercial, and so on).

The paramount issue is to consolidate and reforge the links between the cities and their peripheries in an objective of territorial cohesion. The rural territory will then be able to have a role of articulation in a polycentric system that consolidates the urban centralities. This system, based on an alliance around the issue of the reinforcement of the hubs, would limit the conquest of the countrysides by the cities while maximizing each territory's resources.

Analysis of the case studies assures us that the central large-scale rural or natural area acts more often as a break than as a vector of territorial cohesion or articulation. In every case, the rural or natural area territorial project is a reaction to urban growth. By the same token, the border that has generated an empty transition area also remains an area of break but with a land potential for certain functions. It is noted furthermore that the urban areas of Maastricht and Aachen are tending to enlarge from the Belgian side (Limburg and MD).

The opening of the borders has entailed sports practice areas for the surrounding urban ones. The development of cycle routes is an example of permeability between the urban and rural areas and of soft connections between the centralities. The commissioning of pedestrian and bicycle ferries on the Meuse illustrates such interconnections.

If we now put the ESDP's objectives concerning polycentrism into perspective (see above), few of the polycentric projects taken as examples are meeting people's expectations. An analysis of the literature shows that the most recent project (Wien – Bratislava metropolitan area (AT-SK-HU)) is presenting the strongest integration between the rural areas and the two metropolises. As far as the MHAL Cities are concerned, the five criteria are not being met with co-operation and planning exercises that do not encompass all of the territory. The rural and urban players do not have a common approach to the issues induced by the city/countryside relations in a polycentric system on a cross-border scale.

| **ESDP OBJECTIVES** | *Mobility* | *Partnerships* | *Spatial Programmes Coordinated at the Polycentric System Level* | *Cooperations* | *Mixed Economic Activity Promotion* |
|---|---|---|---|---|---|
| Deûle Park | No | Yes | Yes. | Yes. | Yes (Eurometropolis) |
| Central Tuscany | No | Yes (in part) | No | Yes (in part) | S.O. |
| Upper Veluwe | No | No | No | No | No |
| HCBNP | No | No | No | Yes | No |
| AT-SK-HU | Yes | Yes | Yes | Yes | Yes (cross-border cooperation) |
| MHAL | Yes (in part): the supply of cross-border public transport is stagnating if not decreasing. | Yes (in part): the current governance favours partnerships of opportunity without real structuring | No | Yes (asymmetrical) following the example of the INTERREG projects, the co-operations are of variable geometry. | Yes (in part): some projects have tried joint promotions without any real success (See: City Centres) |

***Table 4 Summary Table Based on ESDP Objectives (Zonneveld W. & Stead D., 2007)***

In conclusion, the central rural territory plays a different role in a polycentric system according to:

- The spatial project that determines it within a coherent perimeter associating the hubs with the central rural territory (cohesion, functional distribution, attractivity / reconversion, and so on);
- The characterizations of the functional or multifunctional hubs;
- The territories' historical construction;
- The status that is allotted to them (agricultural area, protected area, residential pool, etc.).

The observed projects assign a function to the central rural territories, which determine the more or less strong relations with the polarities of the polycentric system. But generally, it can be seen that territorial cohesion between the urban and rural territories is seldom encountered.

The polycentric grouping of the MAHHL Cities has not currently been cemented around a coherent spatial project in spite of the intentions formulated for more than forty years. The intentions of the Three Countries Park, from the beginning, would be for territorial cohesion be able to be established in balanced relationships. The initial objectives have not been achieved. Urban growth is still much in evidence to the detriment of the rural area, and the territories are still being robustly fragmented by institutional enclaves. Lastly, the socio-economic breaks generated by the infrastructures are contributing to the fractioning of the cross-border territory. These are accentuated by strong competition still present between the main functional hubs (Maastricht, Liege and Aachen). However, projects such as Aquadra and the Three Countries Park will have relevance if they manage to be areas of synthesis by symbolically operating the join between the territories of the two former mining basins of the Meuse and the Campine.

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# III. Phase B: 'Landscape perspective for the 3 Countries Park'

## III.1. Description of the core qualities in the 3 Countries Park landscape types

| | Relief | Water | Green character | Polycentric settlement | Cultural heritage |
|---|---|---|---|---|---|
| **Small-scale open field landscape** | - Loess plateau with a-symmetric valleys<br>- Open arable land on the plateau, views over the surroundings<br>- Dry valleys | - Several small rivers and streams crisscrossing | - Green valleys<br>- Gentle slopes used as pastures or meadows,<br>- Steep slopes with forest or pasture land with lynchets<br>- Wetlands in valleys | - Villages in valleys and on plateaus<br>- Villages surrounded by orchards and house meadows bounded by hedges | - Small-scale open field landscape<br>- Historic villages<br>- Standard orchards<br>- Castles, estates, monasteries and historic farms |
| **Bocage landscape** | - Hilly ridge landscape with a-symmetric valleys<br>- Ridges with views over the surroundings | - Several small rivers and streams crisscrossing | - Pasture landscape<br>- Many hedges<br>- Green valleys<br>- Forested steep slopes<br>- Wetlands in valleys | - Villages<br>- Scattered farms<br>- Sub-urbanisation close to major settlements | - Bocage landscape<br>- Historic villages<br>- Standard orchards<br>- Castles, estates, monasteries and historic farms |
| **Meuse valley landscape** | - Broad river valley bounded by slopes | - Meuse river<br>- Excavation areas (gravel and sand) | - Pastures<br>- Orchards<br>- Wetlands | - River related infrastructure (harbours, bridges) | - Historic villages<br>- Standard orchards<br>- Estates and historic farms |
| **Large-scale open field landscape** | - Loess plateau with gentle slopes<br>- Open arable land on the plateau, views over the surroundings | - Few streams crisscrossing | - Small pockets of forest<br>- Arable lands | - Villages and scattered farms<br>- Villages surrounded by orchards, meadows bounded by hedges | - Standard orchards<br>- Castles, estates, monasteries and historic farms |
| **Forest landscape** | - Hilly landscape | - Springs and creeks | - Different forest types | - Few buildings | |
| **Urbanised landscape** | - Hilly structure<br>- (River) valleys<br>- Artificial hills (mining spoil heaps) | - Meuse river<br>- Small rivers and streams crisscrossing<br>- Artificial ponds | - Urban green<br>- Pockets of cultural landscape | - Urban centres<br>- 20th century urbanised areas<br>- Industrial sites | - Historic city centres<br>- Castles, estates, monasteries and historic farms<br>- Industrial heritage |
| **Peri-urbanised landscape** | - Loess plateau with gentle slopes | - Small rivers and streams crisscrossing<br>- Artificial ponds | - Pockets of cultural landscape | - 20th century sub-urbanisation patterns | - Historic villages<br>- Standard orchards<br>- Castles, estates, monasteries and historic farms |

***Table 5 Showing core qualities of the 3LP in connection with different occurring landscape types***

DIVERSIFIED RELIEF


*Gentle slopes*


*Steep slope*


*Ridge*


*River valley*


*Open plateau*


*Artificial hill*

ABUNDANCE OF WATER APPEARANCES


Meuse river


Jeker valley


Water castle


Vesdre valley


Fish pond


Albert canal

VARIED GREEN CHARACTER


Hedges


Standard orchard


Strip lynchet


Forest


Open landscape


Covered walking trail

***Figure 12 Pictures of the 3LP core qualities I***

POLYCENTRIC SETTLEMENT PATTERN


Aachen


Aubel market


Plateau village


village silhouette


Suburban area


Solitary farm

MANIFOLD CULTURAL HERITAGE


Historic centre of Aachen


Beusdaal castle


Mining settlement Hopel


Val dieu


War memorial


Bocage landscape

***Figure 13 Pictures of the 3PL core qualities II***

## III.2. Objectives in previous landscape studies on parts of the 3LP landscape

*Table 6 Atlas de paysages CPDT Wallonie (Cremasco et al, 2008; Witte et al, 2009)*

| Landscape unit | Landscape objectives |
|---|---|
| **Plateau agricole de l'Entre-Geer-et-Meuse** | • preserve open spaces and limit activities that invade the open spaces;<br>• optimise location choice and development of wind farms with respect to the local landscape characteristics;<br>• revalue the cultural-historical elements;<br>• promote/encourage the appreciation of the plateau-landscape |
| **Vallée du Bas Geer** | • preservation of the agricultural and natural areas between the villages;<br>• preservation of the vista of the slopes;<br>• conservation of the diversity in land use, especially the orchards and hedges;<br>• revalue the different ways to experience the landscape;<br>• redevelop the slopes on the right side where extraction has taken place |
| **Terraces Mosanes** | • Taking care of the old 'open field' landscape by strengthening its identity, settlements surrounded by orchards and open fields on the village territory. |
| **Vallées de Barchon et Blégny / Täler von Barchon und Blégny** | • Preservation of the local hedge structure, especially the standard orchards and the hedge networks;<br>• Reservation/designation/design of new developments in the areas already opened up, in order to stop linear development especially the on the hill ridge;<br>• Preservation and strengthening of the forest strips on the edge of a settlement;<br>• Improvement of the accessibility of the attractive valley floors. |
| **Cuvette central du Pays de Herve / Zentraler Kessel des Herver Landes** | • Protection of the remaining elements of the hedge landscape (dispersed settlements; hedge networks, standard orchards);<br>• Restoration of the hedge networks, with priority for the least damaged parts, slowly expanding from these areas;<br>• Direction of urbanisation, especially around Aubel, Thimister and Charneux, in order to preserve the historic village structures and the scattered settlement structure;<br>• Restrict/ supress settlement development on the surrounding hill ridge - a sensitive area from a landscape perspective;<br>• Supporting the planting of new standard orchards and their maintenance;<br>• Reorganisation of the existing road structure and preservation of field paths. |
| **Bourgs rureaux de Herve – Battice / Ländliche Marktflecken Herve und Battice** | • Design of a long term landscape development perspective for the N3-N627 area;<br>• Cautious relocation of the extension options for the industrial zone;<br>• Conservation of the special silhouette of Herve;<br>• Redevelopment/restructuring the centre of Battice, in order to strengthen the coherence of the central open spaces. |
| **Campagnes périurbaine de Liège et de Verviers/ Stadrandlandschaften von Luttich und Verviers** | • Design of new settlement areas in terms of both dimension and quality, in order to maintain the readability of the landscape;<br>• Recognition/protection of the islands of the hedge landscape as Cultural heritage to protect them from future urbanisation;<br>• Upgrading of the hedge landscape islands as open breathing spaces within the built-up area. |

| | |
|---|---|
| **Vallée de la Gulp / Tal der Gulp** | • Protection of the existing elements of the agricultural and hedge landscape: dispersed settlements, hollow roads, hedge networks, standard orchards;<br>• Limit the development west of Homburg with respect to the landscape identity of the area;<br>• Development of tourist routes and views for non-motorised users and upgrading the educational potential of the valley. |
| **Vallée de la Geulle herbagère / Grünes Göhltal** | • Development/design of settlements focused on the strengthening of village silhouettes and keeping the visible village contours;<br>• Protection of the well maintained hedge landscape zones right up to the built-up areas;<br>• Upgrade/Revaluation of the landscape resources in touristic development. |
| **Plateau de Welkenraedt / Ebene von Welkenraedt** | • Protection of the elements of the hedge landscape, the hedges and bushes, especially the low and long hedges as well as the pollard trees surrounding the pools;<br>• Preservation of the views and open areas in the landscape, especially along the roads;<br>• Development/design of settlements focused on the strengthening of the village silhouettes and keeping the visible village contours;<br>• Attention to the integration of industrial/commercial activities in the existing landscape. |
| **Agglomération de Eupen – Welkenraedt / Agglomeration Eupen -Welkenraedt** | • Controlled urban development around Epen and Welkenraedt with special attention paid to the structuring role of urban extensions;<br>• Development of a strategic perspective for the revaluation/design of the connection to the new urban areas around the N67;<br>• Development of a footpath network connecting the green areas with each other and the surrounding landscape;<br>• Design/development of the valley floor downstream of Eupen. |
| **Arc forestier de La Calamine / Waldbogen von Kelmis** | • Design of the ensemble of buildings, forest and pastures, in order to preserve the special landscape features of the area;<br>• Strengthening of the landscape coherence of the settlement zones. |
| **Vallonement herbagers de la Vesdre et de ses affluents, ouest et est / Grüne Hügellandschaft der Weser und ihrer Nebenflusse** | • Preservation of the landscape structure, especially the hedge landscape on the plateaus and the coherence of the villages;<br>• Strengthening of the valleys by constructing access to the river from the footpaths. |
| **Agglomération de Verviers / Agglomeration Verviers** | • Revaluation of the relationship between city and river, cohering with other landscape design projects;<br>• Development of viewpoints and stopping places along streets that have a strong landscape potential;<br>• Taking landscape design into account in the (re)development of industrial plots, especially when they are along the access into the city or close to the Weser;<br>• Taking the logic of the available building areas into account in urbanisation and conservation of the open areas in the surroundings of the city centre. |

| | |
|---|---|
| **Vallée de la Basse Vesdre** | • Creating public access to the valley floor for walking and daily strolls;<br>• Consultations on the reassessment of the N61 and approach roads between Liège and Verviers, as well as taking into account the options related to the railroad;<br>• Opening up the viewpoint on the valley;<br>• Preservation of the quality of the area between the meander and the Weser/Vesdre;<br>• Upgrading the significant industrial heritage in the valley;<br>• Control the effects of the building of the A605 on the landscape. |

*Table 7 Traditionele landschappen van het Vlaamse Gewest (Antrop et al, 2002)*

| **Landscape unit** | Landscape objectives |
|---|---|
| **Limburgse Maas** | • Landscape and nature restoration at shingle excavation sites, not just recreational development. |
| **Maasvlakte en het terrassenland** | • Landscape and nature restoration at shingle excavation sites, not just recreational development. |
| **Kempens Plateau** | • Differentiating spatial policy aligned with the landscape units focused on the restoration of diversity;<br>• Avoid a uniform recreational monoculture;<br>• Safeguard nature areas;<br>• Keep heathland open, restoration of the stream valleys with enclosed landscape as the structuring elements;<br>• Fitting new infrastructure and industrial development in the existing landscape structure. |
| **Demerland** | • Differentiating spatial policy focussing on the restoration of the diversity and readability of the landscape;<br>• Decontamination;<br>• Preservation of swampy valley grounds;<br>• Restoration of the small scale bocage landscape;<br>• Stop ribbon development. |
| **Demervallei** | • Safeguard watery valley grounds. |
| **Vochtig Haspengouw** | • Safeguarding and maintenance of archaeological and cultural historical heritage;<br>• Limit ribbon development and check on appropriate architecture;<br>• Safeguard the differentiating landscape of the valleys as structuring elements in the landscape;<br>• Improve the connectivity of the green elements. |
| **Droog Haspengouw** | • Differentiated preservation of the open field landscape aligned with the landscape units (preservation of regional diversity), keep agriculture as the main landscape use;<br>• Repress ribbon- and open field development;<br>• Safeguard the differentiating small-scale landscape of the valleys as structuring elements in the landscape;<br>• Maximum protection and restoration of small (linear) landscape elements, improve connectivity of the green elements; |

| | |
|---|---|
| | • Care for architectural and archaeological heritage;<br>• Special attention for soil protection against erosion as part of sustainable development. |
| **Vallei van de Herk en de Momebeek** | • Safeguard wet valley ground. |
| **Land van Herve** | • Safeguard the rural character;<br>• Restoration of the typical hedge structure. |

***Table 8 Erhaltende Kulturlandschaftsentwicklung in Nordrhein-Westfalen – Grundlagen und Empfehlungen für die Landesplanung (Landschaftsverband Westfalen-Lipp and Landschaftsverband Rheinland, 2007)***

| **Landscape unit** | Landscape objectives |
|---|---|
| **Jülicher Börde - Selfkant** | • Suppress (further) disappearance of planted avenues, small forest pockets, wooded banks, hedges, etc. around village areas<br>• Maintain pockets of forest on the edges near Übach Palenberg<br>• Maintain the standard orchards, gardens and small meadows around villages<br>• Preserve mining settlements<br>• Preservation and management of small landscape elements like crosses, small wooded areas, rows of trees, solitary trees<br>• Preserve Mergel- or Löss excavation areas<br>• Preserve historic settlement structure consisting of street-villages, small settlements and scattered farms, with special attention paid in the street villages to the main streets and new-build within these streets<br>• Preservation of the agriculture tradition<br>• Take cultural heritage into account in water-management developments<br>• Restoration/reintroduction of meadows in wet valleys and on the village borders in combination with fallow land<br>• Use of regional building material, also for new buildings<br>• Protection and preservation of border posts and historic town centres, including views and silhouettes<br>• Protection and preservation of castles and mills |
| **Aachener Land** | • Take Aachen as the European centre of the early middle ages as a leitmotiv<br>• Preserve the remaining elements of mining industry<br>• Preserve Copper homesteads and relicts of the metal mining and use them for education on mining history<br>• Preserve the West wall and use for education on the history of the 20th century<br>• Preservation of the settlement structure consisting of street-villages, with special attention to the main streets and new-build within these streets<br>• Take cultural heritage into account in water-management developments<br>• Protection and preservation of border posts and historic city and town centres, including views and silhouettes<br>• Preserve and enhance the experience of the historic roads<br>• Preserve and enhance the experience of the Roman cultural heritage. |

***Table 9 Landschapsvisie Zuid Limburg (Kerkstra et al, 2007)***

Landscape framework:

- Enhance natural and cultural historical structure and expand the typical differences between plateaus and valleys by:
    - Rewetting the valley floors;
    - Planting the valley axes;
    - Extending natural growth on the steep slopes;
    - Planting at the village fringes.

Design measures:

- Steep slopes:
    - Calcareous grassland and thickets on steep limestone slopes;
    - A wooded upper rim, to mark the skyline and continuity of the valleys;
    - The non-limestone steep slopes are wooded (unless arid grassland is planned in the EHS) (p. 78, 79);
    - Vista's from the plateaus are taken into account in planning the wooded areas on the slopes.
- Valleys:
    - Planting of the valley based on the nature of a specific valley, the steepness and length of the valley walls and the width of the valley floor (p. 86, 88, 90);
    - Reinforcement of the wet character by extensifing agricultural land use and stop drainage of seepage and well areas;
    - Put an end to piping and vaulting of streams, restore historic water gardens near castles and estates and the use of water for demarcation (instead of barbed wire, planting and fences);
    - Removal of excess planting around historic buildings and create recreational connections between these buildings;
    - Incorporation of rainwater catchments in the dry valleys.
- Plateaus:
    - Maintain openness of the plateaus, restrict new buildings and planting. Especially on the highest flat parts and their peaks to maintain vistas;
- Village fringes:
    - Planting hedges and re-establish standard orchards on the fringes of historic villages;
    - Design of new village fringes depends on the local situation.
- Roads:
    - Emphasise the old longitudinal connection of the valleys with planting, with the exception of the sunken roads, old national main roads and the system of lanes around estates;
    - No planting on the open plateaus. Reinforcement of the ecological and recreational meaning of the plateaus by broad and extensively maintained verges along unpaved and paved roads.

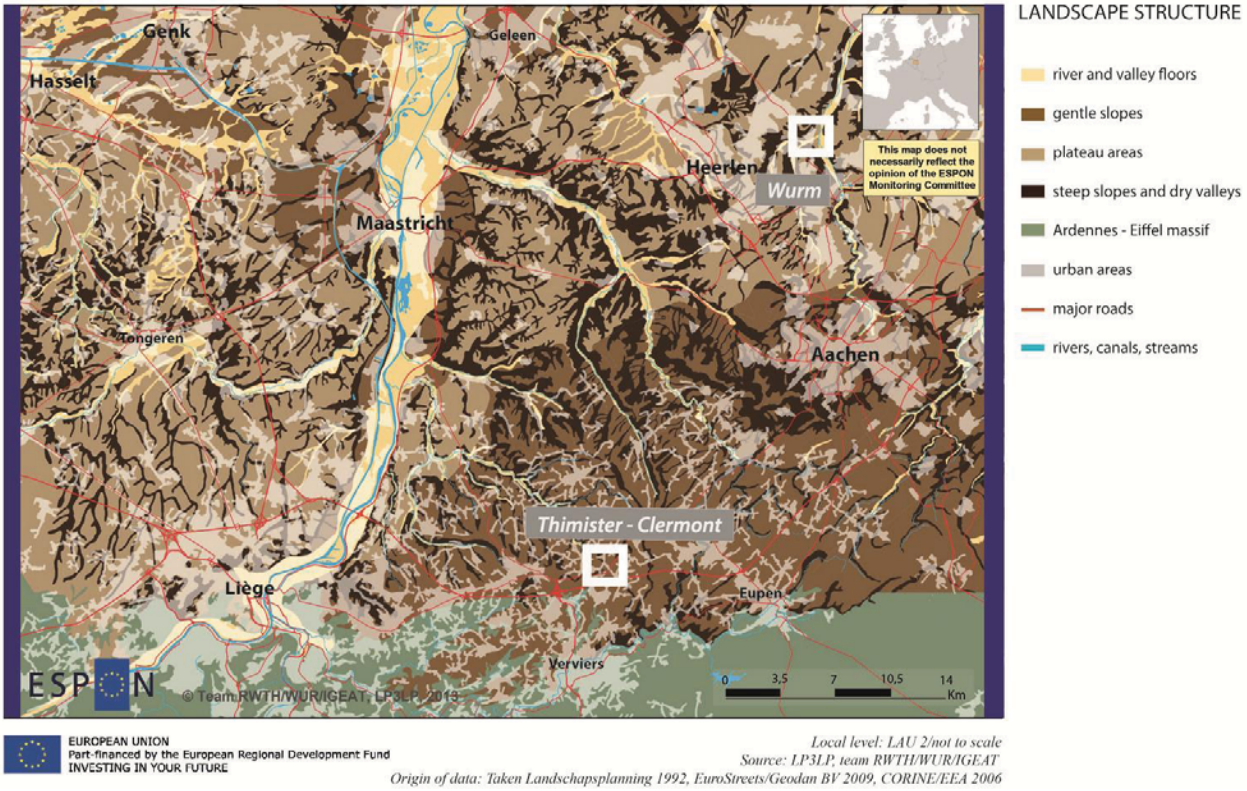
## III.3. Guiding principles contributing to landscape services

***Table 10 Overview of guiding principles and connection to landscape services***

| | 1. Wet valley floors | 2. Forest on steep slopes | 3. Emphasise high ridges | 4. Green village fringes | 5. Restore strip lynchets | 6. (Re-)store standard orchards | 7. (Re-)develop hedge structures | 8. Restore springs and sources | 9. Restricted building | 10. Building fitting in village structure and silhouette | 11. Landscape based restructuring of built-up area | 12. Urban-open space accessibility for slow traffic | 13. Improved access to heritage & nature sites for slow traffic |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Provisioning services** | | | | | | | | | | | | | |
| Provisioning of renewable resources (e.g. water, energy) | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | |
| Provisioning of food sources | | | | ■ | | ■ | | | | | | | |
| **Regulating services** | | | | | | | | | | | | | |
| Carbon sequestration and storage | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | |
| Local climate and air quality regulation | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | ■ | | |
| Water regulation/provisioning of fresh water | ■ | | | | | | | ■ | | | | | |
| Water regulation/moderation extreme events | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | | | ■ | | |
| Erosion prevention/maintenance of soil fertility | | ■ | | | ■ | ■ | ■ | ■ | | | | | |
| Waste (water) treatment and nutrient recycling | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | | | | | |
| Pollination | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | |
| Biological control | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | | |
| **Habitat/supporting services** | | | | | | | | | | | | | |
| Habitat provisioning (incl. habitats along migratory routes) | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | ■ | | |
| Maintenance of genetic diversity | ■ | ■ | | ■ | ■ | ■ | ■ | ■ | | | | | |
| **Cultural & amenity services** | | | | | | | | | | | | | |
| Recreation and mental and physical health | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Aesthetic appreciation/inspiration for culture, art and design | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Knowledge and educational experience | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Spiritual experience | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | ■ | ■ |
| Identity, sense of place, sense of history | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

## III.4. Example locations

The guiding principles, as well as the blue-green and urban-open space framework, are still abstract and developed on a large scale. They need to be elaborated into place-based solutions that include and consider the specific physical and cultural situation at hand. This is an essential part of the landscape perspective and can only be done with the involvement of local people and local knowledge. To give an idea what a place-based elaboration could be, we give two hypothetical examples, one for an area in Pays de Herve around Thimister-Clermont and one for the Wurm near Eygelshoven. Note that these elaborations are just sketches based on the application of the guiding principles on a more detailed scale; in these sketches other spatial issues or developments are not included, nor has there been any input from local stakeholders or specific local knowledge. This means these examples are not 'culturally embedded'. Map 30 shows the location of these examples in the landscape structure map



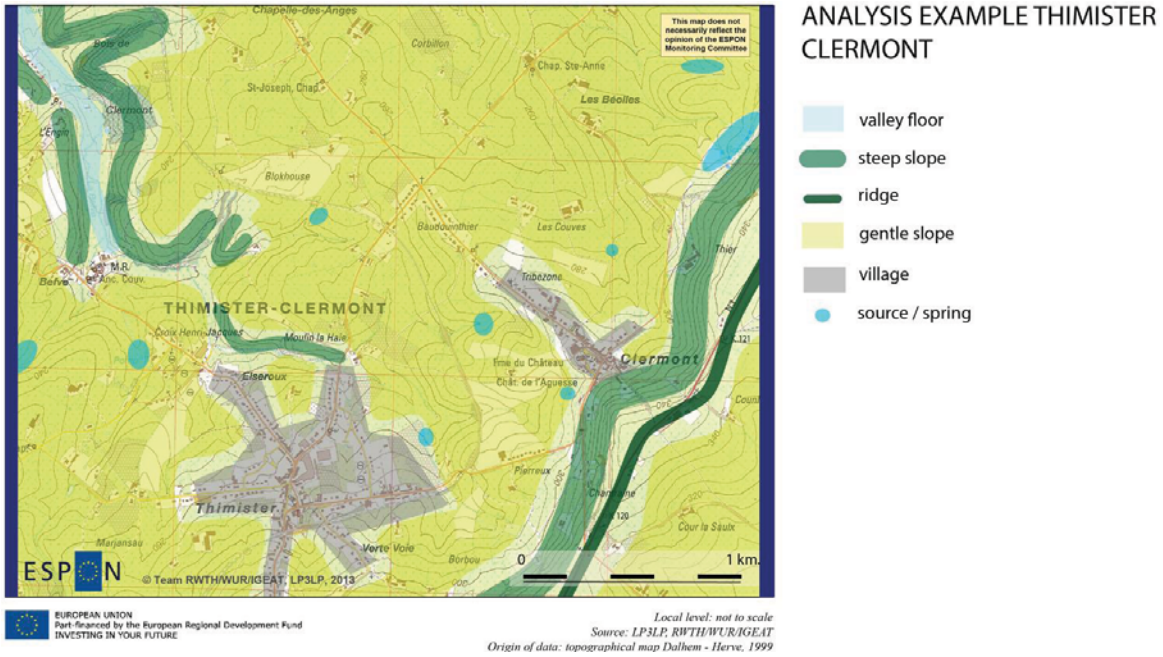

***Map 30 Example locations in the landscape structure.***

*Example 1. Thimister-Clermont*

This example is located in the Bocage landscape of Pays de Herve (BE). Based on its location in the existing landscape structure (see Map 30), indicating a landscape with gentle slopes, steep slopes, ridges and villages, the following guiding principles are applicable:

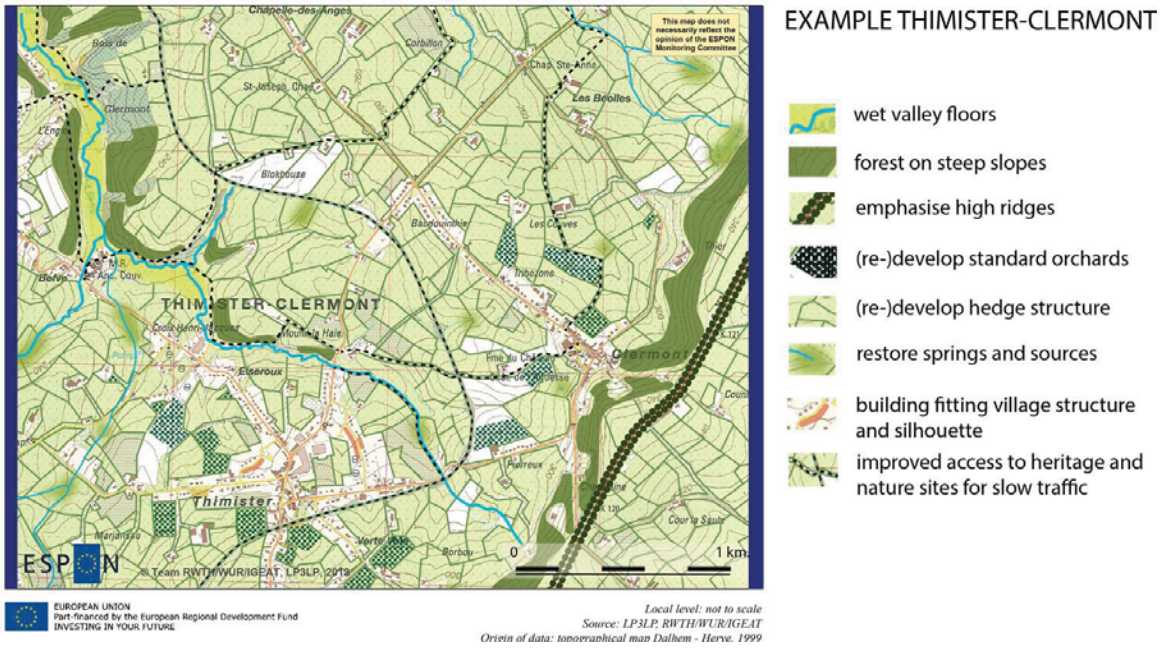
- Wet valley floors
- Forest on steep slopes

- Emphasise high ridges
- (Re-)develop standard orchards (at the gentle slopes)
- (Re-)develop hedge structures (at the gentle slopes)
- Restore springs and sources
- Restricted building (in the rural area)
- Building fitting in village structure and silhouette
- Improved access to heritage and nature sites for slow traffic




***Map 31 Analysis landscape structure Thimister – Clermont location***

Map 32 shows the application of the guiding principles in the area. In the south-east along the N3 the high ridge in this area is emphasised by planting trees on both sides of the road. The steep slope on the west side of the ridge is forested, as are the steeper slopes in the north west. These complement the existing forest on some of the steeper slopes. The valley floor along La Befve is wetted, which means the vegetation will become rougher and takes into consideration the many springs and sources. Throughout the area the network of hedges is restored and intensified. In the neighbourhood of the villages Thimister and Clermont several standard orchards are planted. Building is restricted throughout the area; in the village of Thimister three locations where building fitting the village structure and silhouette is possible are indicated. Finally, a route structure for walking and or biking is indicated, connecting several interesting nature and heritage sites (e.g. the valley of La Befve, historic farms and the village centre).

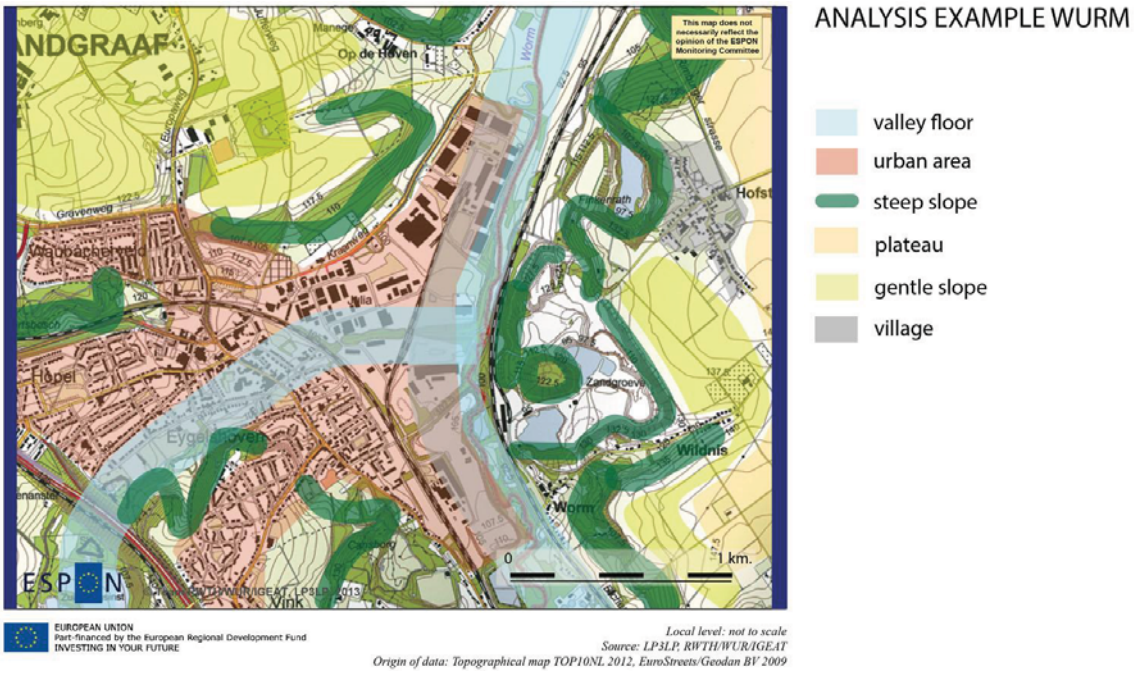



***Map 32 Example Thimister-Clermont***

*Example 2. Wurm*

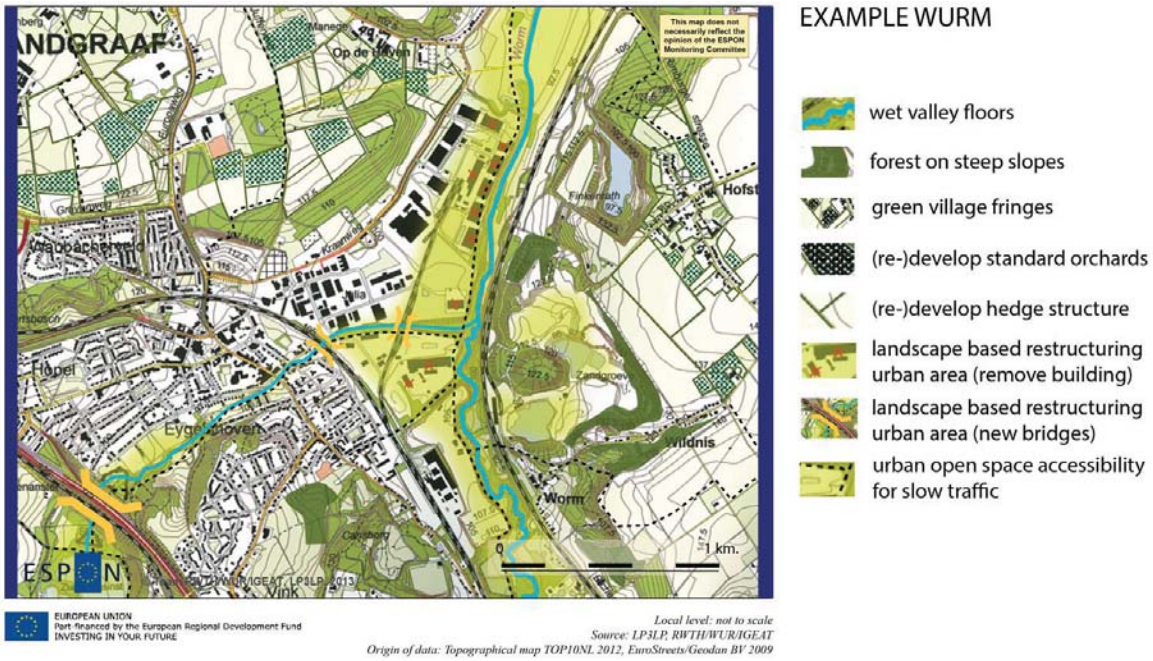
The second example is a part of the Wurm river, located on the border between Germany and the Netherlands as well as the border between urban and rural space. Based on the location in the existing landscape structure (see Map 30) indicating plateaus, river valley and steep slopes, the following guiding principles are relevant:

- Wet valley floors
- Forest on steep slopes
- Green village fringes
- (Re-)develop standard orchards
- (Re-)develop hedge structures
- Restricted building
- Landscape-based restructuring of built up areas
- Urban-rural accessibility for slow traffic.




***Map 33 Topographical map Wurm location***

In this example, the valley of the Wurm guides restructuring of the urban area. Several buildings in the Wurm valley are removed and several measures are taken to resurface and emphasise the stream running through Eygelshoven. Three new, bridge-like constructions for the crossing of the road and railroads will be the biggest operations to meet this end. The sandpit east of the Wurm will be part of the wetted valley floor of the Wurm with forestation on the steep slopes. In the north-west corner, hedges and standard orchards are added on the gentle slopes. Along the small village of Hofstadt, in the north–east, a green village fringe of hedges, small paddocks and orchards is implemented. Throughout the area routes for walking and cycling are developed, improving the urban-open space accessibility (Map 34).

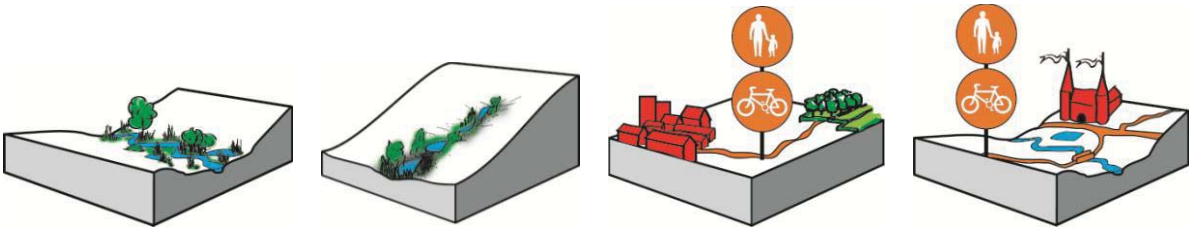



***Map 34 Example Wurm***

## III.5. Examples of local application of the guiding principles - student designs for the Geul/Gulp area

From November 2012 to March 2013 a group of Bachelor students from Wageningen University worked on a design project on the Geul-Gulp valley in the 3 Countries Park area. At the time no guiding principles for the 3 Countries Park landscape perspective had yet been developed. However, the student design work gives, in retrospect, some nice examples of place-based elaboration of the guiding principles.

### 1. Sport Park Wijlre - Gilles van der Heijden



*Wet valley floors* | *Restore springs and sources* | *Urban-rural accessibility for slow traffic* | *Improved access to nature and heritage sites*

This thesis researched and addressed two issues for the redesign of Wijlre Sports Park in the Geul valley, Limburg; these were: improving the local walking routes by connecting existing paths with new routes and drawing attention to the cultural historic landscape of the park, which includes a castle. The broad need identified for the area was preservation of the landscape character.

***Figure 14*** ***Visualisation of the water channels and willow planting around the car parks – one of several water storage solutions for the site.***

***Figure 15*** ***Visualisation of the water channels and new paths connecting the park with Wijlre and other local heritage sites.***

Landscape analysis highlighted the function of water in the valley, and the lack of connection between the park and the nearby town of Wijlre. The design concept, therefore, included the park as a water regulating system, which matched the principles of wetting valley floors and restoring springs and sources. Among recreation facilities and picnic sites the newly designed fishing ponds, and water channel store water, provide new nature areas, draw attention to the castle, and are even included around the proposed car-park (Fig. 16) showing how the wet valley principle can adapt in appearance and function in a heritage or formal setting.

The other major aspect of the design looked at new slow traffic connections and improved access to heritage and nature sites. There was a focus on recreational walkers and strengthening the connections with the surrounding landscape, enabling Wijlre sports park and the town of Wijlre to connect and give better access to several other heritage sites as well as the River Geul itself (Fig. 16).

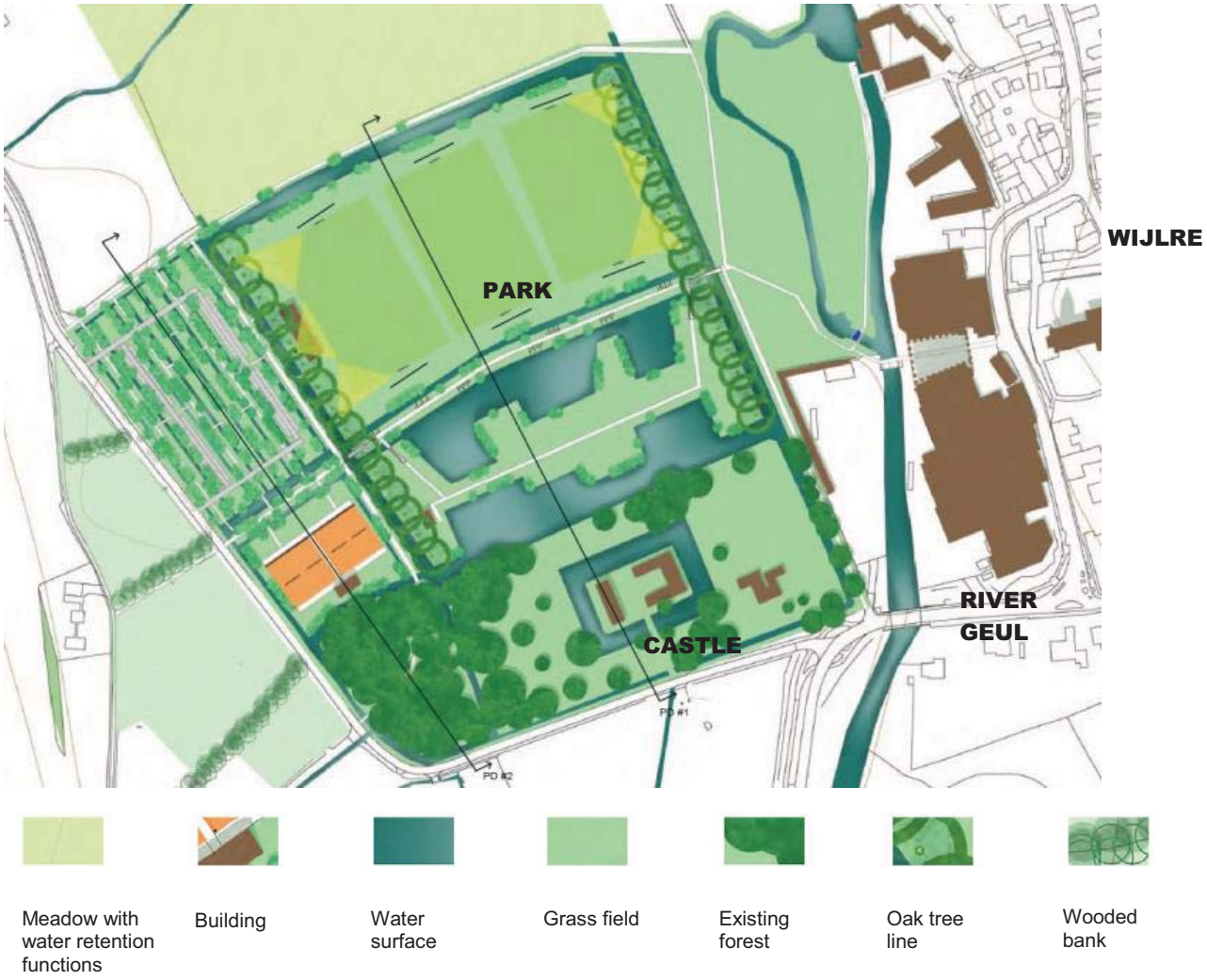
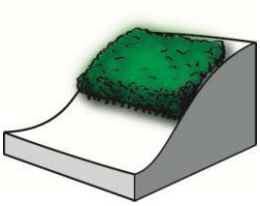
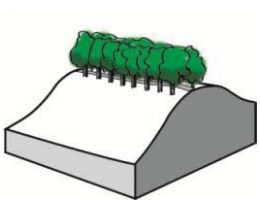



***Figure 16 Masterplan for Wijlre sports park***

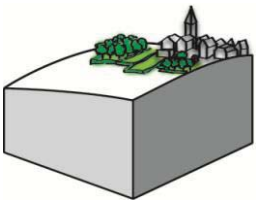
## 2. The Watershed of the River Gulp - Jeroen Grift



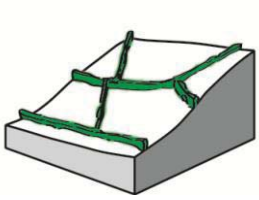
*Forest on steep slopes*



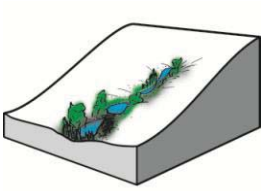
*Emphasise high ridges*



*Green village fringes*



*(Re)develop hedge structures*



*Restore springs and sources*

The area chosen for this design encompasses the whole watershed of the River Gulp, it stretches across one of the Three Countries Park borders, starting in Henri-Chapelle (BE) and ending in Gulpen (NL). The analysis and design references the Landschapsvisie Zuid Limburg (2007) and acknowledges the special beauty of the landscape. Landscape problems noted relate to water management and nature conservation. Throughout the area urban flooding is a problem and run-off causes soil erosion on slopes resulting in smaller harvests for farmers. The main nature conservation issue found was the isolation of the dormouse - a rare species in Holland and Belgium.

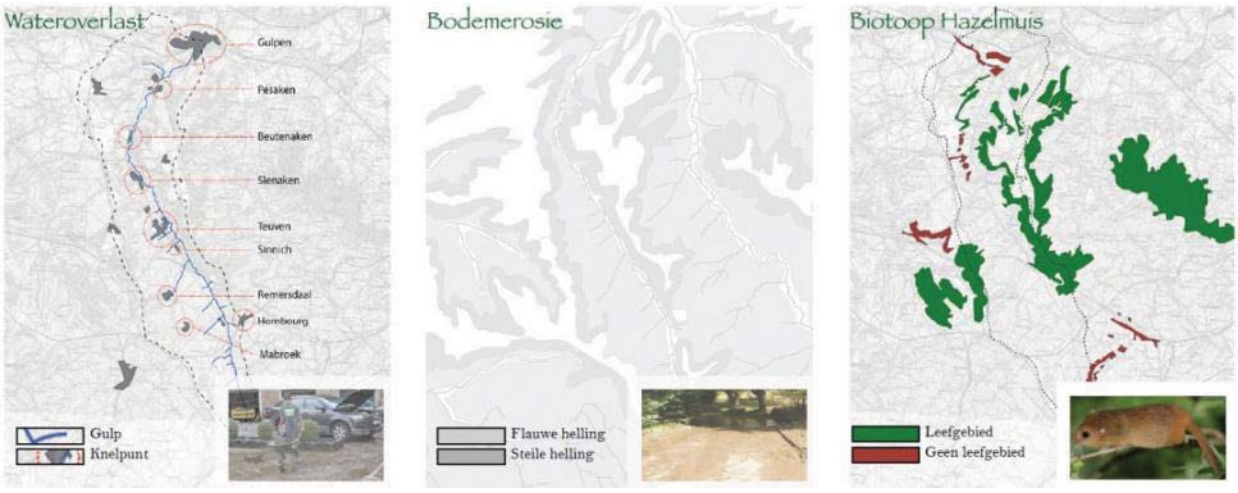
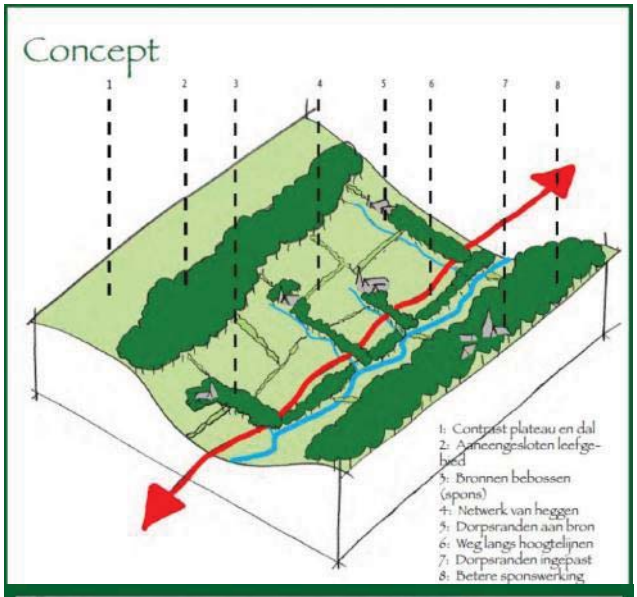



***Figure 17 Three key points raised by the analysis: (left) many areas vulnerable to flooding, (centre) areas on gentle and steep slopes prone to soil erosion, (right) the isolated dormouse habitats shown in green.***

The design seeks to address water management and nature conservation issues using LP3LP principles such as expansion of forest on steep hills, one of the best places for

new forest to retard the movement of water through the landscape and create large-scale habitat for the dormice. Planting around springs also successfully reduces flooding risk as does regeneration of hedges which help control erosion and soil loss. Both principles increase dormouse habitat connectivity and frame the landscape. These measures create contrast between plateaus and valleys. In addition high ridges are emphasised by using tree-lines which again serve as habitat connections for the dormice. The new green network counteracts any negative visual impact of the built environment through better integration of the edges of villages and towns with the surrounding landscape. These measures address flooding and meet the need to connect dormouse habitats while also increasing the contrast between plateaus and valleys in order to enhance landscape experience.



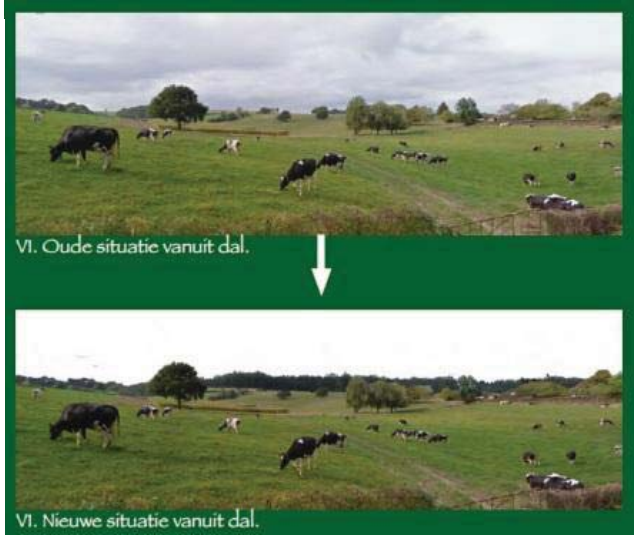
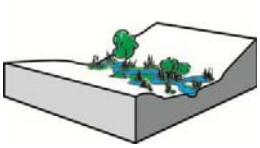



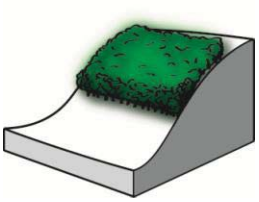

***Figure 18*** ***(left) The foresting of steep slopes, springs, and watercourses in addition to the reconnected hedge structure contribute both to addressing water issues such as erosion and flooding, and to improving the connectivity of dormouse habitat.***

***Figure 19*** ***(below) The view from a valley showing the existing situation (top) and a visualisation of the proposed situation showing the impact of planting bottom).***

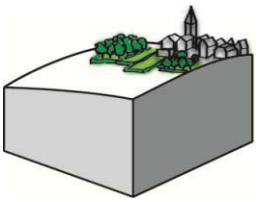
## 3. Connecting the Tree Frog to Limburg's Core Qualities - José Nevenzeel



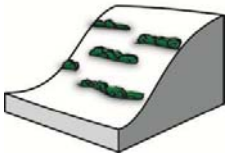
*Wet valley floors*



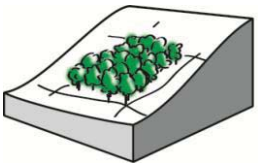
*Forest on steep slopes*



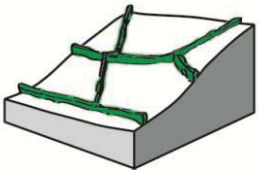
*Green village fringes*



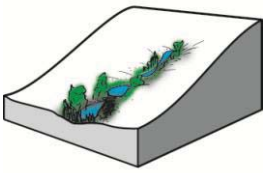
*Restore strip lynchets*



*(Re)develop standard orchards*



*(Re)develop hedge structures*



*Restore springs and sources*

The municipality of Vaals in the Three Countries Park was chosen as the design site for this thesis since it is an area where nature development has a high priority. Yet it also clearly represents the issues of increased precipitation and traditional landscape elements being lost as the province converts to extensive farming practices. This landscape change has resulted in erosion and flooding, as well as loss of habitat which has meant loss of species such as the common tree frog (*Hyla arborea*) whose numbers have fallen by more than 80% in 30 years. The gradual removal of core qualities also negatively impacts the area's special identity, creating poorer nature and recreational experiences, with the consequence that restoration of the core qualities' 'cultural' and, 'scale contrasts' are another design focus.

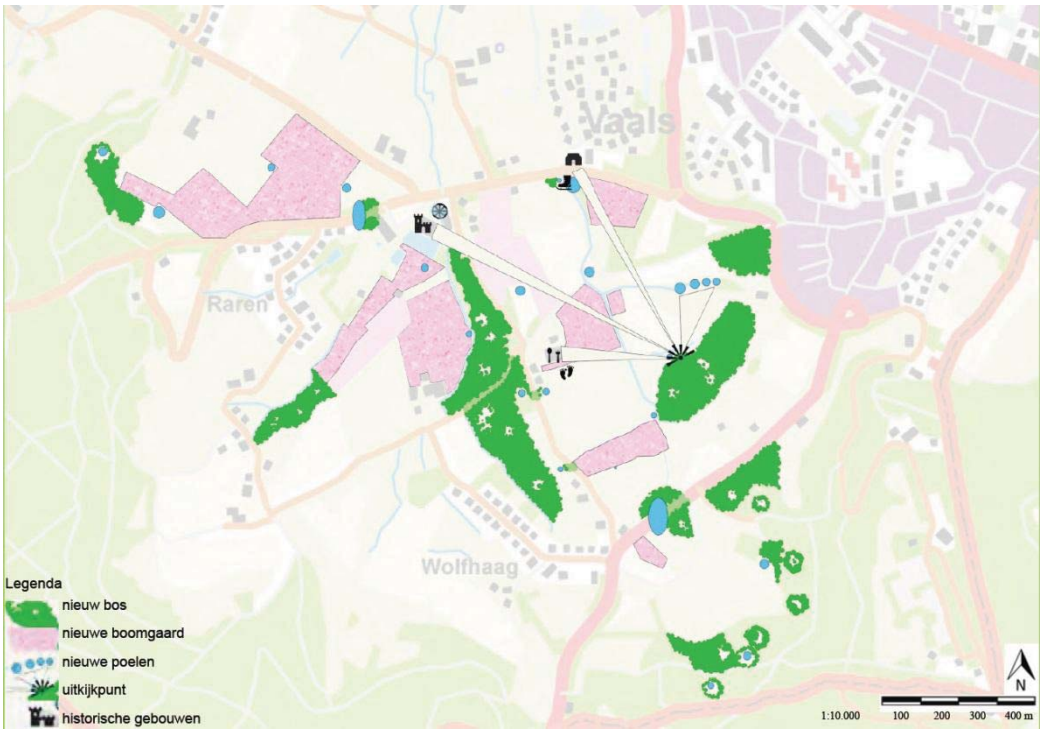



***Figure 20 Proposed new woodland between Vaal, Wolfhaag and Raren.***

The design uses numerous LP3LP principles, mainly through various green landscape elements and tree planting to repair or create connections and habitat for the tree frogs and mitigate flood and erosion problems. Forests on steep slopes, greening village fringes, (re)developing orchards, hedge structures and strip lynchets all also restore the characteristic Limburgian landscape. Barriers for tree frogs are bridged using blue elements too, which are designed to have a visual impact which strengthens landscape experience. Inspiration was drawn from the area's historic fishponds, which were used in the design for tree frog conservation and water retention, including an artistic approach in the form of a mirroring pond in front of the country house "An der Esch" illustrating the more urban context of wetting the valley floors.

*Figure 21 (above) A mirroring pond in front of the country house "An der Esch"*

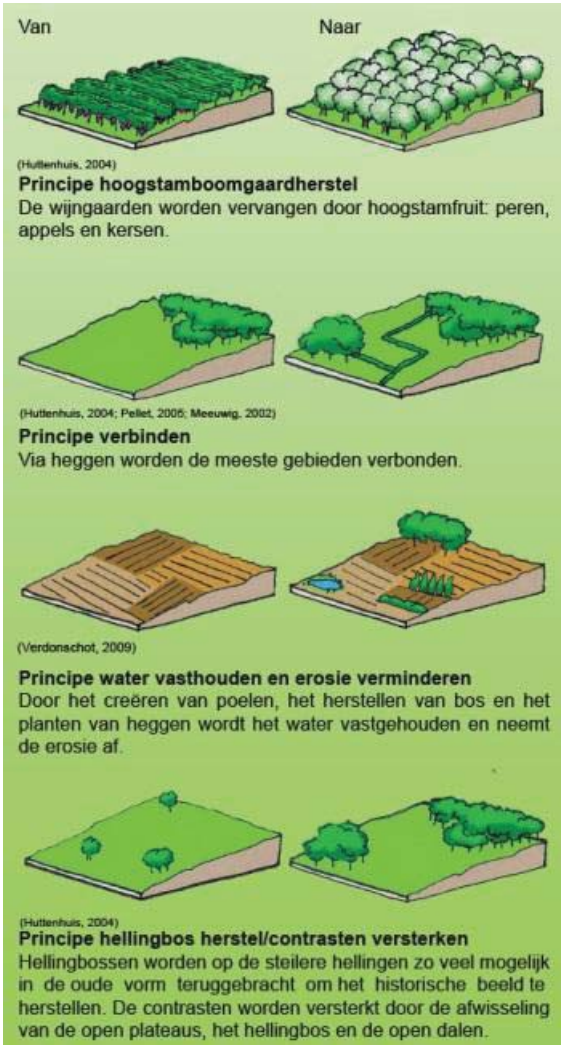



*Figure 22 (left) Design approaches used which are also found in the LP3LP are described here – on the left is an existing situation and on the right, the proposed landscape principle supported by the relevant literature:*

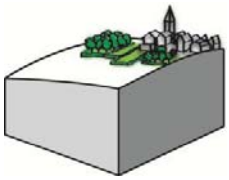
*(Top) management of standard orchards ,*

*(second from top) connection using hedges and other greeinfrastructure,*

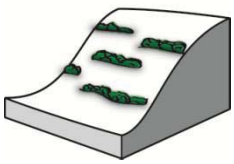
*(third from top) water retention and reduce erosion,*

*(bottom) manage and strengthen hillside woodlands.*

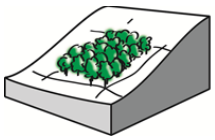
## 4. The Village Edge in Focus - Jacques Reijnders



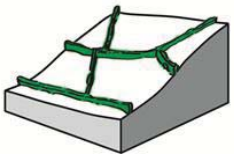
*Green village fringes*



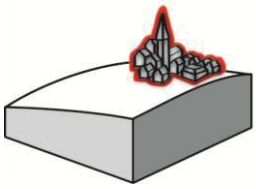
*Restore strip lynchets*



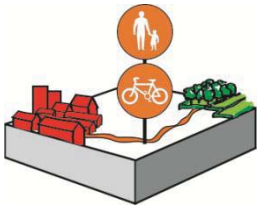
*(Re)develop standard orchards*



*(Re)develop hedge structures*



*Building fitting in village structure and silhouette*



*Urban-rural accessibility for slow traffic*

*Improved access to heritage and nature sites for slow traffic*

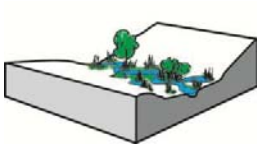
This thesis focuses on the Geul Valley, part of the Meuse basin which begins in Germany and passes through the Netherlands and Belgium. It looks at the expansion of the ribbon development pattern, which it concludes has reduced landscape character, as has the loss of green landscape elements which it replaces. In addition, high water levels and flooding of the River Geul during and after storm events creates a need to ensure that water stays longer on or in the land before it is discharged into the river.

The response to cluttered village edges - which have totally lost connection with the surrounding landscape - reflects LP3LP principles of green village fringes (through orchard (re)development and new buildings being incorporated into existing village structures. It reinstates lost landscape elements such as strip lynchets and hedges, which also consciously addresses flooding, while providing aesthetic value and preserves landscape character. New walking routes are provided into surrounding countryside of the village, reflecting the two LP3LP principles addressing improved accessibility for slow traffic. The edges of the villages of Wijlre and Stokhem in the middle of the Geul valley are used as design examples and show the effects of the principle of green village fringes.

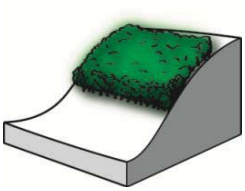
*Figure 23 Southerly entrance to Stokhem*

*Figure 24 Eastern entrance to Stokhem*

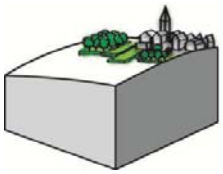
## 5. The valley around Epen - Liz van den Broek



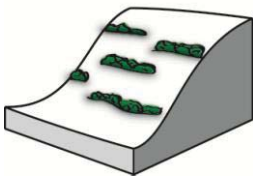
*Wet valley floors*



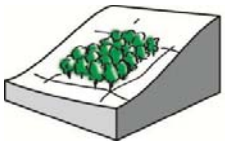
*Forest on steep slopes*



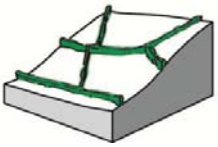
*Green village fringes*



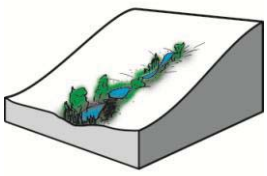
*Restore strip lynchets*



*(Re)develop standard orchards*



*(Re)develop hedge structures*



*Restore springs and sources*

*Improved access to heritage and nature sites for slow traffic*

The valley around Epen, Limburg, represents the last stronghold of the native dormouse in the Netherlands, with the linked issues of increasing agricultural scale, and flooding. This thesis design proposal works with forests on steep slopes, wetland nature areas, and reinstating orchards and hedges to strengthen and preserve characteristic features of the cultural landscape in a way that would concurrently improve the habitat of the hazel dormouse and reduce floods.

Enriching, enlarging, and connecting habitats utilises many of the LP3LP principles, for instance by planting forest on steep slopes. This also prevents floods and reduces soil erosion. Wooded banks and hedges alongside roads and parcels of land provide water retention and are an expansion of the habitat of the dormouse, all done using the principles of redeveloping and restoring the area's typical green landscape elements. Also in line with the principles are the preservation and development of orchards at the edges of villages and other built areas. These provide habitat and hide cluttered landscapes such as village edges. New walking routes are provided through new nature areas, for instance in the lowest areas wetland will be created which will make the river more visible in the landscape and strengthens the closed feeling of the valley landscape experience. The vegetation in this lower area will also prevent peak discharges by delaying the flow of run-off in storm events.

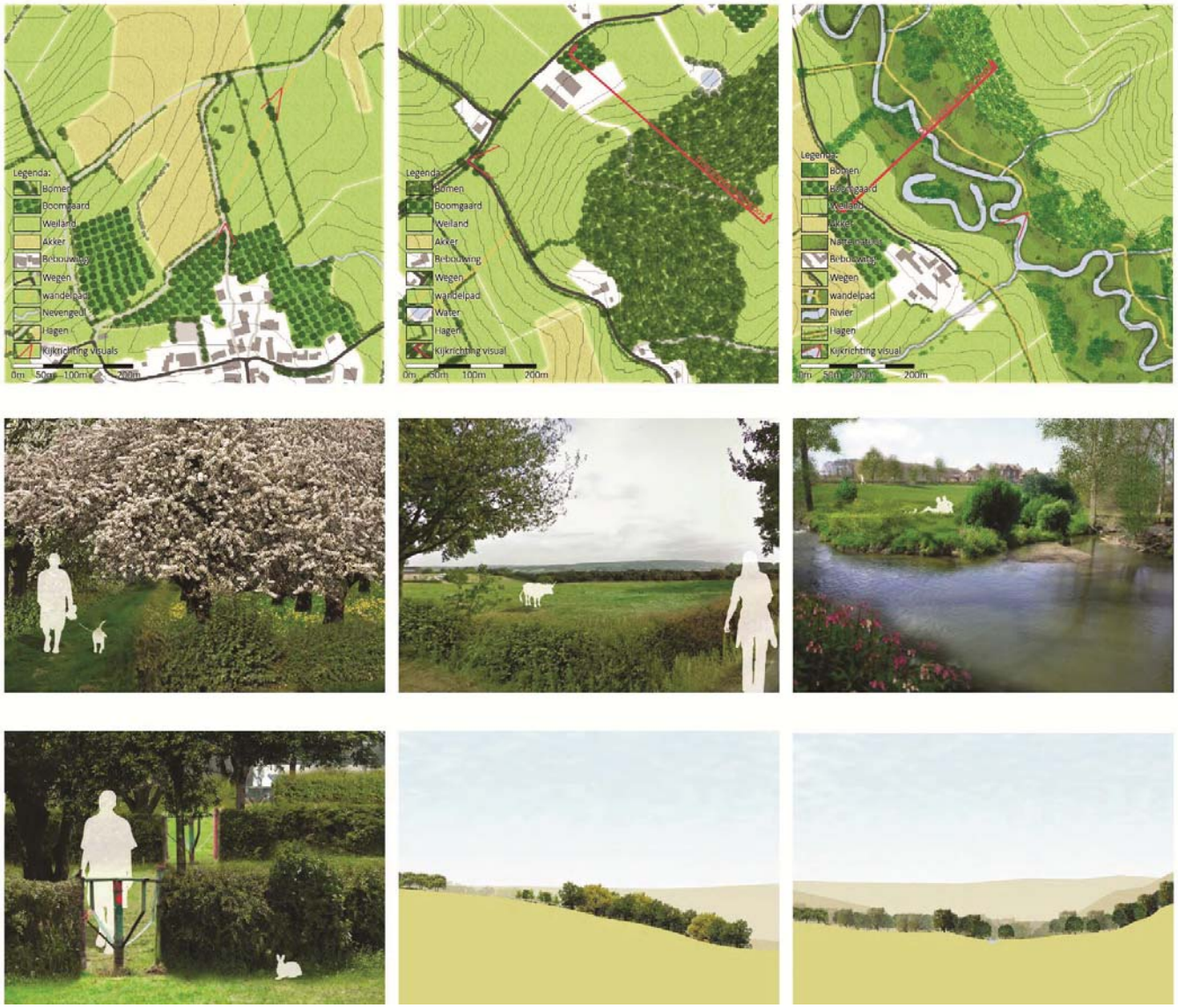
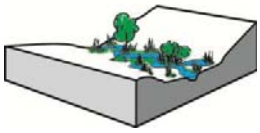
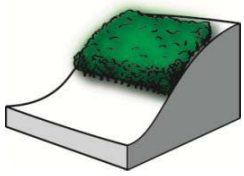



***Figure 25*** ***Plans, with visualisations below, of the main design foci: (left) orchards around the village edge, (centre) forest on steep slopes, (right) a rewetted river valley.***

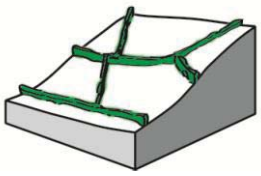
## 6. Healing Hills – Marsja Bongers



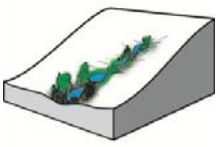
*Wet valley floors*



*Forest on steep slopes*



*(Re)develop hedge structures*



*Restore springs and sources*

*Improved access to heritage and nature sites for slow traffic*

For this thesis an area north-west of Mechelen was chosen, where the characteristic regional landscape elements were present: plateau, steep slope, valley and gentle slope. The focus was on using knowledge of how interaction with green elements and landscapes could be used to design for a centre for children undergoing chemotherapy. This was inspired by the fact that there are three academic hospitals in the Three Countries Park which specialise in children's health, and by the varied and beautiful landscape in the region. A centre, with new walking routes, framing views and making nature accessible, are the main aspects of this design and reflect the usefulness of the principle of improving accessibility to nature areas for slow traffic. Planting around natural springs and increasing woodland were too interventions to increase a positive nature experience.

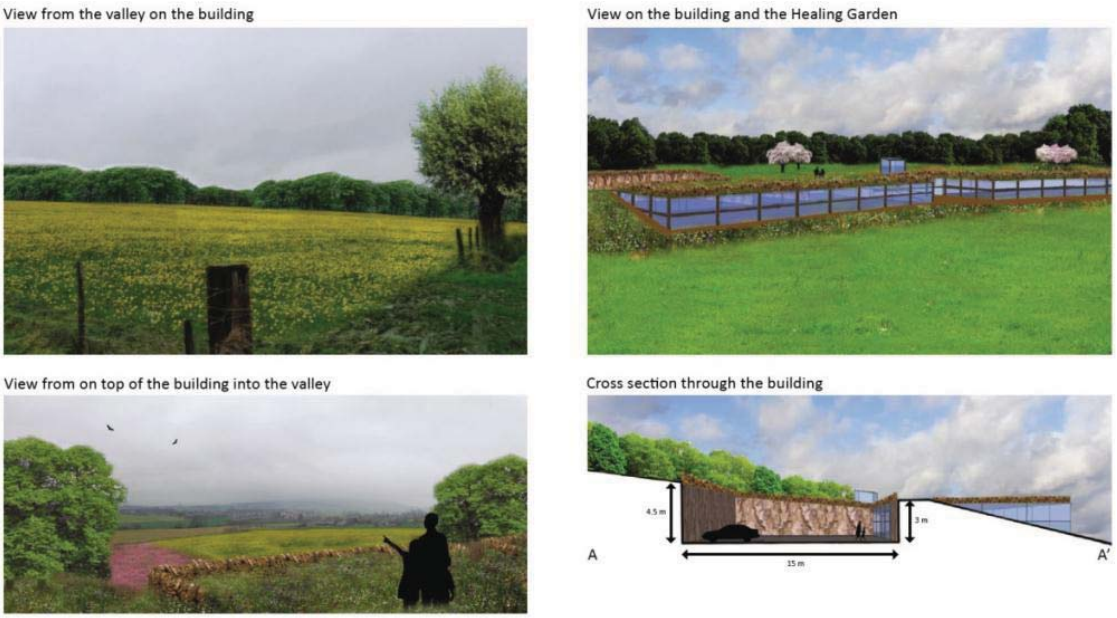



***Figure 26 Visualisations and cross-sections of the children's centre***

Interestingly the analysis of the landscape caused reflection on how to incorporate a building into an un-built environment. The testing of placement (see Fig. 27) involved screening the construction with trees while attempting to leave an open view of the landscape for the users of the building. In the final design the building has to be embedded into the landscape in order to disturb the landscape quality and experience as little as possible. This reflects the extreme difficulty in placing new-build in rural settings. Although this thesis does not use the LP3LP restricted building principle explicitly, it demonstrates the importance of its role. For, in accepting this as the only solution to building in such areas, we must also accept that not every type of building can be dug into a hillside and that it would be impractical on many sites due to geology and water issues.

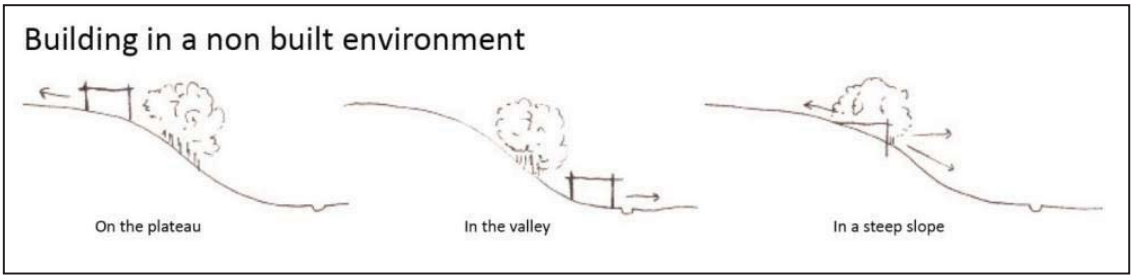
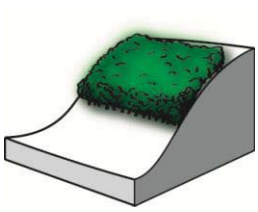



***Figure 27 Testing placement principles for buildings in hilly 3LP terrain***

## 7. Hills of Wellness - Mike Tomassen



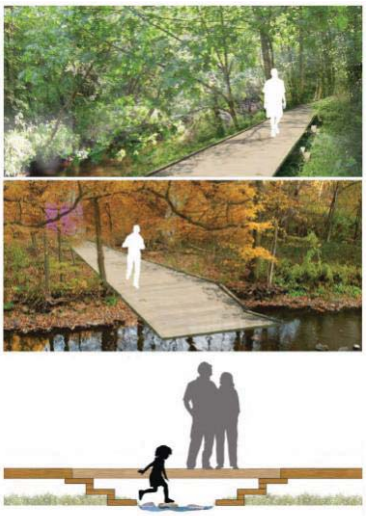
*Forest on steep slopes*

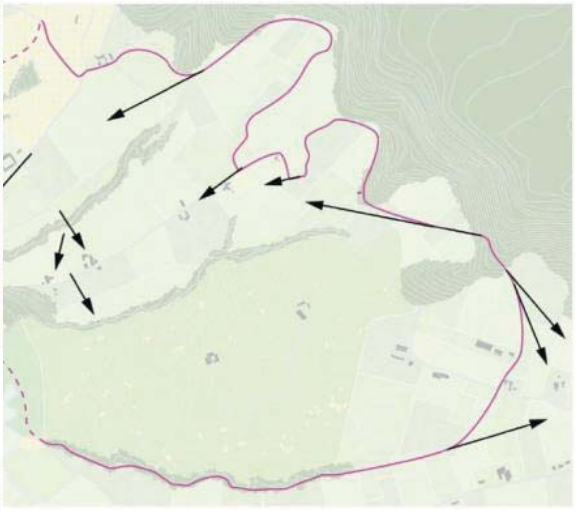
*Restricted building*

*Improved access to heritage and nature sites for slow traffic*

This thesis used health-tourism to structure a design in the countryside of the Geul Valley straddling the Dutch and Belgian borders. The design aimed to highlight and use the characteristic regional landscape qualities of varied terrain, contrast, green character, and cultural history to provide a holiday experience truly connected to the landscape.

The design centres around a new cluster of basic holiday accommodation including a tree-house, sauna, and meadow cabin. The application of LP3LP principles can most clearly be seen in the increased woodland planting and the wellness route which creates new pathways for walkers to experience the landscape in new ways and the addition of orchards.





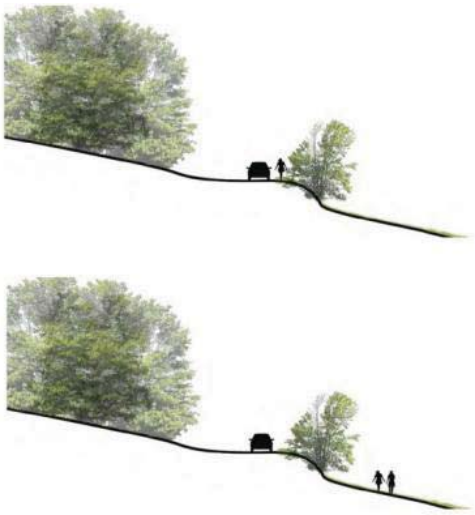


***Figure 28*** ***(left column) Visualizations of the new walking routes, and cross-section of the interactive stream-crossing.***

***Figure 29*** ***(middle and right) Map view of the new walking routes and their planned views, (right) cross-section of the old (top) and proposed (bottom) walking routes alongside roads.***

## III.6. Comparing the Guiding Principles with Existing Cases

The Landscape Framework and guiding principles were formulated after analysis of and consultation on the 3LP area, but they also build on a shared, cross-border set of objectives derived from previous landscape studies of various parts of the 3LP region: *Atlas de paysages CPDT Wallonie (Cremasco et al. 2008; Witte et al. 2009)*, *Traditionele landschappen van het Vlaamse Gewest (Antrop et al. 2002)*, *Landschapsvisie Zuid Limburg (Kerkstra et al. 2007) and Erhaltende Kulturlandshaftsentwicklung in Nordrhein-Westfalen (Landshaftsverband Westfalen Lippe and Landshaftsverband Rheinland, 2007)*.

The guiding principles were developed for the LP3LP, strongly based in the cross-border landscape context, and draft versions were used to consult with stakeholders in order to test their validity and potential. At the LP3LP Workshop, 21st March, 2013, stakeholders were invited to present case studies from their region for discussion in order to consider how the LP3LP landscape framework and guiding principles relate to the way the stakeholders work with the challenges they face. Also, to establish whether the framework provides them with opportunities or potential restrictions, and to discuss what, if anything, is missing.

Three extremely relevant cases, illustrated with maps, photographs and documents, presented an example range of challenges and landscape type and scale. They gave an interesting and important opportunity to see parallels to the guiding principles in existing practice in addition to raising discussion and proposals over their potential use. The broad findings from the group discussions were that most of the landscape framework and guiding principles were relevant and were reflected in best practice; additionally that they presented the participants with new possibilities to address (multiple) problems on a landscape level (rather than site by site), and to communicate across disciplines to achieve multiple common goals.

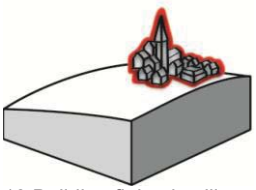
## Case 1 - Richterich urban fringe, city of Aachen, DE


***Figure 30 Plan of the Richtericher Dell development***

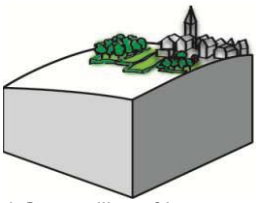
*Image source:*
*www.aachen.de/DE/stadt_buerger/planen_bauen/_materialien_planen_bauen/stadtentwicklung/stadtviertel/richtericherdell/RDA___bersichtsplan_1-1000.pdf*

Urban expansion is a particular challenge to the 3LP which is striving to protect its iconic green character. From the City of Aachen, a case of urbanization on the northern edge of the city was used. A new residential development called 'Richtericher Dell' is in its first phase and will eventually cover 37 Ha. of high-quality farmland. Aside from the use of productive land for urban expansion, the ecological impacts of the case relate to soil and water rather than to rare plant or animal species. This is a plateau site with an urban-edge context, which are two elements addressed by the landscape framework.

**APPLIED**

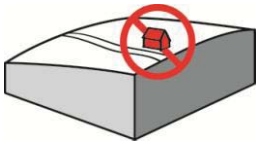
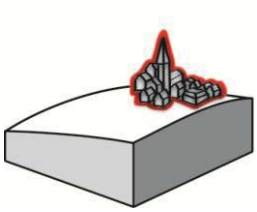
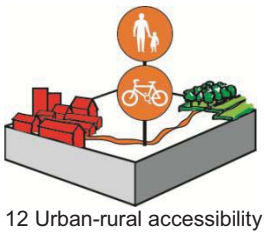


10 Building fitting in village structure and silhouette



4 Green village fringes

The German planning system ensures new-build is compact and includes green space, so principles of including/ rehabilitating green village fringes and fitting new building into existing development are easily met. In this example, principle 10 had been respected through tight connection of new development to existing development infrastructure. The positioning of compensation green space on the edge of the development area reflects principle 4. The ecological impacts of development on water and soil are addressed by these principles, since compact development limits area of impermeable surface and dedicated green space with trees improves natural water management and soil function.

| | | |
|---|---|---|
| APPLICABLE |  <br>9 Restricted building | It was not known whether the principles of not building on high ridges or conserving the visual integrity of heritage skylines were explicitly considered in this case. However, since the site was positioned on high ground these landscape framework considerations could have contributed to preserving landscape character (e.g. the view from the outside). |
| |  <br>10 Building fitting in village structure and silhouette | |
| |  <br>12 Urban-rural accessibility for slow traffic | Edge development projects could also take a proactive role in the design or improvement of urban-rural accessibility. |

The guiding principles relating to plateaus were all relevant to the development, even in an urban and large-scale context. Germany has a best practice measure of nature or green space compensation for new-build areas. In this case, where the edge of a building zone was reached, compensation came in the form of designed green space around the outside of the development. For German areas of the 3LP the site-relevant guiding principles of the landscape framework could help give local meaning to this legal concept of compensation, formalising the improvement and development of the 3LP landscape character.

**Case 2 Concept plan for riverside rehabilitation–Herkenrader Grub, Provincie Limburg NL**

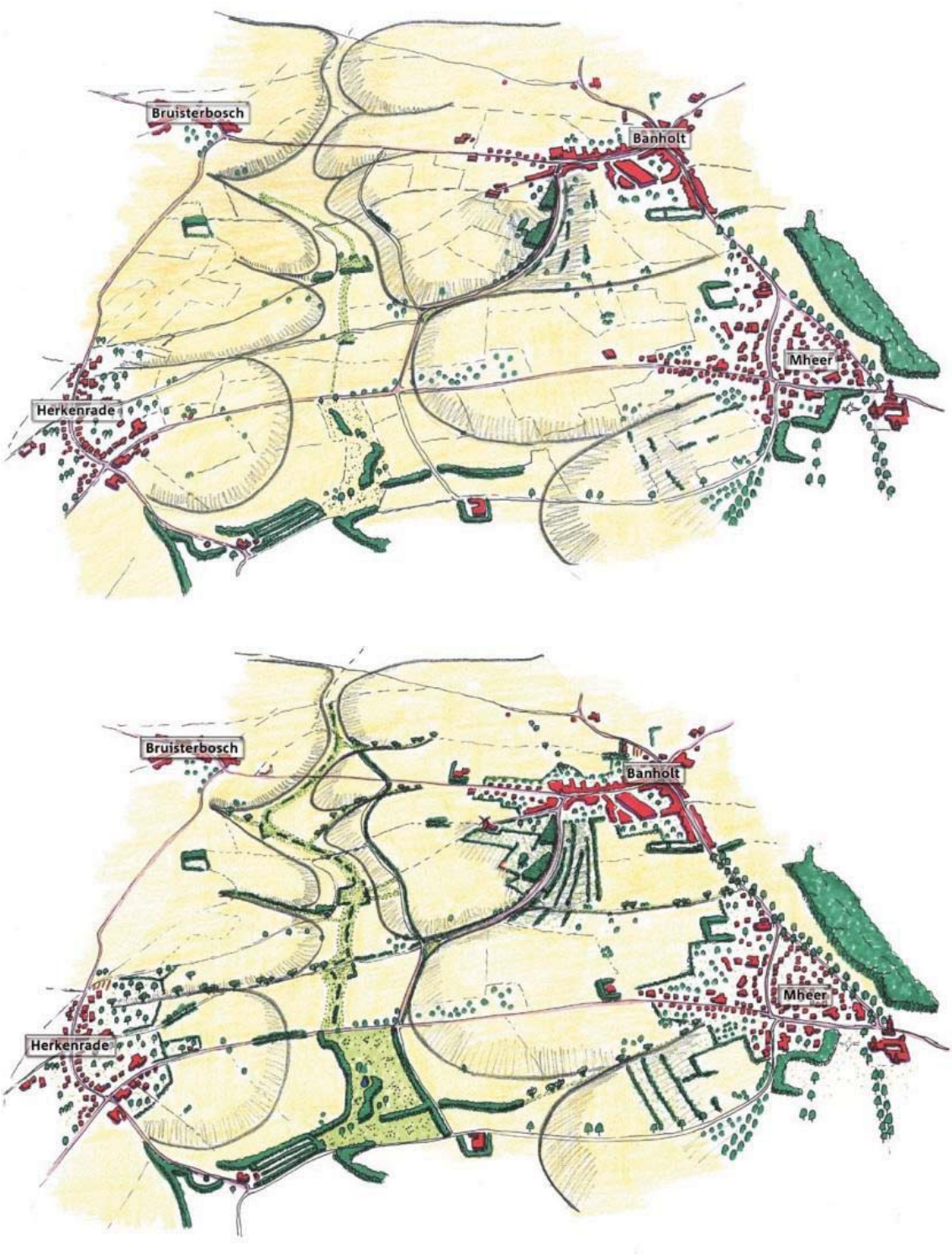



***Figure 31*** ***Existing Situation – Herkenrader Grub, Provincie Limburg***

***Figure 32*** ***Proposed Situation – Herkenrader Grub, Provincie Limburg***

*Images source: http://www.herkenradergrub.nl/pages/documenten-kaarten.aspx*
*Herkenradergrub Integrale Gebiedsuitwerking – Inrichtingsplan. 2010 Provincie Limburg. p.12*

A larger scale, rural case study in the municipality of Margraten, was reviewed, which took the form of a project proposal for a multifunctional regeneration project. It involved developing the recreation and archaeological potential of a valley section totalling 500 ha. lying between Herkenrade, Bruisterbosch, Banholt and Mheer. The plan originated from the local authorities who saw the potential to realise further agricultural, erosion, landscape, nature, and recreation improvements. Among the guiding references for the project was the *Landschapsvisie Zuid Limburg* - one cornerstone of the LP3LP framework. The recreation aspect of the project involved making an archaeological site and the valley floor accessible for slow traffic; ecological aspects were addressed by converting arable land to pasture to combat erosion, restoring strip lynchets, and creating habitat.

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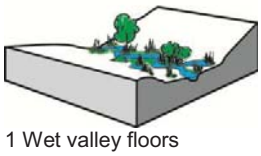
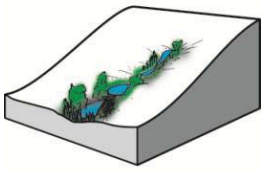
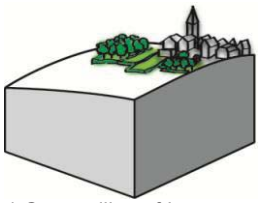
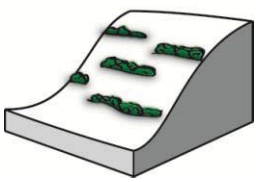
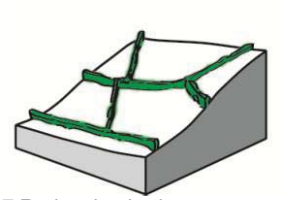
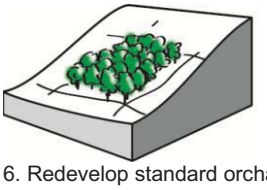
| APPLIED |  <br>1 Wet valley floors<br><br>  <br>8 Restore springs and sources | This project plan used various elements of a rewetting approach, by adding water storage bodies and re-vegetating the landscape to improve ground water replenishment and mitigate flooding. However, the proposal also reflects a typical feature of this region's landscape; what is registered as a stream valley is actually a dry gulley that channels rainfall from the surrounding higher terrain. This means that the area could be considered to be a water source and therefore the plans use principle 8 which provides landscape services such as erosion prevention. |
| |  <br>4 Green village fringes | The plan includes strengthening or reinstating the culturally distinctive green structures at the edges of the surrounding villages, which can be seen in the 'proposed situation' diagram. This clearly shows the positive landscape benefits for cultural identity, in addition to being water and soil management techniques. |
| |  <br>13 Improved access to heritage and nature sites for slow traffic | One of the key elements of the plan was to highlight the existence of an archaeological site in the centre of the area, another was increased leisure access. Both these intentions were covered by the guiding principles and show that the principles express the necessary consideration of ways to improve access to the valley floors and heritage sites for slow traffic. In this case access was one aspect of a multifunctional approach to provide recreation, water management, and ecological connections. |
| |  <br>13 Restore strip lynchets | Preventing erosion, cleaning water, improving ecological connections, reducing surface water run-off and loss of topsoil, are some of the landscape services supplied by restoring strip lynchets and hedges on slopes in addition to strengthened landscape identity. In |

| | | |
|---|---|---|
| |  <br>7 Redevelop hedge structures | this plan the problem of the ploughed steep slopes soil erosion and water issues were addressed by such historical landscape components - major reasons for supporting and increasing them and why they are included in the guiding principles. |
| APPLICABLE |  <br>6. Redevelop standard orchards | Since the plan proposed certain land-use changes, the guiding principle of restoration or creation of standard orchards could be relevant. This use can also be seen as multifunctional and compatible with pasture or agroforestry polycultures. It also presents a productive flood prevention tool in addition to maintaining a cultural landscape, and providing habitat and forage. |

The plan was considered very sound but there was no money available and complications arose over how to manage instigation of the project – the option of buying the land from the local water authorities, and those farmers who objected to the proposed changes in land use, created extra expense. Although not yet implemented, this project illustrated the use of many of the landscape framework guiding principles, and was proof of both their necessity and their relevance.

Most interestingly, through discussion of the challenges faced by this project, it was agreed that the landscape framework and guiding principles could provide a future tool for communication, shared vision, and a reason for organising joint financing and management of such projects. If the province, the water authorities (as land owners), and other private land owners (farmers), could have worked together on this area as a rewetting project or as a broader project achieving the aims of the landscape perspective, it would have provided a structure for shared management with no need for land to be bought in order to allow the project to take place – something which increases the potential costs unacceptably. Using rewetting as an area goal links to other existing landscape aims such as water storage. This enables access to compensation schemes, which helps address objections that local farmers had to the scheme, while also creating and developing riverside leisure and tourism opportunities.

## Case 3 – Water courses in the city region of Aachen (Wurm, Inde & Rur), Kreis Aachen, DE

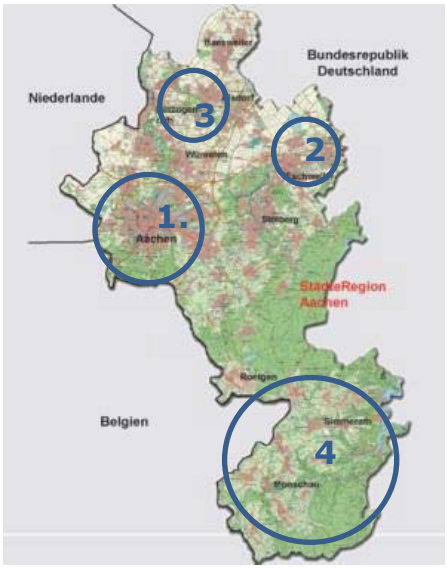



***Figure 33 Focus areas for the case study of the water courses in the Aachen city region***

From the city region of Aachen the largest scale of case study was discussed which looked at the issues surrounding water courses in an urbanised landscape. The focus areas are:

1) Aachen has built-over the small streams of the River Wurm watershed causing city flooding in severe rainfall;

2) there is a flooding bottleneck on the River Inde at Eschweiler caused by development and industry which requires an expensive engineering intervention in order to be fixed locally;

3) mine-waste dumped in the river valley, rail infrastructure, and canalised river beds, creates another bottleneck on the River Wurm downstream of Aachen;

4) in region of Monschau along the Rur, much land is designated as biotope compensation area, including the conversion of pine to deciduous forest – could the 3LP landscape framework offer structure to this process?

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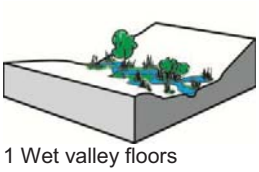
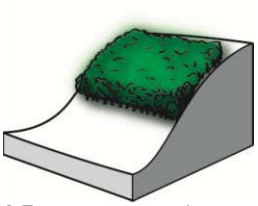
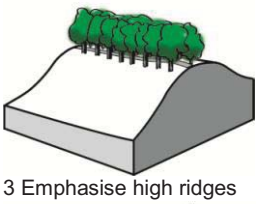


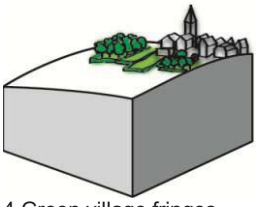
1 Wet valley floors



2 Forest on steep slopes

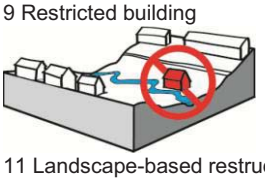


3 Emphasise high ridges



4 Green village fringes

9 Restricted building

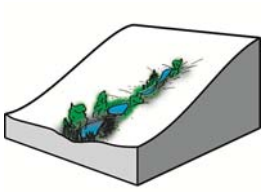


11 Landscape-based restructuring

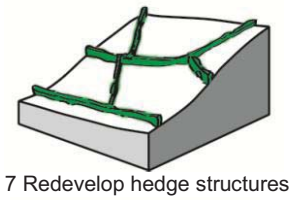
For problem area 1 - where culverted streams under Aachen cause flooding - the principle of rewetting the valley floors can be seen in an urban context, for example by using landscape architecture/ urban design strategies for resurfacing streams and creating water storage areas throughout the length of the water course (which slows water and improves its quality). This is also an applicable principle to use for focus areas 2 and 3 which exhibit flooding bottlenecks. These problem areas could be solved by seeing the entire river valley upstream of the bottlenecks as one rewetting project, and the landscape framework may offer a useful tool to achieve this.

The other landscape framework principle that offers solutions to improve the situation in all the areas would be foresting steep slopes. For focus area 1 the steep terrain which makes up the watershed to the south and west of Aachen has potential to be further wooded, as a first step to controlling run-off and the resulting urban flooding. In addition to forming one of several measures for a landscape-scale flood-mitigating 'rewetting' approach, foresting steep slopes fits into, and provides a structure for the management process of focus area 4.

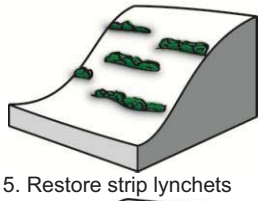
For focus areas 2 and 3, application of many of the guiding principles (which deliver relevant 'water' landscape services) in areas along the whole length of the valley would address hot-spot flooding issues. If well planned, this may be a more productive solution and more economical than a large engineering project. The application of many of these principles would also contribute to landscape quality, regional leisure/tourism, and biodiversity.



8 Restore springs and sources

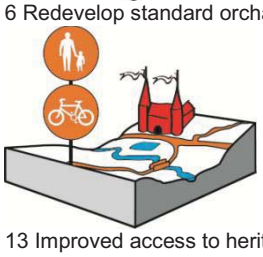


7 Redevelop hedge structures



5. Restore strip lynchets

6 Redevelop standard orchards



13 Improved access to heritage and nature sites for slow traffic

In cases 2,3,and 4, viewing the river valley as a whole and carrying out restoration of or additions to the green and blue frameworks could also address issues of accessibility for local connections and tourism use.

The benefit of the landscape perspective was considered here to provide a way to create a landscape context to issues. Viewing flooding in areas 1, 2 and 3, in this light brings a new way to successfully address landscape functions on a larger scale, which also strengthens cultural landscape aspects. The landscape framework could also give shape and wider meaning to the landscape improvement in area 4 (where new building must be compensated with green development) enabling multifunctional benefits.

# IV. Phase C: 'Interface 3LP landscape perspective and EU policy'

## IV.1. Policy analysis

### IV.1.1. Landscape demands

***Table 11 Landscape demands arising from European policy objectives in selected policy areas***

| Policies | Policy objectives | Landscape demand / supply | | Dynamics |
|---|---|---|---|---|
| **EU overall strategic policy orientation** | | | | |
| Europe 2020 Strategy (2010)[1] / Flagship Initiative Resource Efficieny (2011)[2] | To create growth & jobs in a smart, sustainable and inclusive way | Provide site, resources and conditions for economic and social development in a resource-efficient way | All functions and services | 1,2,3,4 |
| **EU economic sector policies** | | | | |
| Industrial policy communication (2012)[3] | (Growth and jobs as above) To strengthen industrial competitiveness, to support economic recovery and to enable the transition to a low-carbon and resource-efficient economy | Provide site for production and consumption (incl. housing) | Carrier | 1,4 |
| | | Provide recreational opportunities for the regeneration of productive human skills and labour fource (human capital) | Cultural | 1,3,4 |
| | | Provide non-renewable resources for production and consumption | Provisioning | 1 |
| Flagship Initiative Innovation Union (2011)[4], Bioeconomy strategy (2012)[5], Action Plan Eco-Innovation (2011)[6] | | Provide renewable resources for production and consumption (esp. bio-based economy) | Provisioning | |
| | | Provide site for knowledge/ innovation centers, and opportunities for knowledge generation (esp. eco-innovation) | Carrier/ cultural | 1,3 |
| Green Paper on Trans-european Transportation Network (2009)[7] | To provide the infrastructure needed for the internal market and for the objectives of growth and jobs to be achieved | Provide site and media for multi-modal transportation systems (TEN-T) | Carrier | 1,4 |
| Energy 2020 strategy (2010)[8]/ climate & energy package (2007)[9] | Competitiveness, security of supply, and sustainability (i.e. decarbonisation-efficiency-renewables 20-20-20-target) | Provide renewable energy sources and site for technical installations for their use | Carrier/ provisioning | 1,2 |
| | | Provide corridors for energy network installations (TEN-E) | Carrier | |
| Renewable energy sources directive (2009)[10] | RES BE 13%, DE 18%, NL 14% 10%- Transport fuel target | Increasing demand for biomass resources | Provisioning | |

| | | | | |
|---|---|---|---|---|
| CAP 2020 communication (2010)[11] | (1) Viable food production/ food security, (2) sustainable management of natural resources and climate action, (3) balanced territorial development | Provide high quality, diverse and safe food products | Provisioning | 1 |
| | | Provide public goods (e.g. farmland biodiversity, resilience to disasters) | Regulating/ cultural | 1,2,4 |
| | | Provide attractiveness & identity (in rural regions) | Cultural | 1,3,4 |
| Communication on a political framework for tourism (2010)12 | Keeping Europe the world's No1 tourist destination; support the tourism sector, promote its competitiveness, its sustainable and quality-based development | Provide recreational opportunities, landscape attractiveness, accessibility and views, natural and cultural heritage as resources for the tourism sector | Cultural/ regulating | 3, 4 |
| **EU environmental sector policies** | | | | |
| Water framework directive (2000)[13] / Groundwater directive (2006)[14] | To achieve and maintain good status of all surface and groundwater bodies from 2015 | Produce a good quality and provide for renewal of surface and groundwater throughout the whole watershed landscape | Regulating | 2 |
| Floods directive (2007)[15] | To reduce adverse consequences for human health, the environment, cultural heritage + economic activity from flood risk | Provide area-wide water retention throughout the watershed | Regulating | 2 |
| | | Provide designated retention and flooding areas | Regulating | 2 |
| Thematic soil strategy[16] & proposal for a soil protection directive (2006)[17] | Preservation of the capacity of soil to perform environmental, economic, social and cultural soil functions | Provide and maintain high-quality soils in terms of fertility, water & nutrient retention capacity, carbon content, and soil biodiversity | Regulating | 2 |
| | | Provide sites for raw material extraction and geological and archaeological heritage sites | Provisioning/ cultural | 1,3 |
| Biodiversity strategy (2010)[18] / Habitats directive (1992)[19] & Birds directive (2009)[20] | Headline target: Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020 | Provide a variety of typical natural ecosystems and habitats for listed species | Habitat | 1,2,3,4 |
| | | Provide genetic diversity and ecosystem services | All | |
| Green infrastructure working paper (2011)[21] and strategy (2013)[22] | To enhance spatial and functional connectivity outside protected areas, to maintain and restore the capacity of ecosystems to deliver multiple ecosystem services | Provide landscape elements (e.g. hedges, tree groups, wetlands etc.) vital for ecosystem services and habitat quality (e.g. landscape permeability, reduced fragmentation) | All | |
| White paper climate change adaptation (2009)[23] | To reduce the EU's vulnerability and to improve the EU's resilience to the impacts of climate change | Provide various ecosystem services in resilient ecosystems: e.g. moderation of extreme events, water retention/ flood protection, temperature buffering/ evaporative cooling, disease regulation etc. | Regulating/ habitat | 2 |
| Climate action: LULUCF decision proposal (2012)[24] | To increase removals and to decrease emissions of GHG in land use related sectors | Provide carbon sinks in soils and standing biomass stocks | Regulating | 2 |
| | | Maintain permanent grassland (no conversion to cropland) | | |

| | | | | |
|---|---|---|---|---|
| Air quality strategy (2005)[25] and directive (2008)[26] | To achieve levels of air quality that do not result in unacceptable impacts on, and risks to, human health and the environment [mainly relating to anthropogenic pollutants] | Avoid emissions of dust, particulate matter and further pollutants from land surfaces and land uses, provide permanent land cover, filtering & cooling vegetative surfaces | Regulating | 2,3,4 |
| Environmental noise directive (2002)[27] | To avoid, prevent or reduce the harmful effects, due to the exposure to environmental noise [mainly relating to industrial and transport sector] | No requirement, but positive contribution of landscapes: Provide noise buffering, quiet open areas and agreeable soundscapes for relaxation from environmental noise | Regulating/ cultural | 3,4 |
| Urban waste water treatment directive (1991)[28]/ Sewage sludge directive (1986, presently under revision)[29] | To protect the environment from the adverse effects of urban and certain industrial waste water discharges; Target of secondary treatment; To prevent harmful effects on soil, vegetation, animals, and men | Metabolize effluent from sewage treatment plants in recipient waters | Regulating | 1,4 |
| | | Provide alternative, eventually land based, waste water treatment in agglomerations of < 2000 person equivalents; Metabolize treated sewage sludge on agricultural soils | Regulating | |
| **EU socio-cultural sector policies** | | | | |
| Social policy TFEU Art. 151 (2010)[30] | Among others: Improvement of living conditions and combating of exclusion | Provide public open space and community space for social cohesion and inclusion | Cultural | 3,4 |
| Culture TFEU Art.167 (2010)[30] | Improvement of the knowledge and dissemination of the culture and history of the European peoples; conservation and safeguarding of cultural heritage of European significance | Maintain characteristic cultural and historic landscape features contributing to local-regional and European identity | Cultural | 3,4 |

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## IV.1.2. European thematic objectives and investment priorities for regional and rural development

*Table 12 European thematic objectives and investment priorities for regional and rural development*

| CSF thematic objectives[1] | Investment priorities for regional development[2] |
|---|---|
| (1) strengthening research, technological development and innovation | (a) enhancing research and innovation infrastructure (R&I) and capacities to develop R&I excellence and promoting centres of competence, in particular those of European interest |
| | (b) promoting business R&I investment, product and service development, technology transfer, social innovation and public service applications, demand stimulation, networking, clusters and open innovation through smart specialisation |
| | (c) supporting technological and applied research, pilot lines, early product validation actions, advanced manufacturing capabilities and first production in Key Enabling Technologies and diffusion of general purpose technologies |
| (2) enhancing access to, and use and quality of, information and communication technologies | (a) extending broadband deployment and the roll-out of high-speed networks |
| | (b) developing ICT products and services, e-commerce and enhancing demand for ICT |
| | (c) strengthening ICT applications for e-government, e-learning, e-inclusion and ehealth |
| (3) enhancing the competitiveness of small and medium-sized enterprises, the agricultural sector and the fisheries and aquaculture sector | (a) promoting entrepreneurship, in particular by facilitating the economic exploitation of new ideas and fostering the creation of new firms |
| | (b) developing new business models for SMEs, in particular for internationalisation |
| (4) supporting the shift towards a low-carbon economy in all sectors | (a) promoting the production and distribution of renewable energy sources |
| | (b) promoting energy efficiency and renewable energy use in SMEs |
| | (c) supporting energy efficiency and renewable energy use in public infrastructures and in the housing sector |
| | (d) developing smart distribution systems at low voltage levels |
| | (e) promoting low-carbon strategies for urban areas |
| (5) promoting climate change adaptation, risk prevention and management | (a) supporting dedicated investment for adaptation to climate change |
| | (b) promoting investment to address specific risks, ensuring disaster resilience and developing disaster management systems |
| (6) protecting the environment and promoting resource efficiency | (a) addressing the significant needs for investment in the waste sector to meet the requirements of the environmental acquis |
| | (b) addressing the significant needs for investment in the water sector to meet the requirements of the environmental acquis |
| | (c) protecting, promoting and developing cultural heritage; |
| | (d) protecting biodiversity, soil protection and promoting ecosystem services including NATURA 2000 and green infrastructures |
| | (e) action to improve the urban environment, including regeneration of brownfield sites and reduction of air pollution |
| (7) promoting sustainable transport and removing bottlenecks in key network infrastructures | (a) supporting a multimodal Single European Transport Area by investing in the Trans-European Transport Network (TEN-T) network |
| | (b) enhancing regional mobility through connecting secondary and tertiary nodes to TEN-T infrastructure |

| | |
|---|---|
| | (c) developing environment-friendly and low-carbon transport systems and promoting sustainable urban mobility |
| | (d) developing comprehensive, high quality and interoperable railway system |
| | |
| (8) promoting employment and supporting labour mobility | (a) development of business incubators and investment support for selfemployment and business creation |
| | (b) local development initiatives and aid for structures providing neighbourhood services to create new jobs, where such actions are outside the scope of Regulation (EU) No […]/2012 [ESF] |
| | (c) investing in infrastructure for public employment services |
| (9) promoting social inclusion and combating poverty | (a) investing in health and social infrastructure which contribute to national, regional and local development, reducing inequalities in terms of health status, and transition from institutional to community-based services |
| | (b) support for physical and economic regeneration of deprived urban and rural communities |
| | (c) support for social enterprises |
| (10) investing in education, skills and lifelong learning | no priorities |
| (11) enhancing institutional capacity and an efficient public administration | no priorities |
| **EAFRD priorities[3]** | **EAFRD sub-priorities[3]** |
| (1) fostering knowledge transfer and innovation in agriculture, forestry, and rural areas | (a) fostering innovation and the knowledge base in rural areas |
| | (b) strengthening the links between agriculture and forestry and research and innovation |
| | (c) fostering lifelong learning and vocational training in the agricultural and forestry sectors |
| (2) enhancing competitiveness of all types of agriculture and enhancing farm viability | (a) facilitating restructuring of farms facing major structural problems, notably farms with a low degree of market participation, market-oriented farms in particular sectors and farms in need of agricultural diversification |
| | (b) facilitating generational renewal in the agricultural sector |
| (3) promoting food chain organisation and risk management in agriculture | (a) better integrating primary producers into the food chain through quality schemes, promotion in local markets and short supply circuits, producer groups and inter-branch organisations; |
| | (b) supporting farm risk management: |
| (4) restoring, preserving and enhancing ecosystems dependent on agriculture and forestry | (a) restoring and preserving biodiversity, including in Natura 2000 areas and high nature value farming, and the state of European landscapes |
| | (b) improving water management |
| | (c) improving soil management |
| (5) promoting resource efficiency and supporting the shift towards a low carbon and climate resilient economy in agriculture, food and forestry sectors | (a) increasing efficiency in water use by agriculture |
| | (b) increasing efficiency in energy use in agriculture and food processing |
| | (c) facilitating the supply and use of renewable sources of energy, of byproducts, wastes, residues and other non food raw material for purposes of the bio-economy |
| | (d) reducing nitrous oxide and methane emissions from agriculture |
| | (e) fostering carbon sequestration in agriculture and forestry |
| (6) promoting social inclusion poverty reduction and economic development in rural areas | (a) facilitating diversification, creation of new small enterprises and job creation |
| | (b) fostering local development in rural areas |
| | (c) enhancing accessibility to, use and quality of information and communication technologies (ICT) in rural areas |

***Table 13 EAFRD measures for rural development useful for the implementation of the proposed 3LP landscape policy*** *(Note: Selection and programming of these measures will vary considerably in the different national and regional programmes for rural development)*

| Rural development measure[3] | Description[3] | Beneficiary of support[3] |
|---|---|---|
| Art. 15: Knowledge transfer and information actions | (1) skills acquisition actions, demonstration activities and information actions, short-term farm management exchange and farm visit | (2) provider of knowledge transfer and information action |
| Art. 16: Advisory services, farm management and farm relief services | (1a) help farmers, forest holders and SMEs in rural areas benefit from the use of advisory services for the improvement of the economic and environmental performance as well as the climate friendliness and resilience of their holding.<br>(1c) promote the training of advisors | (2) authority/ provider of advice or training |
| Art. 17: Quality schemes for agricultural products and foodstuffs | (1) support for new participation by farmers in quality schemes | (2) farmers |
| Art. 18 (1.c-d): Investments in physical assets | (1c) Support for infrastructure related to the development and adaptation of agriculture, including access to farm and forest land, land consolidation and improvement, energy supply and, water management<br>(1d) non productive investments linked to the achievement of agri- and forest environment commitments, biodiversity conservation status of species and habitat as well as enhancing the public amenity value of a Natura 2000 area or other high nature value area | (2) agricultural holdings |
| Art. 19: […] natural disasters and […] introduction of appropriate prevention actions | (1a) investments in preventive actions aimed at reducing the consequences of<br>probable natural disasters and catastrophic events | (2) farmers or groups of farmers |
| Art. 21: Basic services and village renewal in rural areas | (1a) the drawing up and updating of plans for the development of municipalities in rural areas and their basic services and of protection and management plans relating to NATURA 2000 sites and other areas of high nature value<br>(1b) investments in the creation, improvement or expansion of all types of small scale infrastructure, including investments in renewable energy<br>(1d-e) investments in the setting-up, improvement or expansion of local basic services for the rural population, including leisure and culture, and the related infrastructure; investments by public bodies in recreational infrastructure, tourist information and sign-posting of touristic sites<br>(1f) studies and investments associated with the maintenance, restoration and upgrading of the cultural and natural heritage of villages and rural landscapes, including related socio-economic aspects<br>(1g) investments targeting the relocation of activities and conversion of buildings or other facilities located close to rural settlements, with a view to improving the quality of life or increasing the environmental performance of the settlement | Municipalities in rural areas? |
| Art. 22: Investments in forest area development | (1a) afforestation and creation of woodland<br>(1b) establishment of agro-forestry systems | Art. 23/24 (1) private land-owners and tenants, municipalities and their associations |

| | | |
|---|---|---|
| Art. 29: Agri-environment-climate | (3-6) Agri-environment-climate payments for additional costs and income foregone resulting from commitments going beyond relevant mandatory standards | (2) farmers, groups of farmers and other land-managers |
| Art. 31: Natura 2000 & Water framework directive payments | (1) to compensate beneficiaries for costs incurred andincome foregone resulting from disadvantages in the areas concerned:<br>(6) Natura 2000 agricultural and forest areas, other delimited nature protection areas, agricultural areas included in river basin management plans | (2) farmers and to private forest owners and associations of forest owners |
| Art. 32: Payments to areas facing natural or other specific constraints | (1) to compensate farmers for additional costs and income foregone related to the constraints for agricultural production in the area designated by member states (Art. 33) beyond legal standards | (2) farmers |
| Art. 35: Forest-environmental and climate services and forest conservation | (1) payments for carrying out operations consisting of one or more forest-environment commitments beyond legal standards | (1) forest holders, municipalities and their associations |
| Art. 36: Co-operation | (1) Support to promote forms of co-operation relating to:<br>(2a) pilot projects<br>(2d-e) horizontal and vertical co-operation among supply chain actors for the establishment of logistic platforms to promote short supply chains and local markets; promotion activities in a local context relating to the development of short supply chains and local markets<br>(2f) joint action undertaken with a view to mitigating or adapting to climate change<br>(2g) collective approaches to environmental projects and ongoing environmental practices<br>(2h) horizontal and vertical cooperation among supply chain actors in the sustainable production of biomass for use in food, energy production and industrial processes | Organized clusters and networks? |
| Art. 42-45 LEADER | Support to the formation and training of local action groups | LEADER local action groups |
| Art. 61-63 EIP | European Innovation Partnership 'Agricultural productivity and sustainability'[4] | Operational groups (including cross-border initiatives!)[4] |

## Sources


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[2] European Commission (2011a): Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on specific provisions concerning the European Regional Development Fund and the Investment for growth and jobs goal and repealing Regulation (EC) No 1080/2006. COM(2011) 614, revised 6/10/2011.

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### IV.1.3. 3LP Landscape value chain

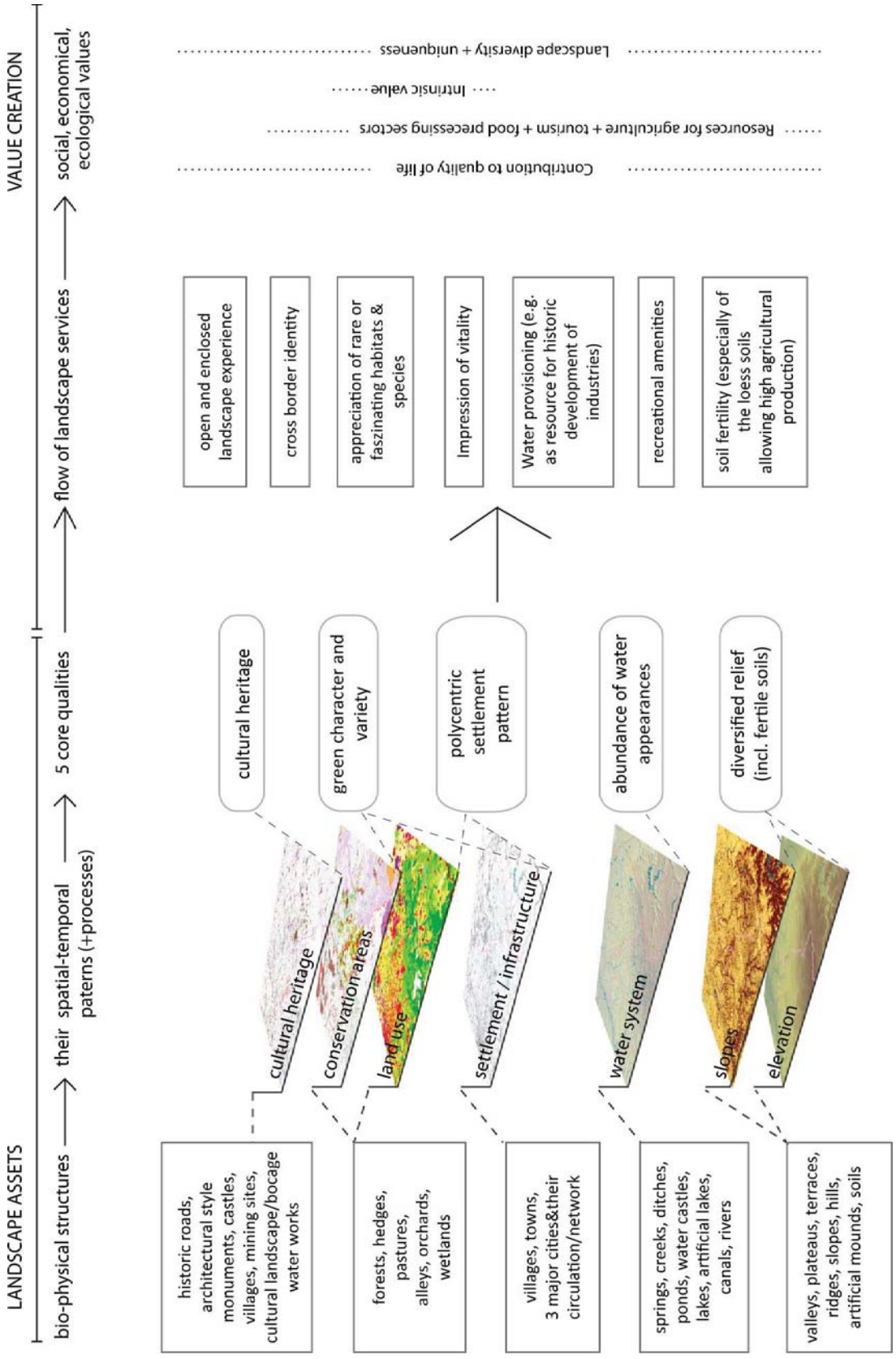



***Figure 34*** ***3LP landscape value chain*** *(Source: own elaboration)*

### IV.1.4. Regional policy initiatives

The 3LP is an on-going initiative, which aims at the development of a trans-national landscape park in one shared vision through cross-border collaboration. In 1993, the 3LP was mentioned in the MAHL[15] perspective, a cross-border spatial development perspective focusing on the urbanised area of the Euregio Meuse-Rhine.

In 2003 a more detailed development perspective was created for the 3LP, with the ambition to elaborate on the themes in later stages and formulate cross-border realization projects (Project Group Three Countries Park 2003).

The basic principles for the 3LP that were mentioned in the 3LP development perspective are (Project Group Three Countries Park 2011):

- The 3LP is an open space accessible to everyone.
- The 3LP is located on a crossing of ecological connections with a European significance.
- The cultural history, natural environment and the landscape are leading to new developments.
- The 3LP is not uniform, it manifests in a diversity of forms, spatial functions and activities.

The main themes within the 3LP initiative are (Project Group Three Countries Park 2011):

- Management and restoration of (natural) water systems
- Ecological structure within the 3LP and the connection to large scale nature areas on the borders of the area
- Preservation, conservation and development of cultural landscapes, and historic buildings and sites
- New perspectives on sub-urbanisation around villages in the inner area of the 3LP
- Develop prospects for environmentally friendly agriculture and cattle breeding, including its related regional products
- Enhancement of touristic / recreational structures and amenities
- Green climate buffers, with forestry and recreational amenities around the urban fringes
- (New) Quality of life in the rural areas

15 The MAHL region: the cities of Maastricht, Aachen, Heerlen, Liège and Hasselt/Genk (MAHL 1993).

In the first phase of the 3LP initiative from 2001 until 2005, the 3LP received Interrreg IIIa funding via the Euregio Meuse-Rhine. In a next stage, the cooperation continued and developed several projects, e.g. Aquadra (Interreg IVb in 2009) or Habitat Euregio (Interreg IVb in 2010).[16]

A broad range of informal projects with direct impact on landscape was identified. For non-cross border projects, only those with cross-sectoral activities at the landscape scale were selected.:

Cross-border (3LP and other)

- Aquadra (2009-2012)
- Habitat Euregio (2010-2013)
- Grensschap Albertkanal (NL-BE)
- Via Belgica (2005-ongoing, NL)
- Grensroute (2008, NL-DE)
- The Euregionale 2008 (2002-2008), example Wurmtal project (2002-2008)

Province Limburg/NL

- The Landscape Vision South Limburg (2004-ongoing activities)

Städteregion, Stadt Aachen and NRW/Germany

- Indeland (2008-ongoing)

Province of Liège/Wallonia/BE

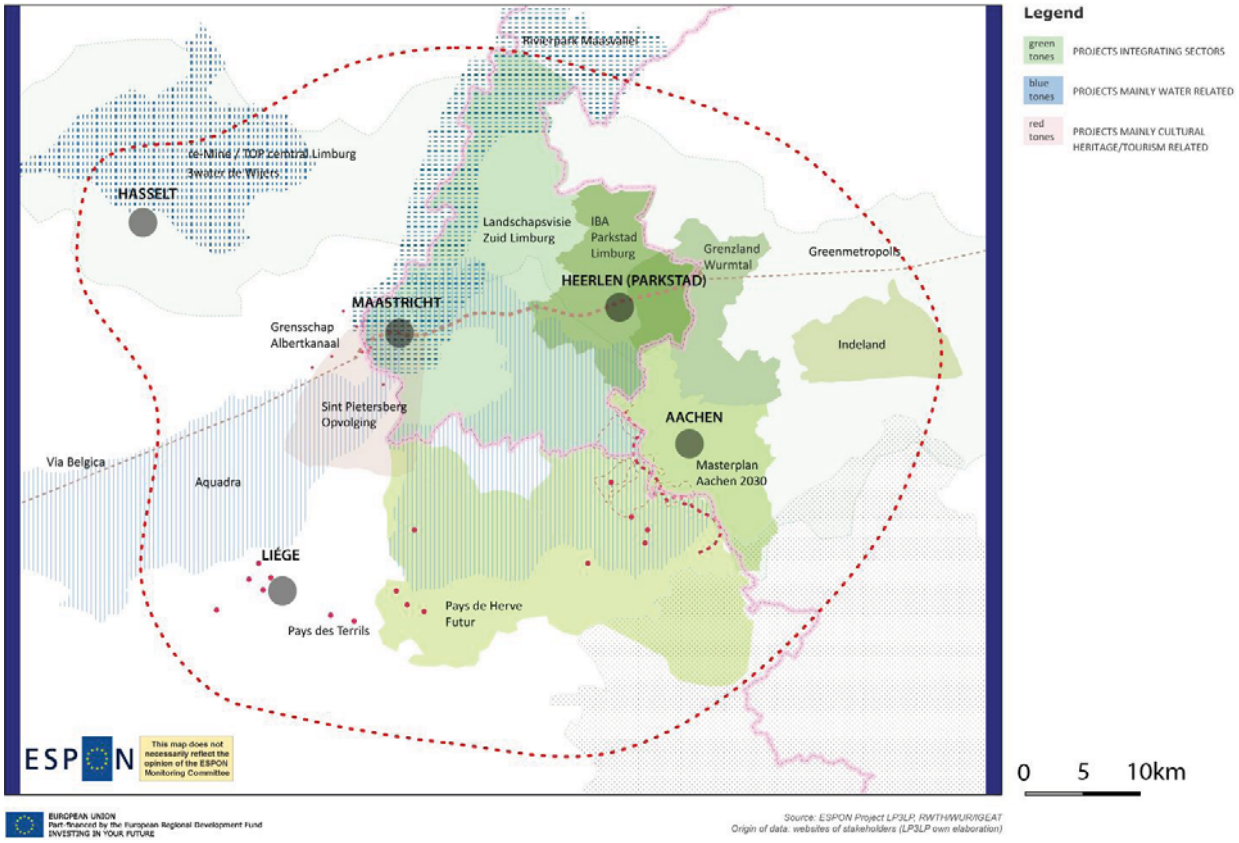
- Pays de Herve – Futur (1999-ongoing)

Province of Limburg/Flanders/BE

- St. Pietersberg (2002-ongoing)

Hence, additional stakeholders for the LP3LP project could be identified, which have been already integrated into the LP3LP work process e.g. through attending workshops (e.g. Aquadra, Pays de Herve Futur, Regionale Landschappen Haspengouw en Voeren and Kempen en Maasland). The territories of the analyzed projects are shown in the below map of the 3LP.

16 The ESPON funded project LP3LP is also an offspring of the on-going crossborder cooperation within the Three Countries Park initiative.




***Map 35 The territories of the regional policy initiatives. The websites of the stakeholder projects provided the sources for creating this map.***

Conclusions:

- Informal projects seem particularly important means to initiate innovation and sustainable development in a cross-border area like the 3LP, since governance and formal planning have different proceedings and paradigms in each of the 3 countries.
- It has become evident that the majority of cross-border projects is enabled by European funding (e.g. Interreg).
- The 3LP initiative can provide a platform for not yet integrated individual projects, e.g. related to cultural heritage or agriculture.
- The integration of market actors such as from the agriculture, forestry, tourism and energy sectors into the landscape perspective of the 3LP project seems to offer a large potential, for example towards achieving ecological benefits such as soil or habitat quality, but also regarding an overall attractivity of the landscape. At this stage, no stakeholder project with a significant impact e.g. on the development of agriculture or forestry at a larger (i.e. landscape scale) has been identified yet.

- Additionally to the 3LP as an existing landscape partnership, one may consider an overall project format that could catalyze ongoing and new projects within a relatively short time frame (a few years) in order to foster synergetic effects. An example for this is the *IBA Emscher Park* (1989-1999) or the *Regionale Köln-Bonn* (2010).

## IV.2. Recommendations at regional cross-border level

### IV.2.1. The 3LP as a future European cross-border partnership for high quality and innovative landscapes - linkages with regional and EU policy objectives and initiatives

| | |
|---|---|
| **3LP development themes and aims** | 2003: Overall cross-border landscape development<br>2013 (Destrée study): Landscape as core competence, European recognition of 3LP as innovative model area for integrated landscape and regional development |
| **Euregio MR 2020** | Regional Marketing , Territorial Analysis, Sustainable Development, Economy and Innovation |
| **Main partners** | 3LP initiative, Euregio MR and regional/ landscape planning and management authorities and landscape organisations (e.g. [1]Dienst Landelijk Gebied Limburg (Netherlands), regionale landshappen in Flanders, Pays de Herve Futur in Wallonia, Stiftung Rheinische Kulturlandschaften and Landschaftsverband Rheinland in Germany. National Parks (e.g. Eifel or Hoge Kempen), municipalities |
| **Relevant European policies and instruments** | Council of Europe:<br>▪ European Landscape Convention<br>European Union:<br>▪ Europe 2020/ Territorial Agenda 2020<br>▪ Flagship initiatives resource efficient Europe/ Innovation Union<br>▪ Integrated territorial investments (ITI)<br>▪ Community lead local development (CLLD)<br>▪ INTERREG Program<br>▪ LEADER Program |
| **Cohesion policy thematic objectives (CSF)** | (11) enhancing institutional capacity and an efficient public administration<br>(1) strengthening research, technological development and innovation<br>(2) enhancing use and quality of information and communication technologies |
| **Investment priorities regional development** | 1(a) enhancing research and innovation infrastructure (R&I) and capacities to develop R&I excellence and promoting centers of competence, in particular those of European interest<br>6(c) protecting, promoting and developing cultural heritage |
| **Investment priorities rural development** | (1) fostering knowledge transfer and innovation in agriculture, forestry, and rural areas,<br>(4) restoring, preserving and enhancing ecosystems dependent on agriculture and forestry |
| **Territorial Agenda 2020 priorities** | 1. Promote polycentric and balanced territorial development<br>2. Encouraging integrated development in cities, rural and specific regions<br>3. Territorial integration in cross-border and transnational functional regions<br>6. Managing and connecting ecological, landscape and cultural values of regions |

***Table 14 The 3LP as a future European cross-border partnership for high quality and innovative landscapes - Linkages with regional and European policy objectives and initiative***

**References:**


Initiatives/concepts defining landscape as asset and as common ground for cooperation

"Landscape Quality Objectives"/example Catalonia – defined for 3 different scale levels:
http://www.catpaisatge.net/eng/objectius.php

"Natural Character areas"-Natural England:
http://publications.naturalengland.org.uk/category/587130

"Landscape Partnerships"-Natural England/example East Midlands:
http://www.naturalengland.org.uk/regions/east_midlands/ourwork/characterassessment.aspx

"Integrated land use planning":
http://www.unep.org/documents.multilingual/default.asp?DocumentID=52&ArticleID=58&l=en

Pioneer projects of crossborder landscape management" (apart from 3LP itself)

"IBA Basel":
http://www.iba-basel.net/de/aktuelles_d/iba-landschaftskongress.html
http://www.iba-basel.net/de/aktuelles_d/fachtagung-cross-border-planning.html

"The crossborder landscape of Cerdagne":
http://www.catpaisatge.net/fitxers/tries/proj_transfront_2013.pdf

"Upper Rhine Valley" (less focus on landscape management, but on tourism, access and cultural heritage):
http://www.upperrhinevalley.com/de

Different legal and financial models

"Australian Landscape Trust" – Engaging communities in sustainable landscape management:

http://austlandscapetrust.org.au/

"The National Trust" UK – Membership based conservation charity managing cultural heritage, buildings and landscapes:

www.nationaltrust.org.uk

"Landscape partnership program of the UK Heritage Lottery Fund":
http://www.hlf.org.uk/HowToApply/programmes/Pages/LandscapePartnerships.aspx#.Uo57O8u9KSO

"Regionalwert AG" – German citizen shareholder companies engaging in regional and sustainable agriculture:

http://www.regionalwert-ag.de/
http://regionalwert-ag-isar-inn.de/

“German regional parks” working with a mix of informal and formal instruments:
http://www.difu.de/node/5965

“Swiss governmental landscape fund”
http://www.fls-fsp.ch/francais.php
http://www.fls-fsp.ch/deutsch.php

“Project Bocage d'Evordes”
http://www.fls-fsp.ch/131.php?page=1310&id=232

### IV.2.2. Green infrastructure strategy – linkages with regional and EU policy objectives and initiatives

| | |
|---|---|
| **LP development themes and aims** | 2003: Nature, water and environment<br>2013 (Destrée study): Sustainable development and valorization of 3LP landscape, environment and biodiversity |
| **Euregio MR 2020** | Sustainable Development, Culture and Tourism |
| **Main sectors/ actors** | Water sector, agricultural & forestry sector, environmental organizations, competent authorities |
| **Local/ regional initiatives** | ▪ Habitat Euregio<br>▪ Aquadra<br>▪ De Nieuwe Grensmaas/Maasvallei River5 Park<br>▪ Wurmtal project (past)<br>▪ Maas River Basin Management Plan>follow up projects such as "Lebendige Gewässer" in NRW/DE<br>▪ FLOODWISE<br>▪ AMICE<br>▪ (…) |
| **Relevant EU policies and instruments** | ▪ Flagship initiative resource efficient Europe<br>▪ EU Biodiversity and Green infrastructure strategies<br>▪ Natura 2000 network<br>▪ River basin management plans<br>▪ 5-7% ecological focus area condition for direct payments (CAP)<br>▪ Farm advisory systems (CAP)<br>▪ BISE, WISE, CLIMAT-ADAPT (information systems)<br>▪ Funds: LIFE, EAFRD, EAGGF<br>▪ Rural development measures: afforestation, agro-forestry, etc. (CAP)<br>▪ EU financing facility for GI projects (planned for 2014)<br>▪ TEN-G: trans-European Network of Green Infrastructure (planned) |
| **Cohesion policy thematic objectives (CSF)** | (5) promoting climate change adaptation, risk prevention and management<br>(6) protecting the environment and promoting resource efficiency |
| **Investment priorities regional development** | 5(b) promoting investment to address specific risks, ensuring disaster resilience<br>6(d) protecting biodiversity, soil protection and promoting ecosystem services including NATURA 2000 and green infrastructures |
| **Investment priorities rural development** | 4(a) restoring and preserving biodiversity, including in Natura 2000 areas and high nature value farming, and the state of European landscapes (b) improving water management (c) improving soil management; 5(e) fostering carbon sequestration in agriculture and forestry |
| **Territorial Agenda 2020 priorities** | 1. Promote polycentric and balanced territorial development<br>3. Territorial integration in cross-border and transnational functional regions<br>6. Managing and connecting ecological, landscape and cultural values of regions |

***Table 15 Green infrastructure strategy - Linkages with regional and European policy objectives and initiative***

**References:**

"Towards a EU wide strategy for Green Infrastructure":

http://ec.europa.eu/environment/nature/ecosystems/

"UK Green infrastructure":
http://www.landscapeinstitute.org/policy/GreenInfrastructure.php

"EHS Achterhoek" (example of a partially realized landscape framework in NL)

http://oroa.losstadomland.nl/Themakaarten/tabid/747/articleType/ArticleView/articleId/73/Natuur.aspx

"All London Green Grid" (example of a landscape framework "in the making" in GB)

http://www.london.gov.uk/sites/default/files/archives/TakingForwardALGG.pdf

"LIFE building up Europe's green infrastructure" (Report from the European LIFE fund including realized projects on green infrastructure)

http://ec.europa.eu/environment/life/publications/lifepublications/lifefocus/documents/green_infra.pdf

"Econnect", a crossborder project aiming at an ecological network across the Alpine range

http://www.econnectproject.eu/cms/

"Afforestation"
http://www.waldvermehrung.com/themen/waldvermehrung/projekte.html

### IV.2.3. Cultural heritage and access strategy - linkages with regional and EU policy objectives and initiatives

| | |
|---|---|
| **3LP development themes and aims** | 2003: Landscape and Cultural History, Tourism, Infrastructure, Water and Environment<br>2013 (Destrée study): innovative projects for urban-rural exchange, development of sustainable mobility solutions |
| **Euregio MR 2020** | Culture and Tourism, Mobility and Infrastructure, Regional Marketing, Sustainable Development |
| **Main partners** | Tourism & transportation sector, culture & creative sector, tourism agencies, environmental organizations, voluntary sector |
| **Local/ regional initiatives** | ▪ Mobility Euregio<br>▪ TIGER<br>▪ Via Belgica/Grensrouten/St. Pietersberg/Grensschap Albertkanal<br>▪ IBA Parkstad Limburg<br>▪ Maasvallei River Park<br>▪ Greenmetropolis (past)<br>▪ Bloesemlint |
| **Relevant EU policies and instruments** | ▪ Culture work plan<br>▪ Smart specialization / sector cultural & creative industries<br>▪ Community Led Local Development<br>▪ European Destinations of Excellence (EDEN)<br>▪ European heritage label and heritage days<br>▪ Funds: EFRD, EAFRD |
| **Cohesion policy thematic objectives (CSF)** | (1) strengthening research, technological development and innovation / (2) enhancing access to, and use and quality of, information and communication technologies / (7) promoting sustainable transport and removing bottlenecks in key network infrastructures / (6) protecting the environment and promoting resource efficiency |
| **Investment priorities regional development** | 7 (c) developing environment-friendly and low-carbon transport systems and promoting sustainable urban mobility/ 6 (c) protecting, promoting and developing cultural heritage |
| **Investment priorities rural development** | (6) promoting social inclusion poverty reduction and economic development in rural areas |
| **TA 2020 priorities** | 1. Promote polycentric and balanced territorial development<br>2. Encouraging integrated development in cities, rural and specific regions<br>3. Territorial integration in cross-border and transnational functional regions<br>4. Ensuring global competitiveness of the regions based on strong local economies<br>5. Improving territorial connectivity for individuals, communities and enterprises<br>6. Managing and connecting ecological, landscape and cultural values of regions |

***Table 16 Cultural heritage and access strategy - Linkages with regional and European policy objectives and initiative***

**References**

“Mobility Euregio”- Euregional initiative linking public transportation with discovery of the cross-border region and landscapes

http://mobility-euregio.com/

http://mobility-euregio.com/grenzenloses-entdecken/regionen/

“The National Trust” UK – Membership based conservation charity managing cultural heritage, buildings and landscapes

www.nationaltrust.org.uk

### IV.2.4. Complementary biomass strategy – linkages with regional and EU policy objectives and initiatives

| | |
|---|---|
| **3LP development themes and aims** | 2003: -/- not specifically addressed<br>2013 (Destrée study): Climate and Energy (as additional topics) |
| **Euregio MR 2020** | Economy and Innovation, Sustainable Development |
| **Main sectors/ actors** | Energy sector, agriculture & forestry, local communities/ municipalities, research & development |
| **Local/ regional initiatives** | ▪ Bioenergieregion Eifel<br>▪ STAWAG Smart Lab<br>▪ Integriertes Klimaschutzkonzept Städteregion Aachen<br>▪ Indeland |
| **Relevant EU policies and instruments** | ▪ Europe 2020 sustainable growth: 20/20/20 headline target<br>▪ Energy 2020 strategy<br>▪ Flagship initiatives Resource Efficient Europe/ Innovation Union<br>▪ Renewable Energy Sources Directive<br>▪ Biomass action plan<br>▪ Horizon 2020 research & innovation programme<br>▪ Community Lead Local Development<br>▪ Smart Specialization Platform<br>▪ Funds: EFRD, EAFRD |
| **Cohesion policy thematic objectives (CSF)** | (1) strengthening research, technological development and innovation<br>(4) supporting the shift towards a low-carbon economy in all sectors<br>(6) protecting the environment and promoting resource efficiency |
| **Investment priorities regional development** | 4(a) promoting the production and distribution of renewable energy sources, (d) developing smart distribution systems at low voltage levels<br>1(a) enhancing research and innovation infrastructure (R&I) and capacities to develop R&I excellence and promoting centers of competence, in particular those of European interest<br>6(c) protecting, promoting and developing cultural heritage; |
| **Investment priorities rural development** | 5(c) facilitating the supply and use of renewable sources of energy, of byproducts, wastes, residues and other non food raw material for purposes of the bio-economy |
| **TA 2020 priorities** | 3. Territorial integration in cross-border and transnational functional regions<br>4. Ensuring global competitiveness of the regions based on strong local economies<br>6. Managing and connecting ecological, landscape and cultural values of regions |

***Table 17 Complementary biomass strategy - Linkages with regional and European policy objectives and initiative***

**References:**


"Bioenergie region Eifel" – partially within the 3LP:
www.bioenergie-eifel.de

Holzkompetenzzentrum Rheinland – Study on energy use of wood
http://www.hkzr.de/media/filebase/files/D6%20-Studie%20Energetische%20Holznutzung%20Eifel.pdf

"100% renewable energy regions project":
http://www.100-ee.de/

"ELKE project", related to biomass and rural development (ELKE=Establishment of an extensive land-use strategy based on the transition of compensation measures of the impact regulation in Germany towards new flexible ways)
http://www.landnutzungsstrategie.de/

http://www.landnutzungsstrategie.de/fileadmin/userdaten/dokumente/ELKE/Oeffentlicher_Bereich/Startseite/09-03-29_ELKE-abstract_engl.pdf

"Bioeconomy Science Center" of the Universities of Aachen, Bonn, Düsseldorf, and the research centre FZ Jülich
http://www.biosc.de/

"Fuelcenter" excellence cluster at RWTH Aachen
http://www.fuelcenter.rwth-aachen.de/

"Geotexia Mené" biogas plant - a local cooperation of farmers
http://geotexia.wordpress.com/

INTERREG project "WallIS" in the EUREGIO Germany – Netherlands: Development and application of a hedge management system for bioenergy use
http://www.planinvent.de/wallis/de/start

### IV.2.5. Quality production strategy – linkages with regional and EU policy objectives and initiatives

| | |
|---|---|
| **3LP development themes and aims** | 2003: Agriculture, Urbanization and Infrastructure, Tourism, Nature, water and environment; 2013 (Destrée study): Development of a label of regional origin and quality |
| **Euregio MR 2020** | Regional Marketing , Economy and Innovation, Sustainable Development |
| **Main sectors/ actors** | Agriculture & forestry, food processing and retail industry, agricultural chambers, extension and advisory services |
| **Local/ regional initiatives** | ▪ Euregio met Smaak<br>▪ Groene Gastvrije Gordel<br>▪ Foodlinks<br>▪ Pays de Herve – Futur<br>▪ Mergelwind e.V.<br>▪ Regionalmarke Eifel<br>▪ Fairebel<br>▪ Pferdelandpark |
| **Relevant EU policies and instruments** | ▪ Common Agricultural Policy (CAP)<br>▪ Green public procurement (GPP)<br>▪ Agricultural advisory systems<br>▪ Funds: EAFRD<br>▪ Rural development measures, e.g.: Quality schemes for agricultural products and foodstuffs, agri-environment-climate payments, Natura 2000 & Water framework directive payments |
| **Cohesion policy thematic objectives (CSF)** | (3) enhancing the competitiveness of small and medium-sized enterprises, the agricultural sector and the fisheries and aquaculture sector<br>(4) supporting the shift towards a low-carbon economy in all sectors<br>(6) protecting the environment and promoting resource efficiency |
| **Investment priorities regional development** | 6 (d) protecting biodiversity, soil protection and promoting ecosystem services including NATURA 2000 and green infrastructures/ (c) protecting, promoting and developing cultural heritage |
| **Investment priorities rural development** | 3(a) better integrating primary producers into the food chain through quality schemes, promotion in local markets and short supply circuits, producer groups and inter-branch organizations/ 1(b) strengthening the links between agriculture and forestry and research and innovation |
| **Territorial Agenda 2020 priorities** | 2. Encouraging integrated development in cities, rural and specific regions<br>4. Ensuring global competitiveness of the regions based on strong local economies<br>6. Managing and connecting ecological, landscape and cultural values of regions |

***Table 18 Quality production strategy - Linkages with regional and European policy objectives and initiative***

**References:**

"Payments for Ecosystem Services" – Best practice guide and case studies
https://www.gov.uk/government/publications/payments-for-ecosystem-services-pes-best-practice-guide
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/200901/pb13932a-pes-bestpractice-annexa-20130522.pdf

"CIVILAND" research project engaged in payments for environmental and cultural landscape services
http://www.civiland-zalf.org/en/

Regional-Marke Eifel
http://www.regionalmarke-eifel.de/

"Towards a multifunctional landscape in Maastricht-Valkenburg". Oongoing project initiatives of the municipalities Maastricht, Meersen and Valkenbourgh. Among other concepts urban agriculture is proposed for relatively large areas at city edges.
http://www.c2cn.eu/gph/supplying-city-%E2%80%93-towards-multifunctional-landscape-maastricht-valkenburg

"Peri-urban parks" (including agricultural parks):
http://www.periurbanparks.eu/live/?l=en

"Pferdelandpark Aachen":

http://www.pferdelandpark2008.eu/landschaftspark/04Karte/index.html

## IV.2.6. Mutual relationship of the guiding principles of the landscape perspective and EU policies

***Table 19 Mutual relationship of the guiding principles and EU policies*** *(sources see IV.1.1 and IV 1.2)*

| EU policies | | Sectoral policies | | | | | | Regional/ cohesion policy | |
|---|---|---|---|---|---|---|---|---|---|
| | Physical CAP measures/ EAGGF & EAFRD | Green Infrastructure strategy and financing facility | LIFE Integrated projects/ NATURA 2000 areas | WFD/ River basin management planning | LULUCF/ Carbon credits/ Climate adaptation strategies | Soil sealing guidelines/ (Future soil framework directive?) | Horizon 2020: societal challenges/ bioeconomy/ EIP-AGRI | ERDF/ INTERREG program | ERDF: ITI and CLLD, EAFRD Leader program |
| **Main policy objectives** | | improve biodiversity and ecosystem services | improve biodiversity | improve water quality, reduce flood risks | improve carbon sinks and resilience | improve soil functions | provide sustainable biomass | jobs & smart, sustain. inclus. growth | jobs and growth and rural development |
| **Landscape Perspective Guiding principles** | | in connection with green infrastructure strategy | | | | | | | |
| (Re-)establishing functional vegetation structures in the landscape | 1. Wet valley floors | Investments for preventive action 'Non-productive' investments 7% ecological focus area | + | + | + | + | (+) | in connection with complementary biomass strategy | in connection with green infrastructure strategy | via 3LP landscape partnership and landscape management |
| | 2. Forest on steep slopes | Afforestation and creation of woodland Investments for preventive action | + | ? | + | + | (+) | | | |
| | 3. Emphasise high ridges | Village renewal in rural areas | + | ? | ? | + | | | | |
| | 4. Green village fringes | Village renewal in rural areas 7% ecological focus area | + | + | ? | ? | (+) | | | |
| | 5. Restore strip lynchets | Investments for preventive action 'Non-productive' investments 7% ecological focus area | + | + | + | + | (+) | | | |
| | 6. (Re-)develop standard orchards | Establishment of Agro-forestry systems 'Non-productive' investments 7% ecological focus area | + | + | ? | ? | | | | |
| | 7. (Re-)develop hedge structures | Investments for preventive action 'Non-productive' investments 7% ecological focus area | + | ? | + | + | (+) | | | |
| | 8. Restore springs and sources | Non-productive' investments 7% ecological focus area | + | + | + | + | + | | | |
| Concerning built structures | 9. Restricted building | Village renewal in rural areas 'Non-productive' investments | (+) | in Natura 2000 areas | in spring and flooding areas | in flooding areas | + | in connection with cultural heritage and access strategy | | |
| | 10. Building fitting in village structure and silhouette | | | | | | | | | |
| | 11. Landscape-based restructuring of built-up areas | | (+) | in Natura 2000 areas | in spring and flooding areas | in flooding areas | + | | | |
| | 12. Urban-open space accessibility for slow traffic | | | | | | | | | |
| | 13. Improved access to heritage and nature sites for slow traffic | | | | | | | | | |

+ strong relationship; + weaker relationship; (+) potential relationship with sectoral objectives; (?) contribution of principle to policy objectives unclear, may vary according to local context

### IV.2.7. Inputs from the 2nd LP3LP expert meeting ("Potential Three-Countries-Park policy initiatives", 29.04., 2PM, RWTH Aachen)

Program:
14.00 – 14.15: Arrival / 14.15 – 14.45: Presentation RWTH "Landscape Policy for the 3 Countries Park - recommendations" / 14.45 – 16.30: Discussion

Attendance:

| *name* | *organisation* |
|---|---|
| Susanne Lock | Landwirtschaftskammer NRW/ Kreisstelle Aachen-Düren-Euskirchen, DE |
| Dr. Thorsten Mrosek | Holzkompetenzzentrum Rheinland, DE |
| Andreas Gijbels | Tourisme Limburg, BE |
| Didier Bonni | Agence de Dévelopment Local Lontzen Plombières Welkenraedt, BE |
| Ian Whitehead | Consultant - Green Network Solutions, DE |
| Prof. Frank Lohrberg | RWTH Aachen, DE |
| Anja Brüll | RWTH Aachen, DE |
| Matti Wirth | RWTH Aachen, DE |
| Marc Nielsen | ULB Brussels/IGEAT, DE |
| Alain Coppens | ULB Brussels/IGEAT, DE |
| Annet Kempenaar | Wageningen UR, NL |

The expert meeting's purpose was to discuss several thesis papers (see annex V.9. to the Scientific Report), each outlining a "3 Countries Park" (3LP) policy proposal. Before the discussion, ideas were presented by Anja Brüll and Matti Wirth from RWTH - for various overlapping/synergistic policy initiatives. These initiatives covered themes such as green infrastructure, agricultural development, energy transition, sustainable tourism and cultural heritage/access. Special interest was given to addressing cooperative relationships with market actors with regard to a variety of European investment priorities. Moreover, one overarching thesis paper investigated potentials for 3LP cross-border landscape governance and management considering the use of the European instruments (e.g. Interreg or ITI) – conceptualizing the 3LP as a "European landscape laboratory". All thesis papers were discussed at the expert meeting and revised accordingly by the project team. Relevant results have been used in partially modified forms in the final main report. The below are the comments of the participants ordered according to the 5 policy proposals presented by the LP3LP team.

1. European laboratory

a) It was suggested to include topics of social inclusion in policy recommendations, e.g.:
   - Inclusion of long term unemployed
   - Involvement and activation of 3rd sector (volunteering)
   - Access to rural areas (within accessibility strategy)
   - Local scouts/ interpreters/ telling local stories
   - Working with children

b) It was also suggested to build on quite established initiatives/ networks and local identities. Not only to rely on public funding, but to explore options of industry funding.

→ Example 1 (regarding the above): *Regionale Landschappen* in Flanders work with volunteers/ rangers who guide tourists (this kind of initiative may deserve to be exchanged with other parts of the 3LP).

http://www.regionalelandschappen.be/

→ Example 2: *LEADER Region Eifel / Zukunftsinitiative Eifel*: Strengthening local identity, many successful projects (forestry, tourism services, gastronomy and environmental programs from the government).

http://www.leader-eifel.de/

http://www.zukunftsinitiative-eifel.de

2. Green infrastructure

a) The problem of different policies and different institutions on each side of the border was mentioned, (e.g, 'nature' in South Limburg is managed with large institutions – in a different way than in Wallonia).

b) A great challenge is data compatibility not only across borders, but also across different authorities.

c) A project deriving from EU level can be heavy and time consuming. Own experiences with a rural strategy in Scotland where no one was happy as the structure was too bureaucratic. Instead, one proceeded on purpose without help from the EU rural development fund.

d) There exists a problem with INTERREG projects: difficult to keep momentum and to continue with the ideas and networks after the period of funding, in contrast, continuous processes are needed.

→ Example 1 (Scotland): Here, Green Infrastructure is used to guide land development in terms of housing. Habitat network models are elaborated and explained to planners involved in zoning. e.g. *Lothians and Fife Green Network Partnership*:

http://www.centralscotlandgreennetwork.org/partners/regional-advisory-forum/lothians-and-fife-green-network-partnership

→ Example 2: Dutch projects on blue-green networks (work with a time horizon of 30 years), e.g. *EHS Achterhoek*:

http://www.gelderland.nl/eCache/DEF/5/013.html

3. Quality production

Farmers experience more and more arable land loss to urban development as well as to nature conservation. Common interest: To keep arable land for their livelihood, to maintain their existence as farmers as well as for society's productivity.

It is very difficult to reverse globalization of agriculture by regionalization. E.g. most farmers of the region deliver their milk to Campina, the third biggest dairy company worldwide.

Growth of regional products is very difficult, many initiatives have already tried to market regional products, but were not successful.

Trend to be expected with the example of Pays de Herve: Only big farm operations will survive as well as small diversified ones. You must either grow or diversify to survive. However, diversification means high risk and uncertainty for the farmers. Often there is no time to develop concepts for diversification.

In the case of the Eifel region, 70% of farms are operated on a part-time basis. This is possible due to European direct payments. Here, many farmers do not want to grow their business.

Many farmers seem reluctant to 'more park like design' on their land especially in the urban neighborhood of the city of Aachen.

In contrast, there are many examples of diversification in Scotland, especially for small farms as they cannot compete with the global market so they shift to local food production and marketing.

Concerning forestry, there are many initiatives (e.g. Woods and Forestry Eifel Network), the need is more about to identify them, rather than to implement a new platform. The approach should be in the sense of finding an economic base for enterprise, and to deal with a high political level.

→ Example 1: *Regionalmarke Eifel* for agricultural products, but also touristic offers

http://www.regionalmarke-eifel.de/

→ Example 2: Multifunctional farming initiatives in NL (e.g. in Zuid Limburg)

http://multifunctionelelandbouw.net/

4. Smart & small-scale renewable energy /Bioenergy

a) There is little additional potential from forests, since the wood is already used by the timber industry.

b) Rather, there is a potential from agricultural wooden sources, e.g. hedges and short rotation plantations (SRP). (Although, SRPs are not allowed in Germany on agricultural land, hedges, alleys and the like may have larger yet not fully explored potentials.)

→ Example: Bioenergy region Eifel

http://www.bioenergie-regionen.de/index.php?id=2118&region=91

5. Cultural heritage and access

a) It is very difficult to develop consistent approaches across the border, due to major differences in the three countries, e.g. transportation system, system of hiking paths/ nodes. Every region has its own approach of how to deal with cultural heritage, e.g. mining sites: some tell the historic story, some involve design an reinvent the site, etc. Moreover, budget for cultural heritage is usually very small.

b) A new approach should be developed within a tourist vision or tourist organization and not apart from existing projects, e.g. TIGER. The question is whether/ how to really create an economic system out of cultural heritage

→ Example 1: ?*BUIS*? redeveloping heritage sites model from the Netherlands

→ Example 2: *Regionale Landschappen* already use the 'Heart of Europe' concept (AG)

→ Example 3: *Stiftung Rheinische Kulturlandschaften* (nature protection, measures related to landscape management, etc.)

Overall conclusions:

- Varying evaluations for each of the 5 policy proposals. None of the proposals seems impossible.
- Mutual learning from success stories of the regional parts/ local landscapes of 3LP possible.
- Classical 'landscape problem'? Many topics are usually best dealt with within the sector, however from a landscape perspective integration is needed.
- It may be meaningful to envisage especially strategies 2 and 4 together.

Conclusions directly related to the 5 policy strategies:

1. 3LP as a European landscape laboratory: ensure public participation/legibility, integrate existing larger cross-sectoral initiatives like EMR.
2. A green infrastructure framework may be difficult to achieve, especially regarding the different types of governance.
3. The possible impact of landscape policies on agriculture should not be overestimated, or in other words, carefully considered within a strategy.
4. Biomass production with wood on, or in the case of Germany only adjacent to, agricultural lands without competition with ongoing agricultural production seems to be a possibility for the future.
5. A strategy related to cultural heritage and access should take into account cultural differences related to the topic, small budgets and involve already existing cross-border initiatives. (> start minimal for the entire region, with the option to grow bigger, where feasible.)

## IV.3. Recommendations at European level

### IV.3.1. Inputs from the 3rd LP3LP expert meeting ("Cross-border regional landscapes and EU policy", 04.06., 10-12:30 AM, RWTH Aachen)

Program:

10.00 – 10.15 Welcome + introductions of participants and project team

10.15 – 10.25 Presentation of the project context and aims of the expert meeting

10.25 – 11.00 Landscape as asset > participant's reply to 1 question > examples from the LP3LP project > discussion

11.00 – 11.35 Landscape as place > participant's reply to 1 question > examples from the LP3LP project > discussion

11.35 – 12.10 Landscape as common ground > participant's reply to 1 question > examples from the LP3LP project > discussion

12.10 – 12.15 (break)

12.15 – 12.30 Résumé/synthesis: Possible comments to the EU level

Attendance:

| Name | Organization |
|---|---|
| Boris Stemmer | Universität Kassel |
| Christine Fürst | University of Bonn |
| Dirk Gotzmann | Civilscape Office Bonn |
| Valeria Paül Carril | Geographic Department Praza da Universidade, Santiago de Compostela |
| Estelle Evrard | University of Luxembourg |
| Ian Whitehead | Green Network Solutions |
| Liesl Vanautgaerden | RWO Vlaanderen |
| Alain Coppens | ULB Brussels/IGEAT |
| Anja Brüll | RWTH Aachen |
| Annet Kempenaar | WageningenUR |
| Frank Lohrberg | RWTH Aachen |
| Marc Nielsen | ULB Brussels/IGEAT |
| Matti Wirth | RWTH Aachen |

The expert meeting's purpose was to discuss cross-border landscapes and EU policy, including the 3 Countries Park as an example. In response to undesirable but possible negative impacts of various EU policies (e.g. Europe 2020, TA 2020, some sectoral policies) to regional landscape quality/-diversity and the aims of the European landscape convention – it was discussed if such impacts could be turned into strengths by pro-active landscape development. In this line of thinking, the following three pairs of risks and chances guided the discussion, including examples from ongoing LP3LP work:

(1) *Risk*: Uncontrolled growth at the cost of landscape degradation if landscape qualities and values are not taken into regional account.
*Chance*: → Landscape as asset - contributing to smart, sustainable, and inclusive regional development.

(2) *Risk*: 'Territorially blind' standardization without enough room for regional and local specification creating 'uniform' landscapes.
*Chance*: → Landscape as place - contributing to cohesion and place-based policy implementation.

(3) *Risk*: One sided implementation of sectoral policies in a non-integrated manner causing land-use conflicts and trade-offs between various landscape demands on multiple scales.
*Chance*: → Landscape as common ground - contributing to horizontal, vertical & territorial integration.

In order to discuss these 3 pairs, 3 questions were brought forward by the project team, outlined in a discussion paper (see annex V.10 to the Scientific Report) and discussed in the group:

Question (1): Which concepts can be used to frame landscape as an asset and a place of value-creation in whole territories?

Conclusions from the discussion:

1. Participation I: Landscape assets should be assessed in relation to personal attachments (drawings, storytelling, interviews, reaction to simulated planning impacts, etc.) and the notion of livability. This can include the anticipation of future scenarios via the simulation of landscape change under policy influences.
2. Participation II: Viewpoints of people regarding their inhabited landscapes can be acknowledged as being relatively holistic (even if different terms than "landscape" are used - such as "environment" or the like). However, the question of how to link peoples' landscape value assignment and landscape quality objectives to the EU level is still a largely unresolved question.
3. Economics: A connection of landscape to economics (including monetization where feasible) remains equally crucial.

4. Regarding all above points: Value chains and the concept of ecosystem services (or similar ones: landscape services/-functions, etc.) seem helpful tools – however they are not yet widely applied in praxis.
5. Landscape and EU policy: In order to improve the efficiency of EU policy support to regional landscapes, the asset 'landscape' has to be understood in a holistic way (i.e. as "whole territory" /ELC) beyond classic conservationist/historicist perspectives or narrow definitions of "cultural landscape".
6. EU member states are often reluctant to the landscape concept, since it was traditionally understood and used as a conservative heritage concept. If the landscape approach is to become more relevant for EU policy, a broader landscape concept as promoted by the ELC should be introduced.

Question (2): What means the goal of territorial cohesion and the place-based policy approach of the Territorial Agenda 2020 with regard to landscape policy?

Conclusions from the discussion:

1. There seem very little overlaps/connections between landscape policy (that is in line with the ELC) and overarching EU policy documents such as Europe 2020/the TA 2020.
2. However, this may improve: Within its text, the TA 2020 promotes complementarity as a major potential/goal in Europe, also at smaller scale between landscapes within regions: By explaining goals like 'evidence informed policy', 'place based policy' and 'integrated functional area development'. Priority 6 of the TA 2020 could serve as an entry point: "Managing and connecting ecological, landscape and cultural values of regions".
3. Hence, cohesion has to be understood as a diversity of unique elements (selling points, etc.) and their complementarity in interrelation – also at the landscape scale.
4. Cohesion in a place-based way within regions (=at the landscape scale) can only be achieved after local stakeholders agreeing on common goals, since the EU has little direct influence below the regional scale (as is e.g. reflected in ESPON cartographic data).
5. Territorial analysis as part of evidence-based policy should address the landscape system and its values.

Question (3): What are suitable 'landscape governance' arrangements across sectors, scales and functional units, especially in a cross-border situation?

Conclusions from the discussion:

1. In order to arrange efficient ‘landscape governance’, shared goals should be defined first in any cross-border setting: Such goals should result both from complementarities between assets as well as from shared problems.
2. A central task of ‘landscape governance’ within regions is to align shared goals with concrete context (i.e. different landscapes and their assets).
3. It seems efficient to have individual thematically overlapping strategies within a cross-border region (such as developed by the LP3LP with the current “thematic strategies”), rather than to rely only on one all-embracing strategy.
4. Moreover, a continuous open process (such as developed by the LP3LP with the current “thematic strategies”), that leaves choices/realignments during implementation is meaningful – in contrast to ideal but static plans leaving no room for interpretation.
5. A certain level of institutionalization is needed for coordination of cross-border strategies. (This is proposed for the 3LP as a “European cross-border landscape partnership”.) Here, more than elsewhere, responsibility is a key issue. (For the 3LP, one may consider to have one coordinator per thematic strategy.)
6. GIS cartographic data synchronization, then shared value monitoring across borders is usually a challenge, but indispensible.

# V. Annexes to the Scientific Report

## V.1. List of Figures

## V.2. List of Maps

## V.3. List of Tables



## V.4. List of abbreviations and glossary

3LP: Three-Countries-Park (Drielandenpark/Parc des Trois Pays/Dreiländerpark)
CAP: Common agricultural policy
CBPMR: Crossborder polycentric metropolitan region
CHI: Cultural Heritage and Identity
CLLD: Community led local developmentELC: European Landscape Convention
EAFRD: European Agricultural Fund for Rural Development
EAGGF: European Agricultural Guidance and Guarantee Fund
EIP-Agri: European Innovation Partnership ‘Agricultural productivity and sustainability
EMR: Euregio Meuse Rhine
ERDF: European Regional Development Fund
ESPON: European Observation Network for Territorial Development and Cohesion
EU: European Union
FUA: Functional Urban Areas

GHG: Greenhouse gases
GI: Green infrastructure
GPP: Green public procurement
HCBNP: Hainaut Cross border Natural Park
ITI: Integrated territorial investment
LIFE: L'Instrument Financier pour l'Environnement
LQO: Landscape quality objectives
LP3LP: Landscape Policy for the Three-Countries-Park
LULUCF: Land use, land use change and forestry
LUZ: Large Urban Zone
MAHL: Maastricht, Aachen, Heerlen, Liège cross-border city network
MAHHL: Maastricht, Aachen, Heerlen, Hasselt, Liège cross-border city network
MRE: Meuse-Rhine Euregio
MUA: Morphological Urban Area
NWE: North-West Europe
PES: Payments for ecosystem services
SCoTs: Territorial Coherence Schemes
WFD: Water framework directive

## V.5. List of references/Bibliography

## V.6. List of implemented workshops, expert meetings and dissemination activities

| | |
|---|---|
| 04.07.2012 | Stakeholder workshop 1 on core qualities and issues |
| 22.10.2012 | Stakeholder workshop 2 on the dynamics and challenges of the 3LP region |
| 22.11.2012 | Stakeholder workshop 3 on the contours of a landscape perspective |
| 21.03.2013 | Stakeholder workshop 4 on the landscape perspective |
| 10.07.2013 | Stakeholder workshop 5 on the draft catalogue of policy actions |
| 23.05.2012 | Expert meeting 1: “Defining a European landscape identity” on criteria for defining the European identity of the 3LP region |
| 29.04.2013 | Expert meeting 2: “Potential 3 Countries Park policy initiatives”, discussion with regional and local experts |
| 04.06.2013 | Expert meeting 3: “Cross-border regional landscapes and EU policy”, discussion with international experts |
| 05./06.12.2012 | ESPON seminar Paphos, Cyprus: Participation |
| 13./14.06.2013 | ESPON seminar Dublin, Ireland: Presentation of project results |
| | ESPON seminar Vilnius, Lithuania: Presentation of project results |
| 28.02.2013 | Public event: “Landscape Policy for the Three Countries Park”, presentation and discussion of ‘half-way’ project results |
| 14.05.2014 | Stakeholder public event: “Landscape Policy for the Three Countries Park”, presentation and discussion of final project results |
| 23./24. 09.2013 | ECLAS conference: Paper and poster presentation of LP3LP Project |
| 04.11.2013 | TOPOS conference: Presentation of LP3LP Project |
| 01.04.2013-15.05.2013 | Exhibition “Mapping the Charlemagne Region”, travelling from Maastricht to further cities of the 3LP, presentation of LP3LP Maps |
| 22.-25.07.2013 | Summer school “River Meuse – Madame or Machine?”, cooperation of RWTH Aachen and UIB Liège |
| 15.10.2012-31.01.2013 | MSc Student seminar at RWTH Aachen on regional design and 3LP case study |
| 19.11.2012-06.02.2013 | BSc Student works on LP3LP approach at WUR |
| In preparation | Book publication: “Landscape Policy for the Three Countries Park” |
| In preparation | Scientific paper for submission to the Journal of Change and Adaptation in Social-Ecological Systems: “Managing territorial change through landscape policy – The European case of the Three Countries Park” |

## V.7. Note regarding separate A3 Atlas of Maps

For important maps of the LP3LP project at A3 format, please see the additional A3 Map Atlas document.

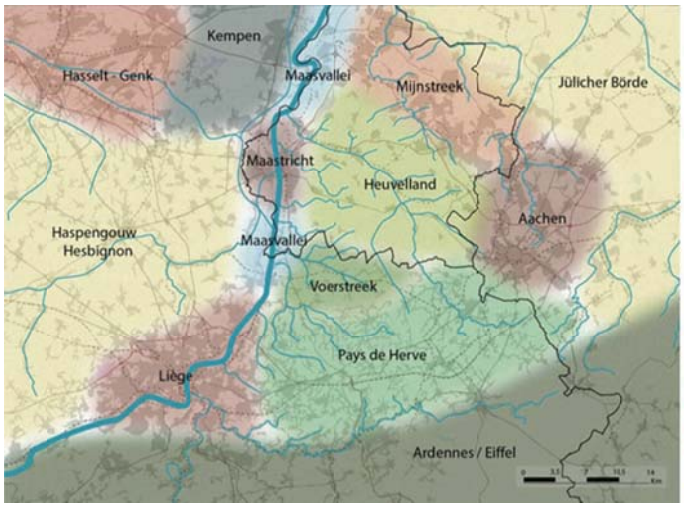
## V.8. Data overview – Used for GIS maps of the 3LP

| Title of map | Additional information | Country | Origin of data | Scale | Year |
|---|---|---|---|---|---|
| **Topographic map** | | Belgium-Wallonia | SPW | 1:50.000 | 2001 |
| | | Belgium-Flanders | Province of Limburg (BE) | 1:50.000 | N/A |
| | | Netherlands | Province of Limburg (NL) | 1:50.000 | 2011 |
| | | Germany | Bezirksreg. Köln | 1:50.000 | 2012 |
| **Elevation** | | European-wide data | NASA (ASTER) | NTS | 2011 |
| **Water System** | Water bodies | Belgium-Wallonia | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Belgium-Flanders | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Netherlands | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Germany | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | Streams | Belgium-Wallonia | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Belgium-Flanders | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Netherlands | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Germany | Bezirksreg. Köln | NTS | 2012 |
| **Land Cover** | Various types (19 used) | European-wide data | EEA (CORINE) | NTS | 2006 |
| **Traffic Infrastructure** | Streets | Belgium-Wallonia | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Belgium-Flanders | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Netherlands | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Germany | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | Railroads | Belgium-Wallonia | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Belgium-Flanders | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Netherlands | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| | | Germany | Province of Limburg (NL) | 1:5.000 (recommended | 2009 |
| **Natural heritage** | Natura 2000 | European-wide data | EEA | 1:100.000 | 2012 |
| | various classifications | Belgium-Wallonia | SPW | NTS | 2008-2012 |
| | various classifications | Belgium-Flanders | Province of Limburg (BE) | NTS | 2006-2012 |
| | various classifications | Netherlands | Province of Limburg (NL) | NTS | 2012 |
| | various classifications | Germany | LANUV NRW | NTS | 2012 |
| **Cultural heritage** | various classifications | Belgium-Wallonia | SPW | NTS | 2008-2012 |
| | various classifications | Belgium-Flanders | Province of Limburg (BE) | NTS | 2006-2012 |
| | various classifications | Netherlands | Province of Limburg (NL) | NTS | 2012 |
| | various classifications | Germany | KULADIG | NTS | N/A |
| **Historical maps** | Vandermaelen map | Belgium-Wallonia | SPW | 1:20.000 | 1850-1854 |
| | Vandermaelen map | Belgium-Flanders | Province of Limburg (BE) | 1:20.000 | 1850-1855 |
| | Topkaart 1850 | Netherlands | Province of Limburg (NL) | 1:20.000 | 1850 |
| | Preußische Uraufnahme | Germany | Bezirksreg. Köln | 1:25.000 | 1880 |
| **National Boundaries** | | BE-NL-DE | Manual drwg. By TPG (own elaboration) | NTS | 2012 |
| **Adm. Boundaries** | various classifications | Belgium-Wallonia | Province of Limburg (NL) | NTS | 2009 |
| | various classifications | Belgium-Flanders | Province of Limburg (NL) | NTS | 2009 |
| | various classifications | Netherlands | Province of Limburg (NL) | NTS | 2009 |
| | various classifications | Germany | Province of Limburg (NL) | NTS | 2009 |
| **Aerials** | | global data | World Imagery | NTS | 2012 |

## V.9. Thesis papers on the "Potential Three-Countries-Park policy initiatives" used for "Phase C - The interface between the 3LP landscape perspective and EU policy" in the expert meeting on 29.04.2013.

The topics of the thesis papers were selected based on the themes of the 3LP development perspective (2003), the EU policy analysis, the guiding principles of the Landscape Perspective and the previous experience and knowledge of the project team.

# 3 Countries Park:
# A European laboratory for high-quality and innovative landscapes




**<u>Theses:</u> Investment into a continuous monitoring and cooperative management of landscape services and qualities will enhance value creation in landscapes. Institutional cross-border capacity for landscape management can provide a coherent framework, critical mass and innovation consulting for individual land use activities.**

<u>Abstract:</u> The landscape – an area as perceived by people according to the European Landscape Convention – is both the place of economic activities and of non-commodified value creation. Therefore, it largely contributes to economic productivity, quality of life and human well-being. The flow of benefits obtained from characteristic landscape features, processes and ecosystems can be assessed by the concept of ecosystem and landscape services. From a traditional point of view, the production of commodities is compensated and 'coordinated' by the market, while non-commodified ecosystem/ landscape services are usually taken for granted. The latter are mostly sectorally administered on different levels and are often lacking coherent management, especially in cross-border situations. Going beyond this course of action, it is suggested for the Three Countries Park (3LP) to build-up cross-border capacity of continuous landscape monitoring & management – to enable smart, sustainable and inclusive growth by an alignment with landscape quality. Such a professional steering activity should be designed as learning process with adaptive cycles involving multiple stakeholders and actors, while basically performing two tasks:

Task 1 - **Landscape monitoring**: Continuous assessment of the trend of most relevant landscape/ecosystem services and their qualities between demand and supply based on agreed indicators and synchronized data bases.

Task 2 - **Landscape (quality) management**: Coordination and facilitation of various thematic initiatives and projects as well as individual land use activities under a shared landscape perspective, with the ambition of continuous improvement towards environmental and landscape quality objectives or targets.

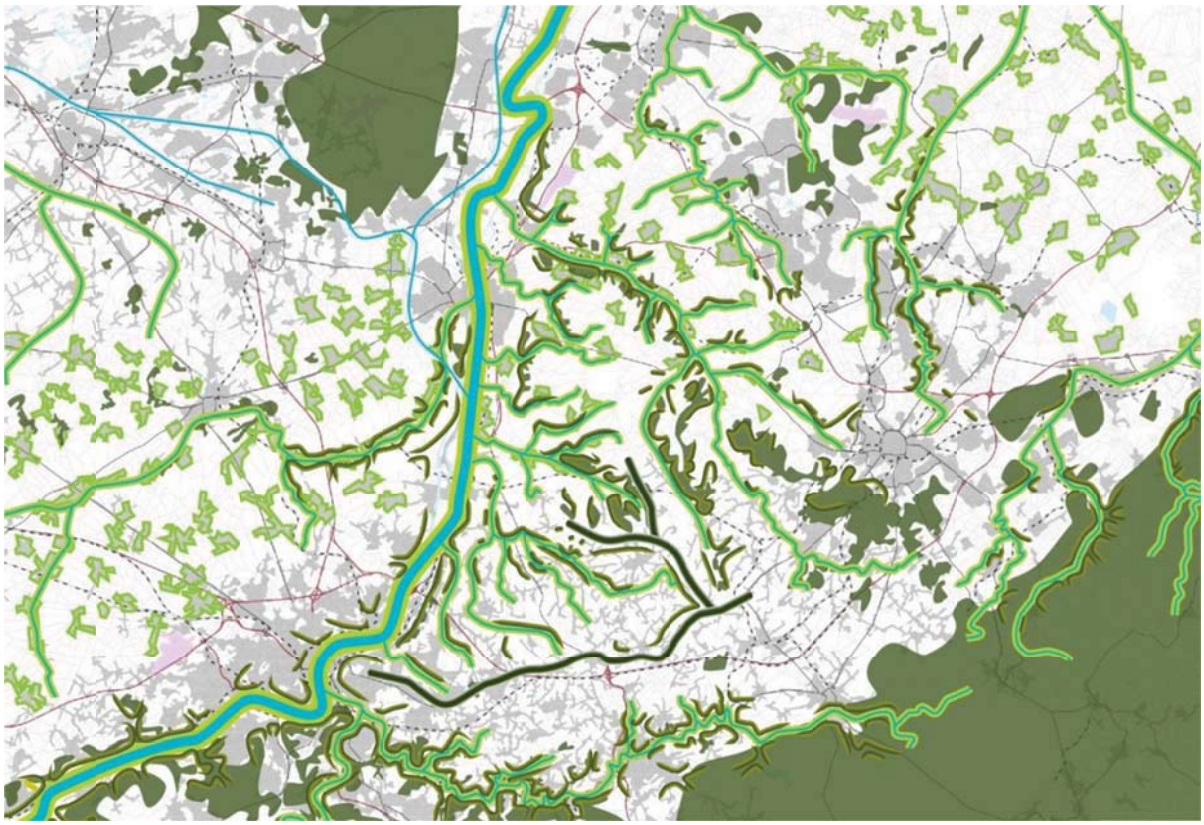
Task 1 should maintain an interface with scientific expertise (e.g. remote sensing) and the interested public, e.g. via communication and information technologies, temporary landscape events etc. Task 2 will especially provide tailor-made support to market actors, e.g. in the form of financial instruments,

consulting services, experience exchange or group certification etc. Both landscape monitoring and landscape management activity could start operation under an informal cooperation agreement based on the existing 3LP initiative. Later it might be institutionalized in a different form, e.g. a public-private fund or '3LP landscape trust' as an umbrella organization open to existing landscape associations (e.g. Pays de Herve Future, Regionaal Landschap Haspengouw & Voeren, Parc Naturel Hautes Fagnes etc.) and citizens as members.

With a proposed **Leitbild 'Heart of Europe Park'** the 3LP institution and territory could serve as a European laboratory for high-quality and innovative landscape using its past and its diversity as resources for the future. 'Laboratory' thereby indicates to maintain a creative and experimental atmosphere and to innovatively cross-link information, ideas and initiatives presently scattered across borders, sectors and scales. With regard to the past, the 3LP territory is located in the heart of 'old Europe' and mirrors different phases of the development of the European Community/ Union, which could be used as a common cross-border storyline (thesis paper 5). It is itself composed of a great diversity of local landscapes representing European heritage with a long cultural history and linkages to other European landscapes. With regard to the future the proposed landscape monitoring & management activity based on the concept of ecosystem/ landscape services will be well suited to promote and achieve multiple European policy objectives (thesis paper bottom-up in progress) and to create attractive, resilient and innovative cultural landscapes mastering European challenges.

| **3LP: A European laboratory for high quality and innovative landscapes - Linkages with regional and European policy objectives and initiatives** | |
|---|---|
| **3LP development themes and aims** | 2003: Overall cross-border landscape development<br>2013 (Destrée study): Landscape as core competence, European recognition of 3LP as innovative model area for integrated landscape and regional development |
| **Euregio MR 2020** | Regional Marketing , Territorial Analysis, Sustainable Development, Economy and Innovation |
| **Main sectors/ actors** | 3LP initiative, Euregio MR and regional/ landscape planning and management authorities and organisations |
| **Relevant European policies and instruments** | Council of Europe:<br>▪ European Landscape Convention<br>European Union:<br>▪ Europe 2020/ Territorial Agenda 2020<br>▪ Flagship initiatives resource efficient Europe/ Innovation Union<br>▪ Integrated territorial investments<br>▪ Community lead local development<br>▪ Smart specialization<br>▪ Eco-Innovation |
| **Cohesion policy thematic objectives (CSF)** | (11) enhancing institutional capacity and an efficient public administration<br>(1) strengthening research, technological development and innovation<br>(2) enhancing use and quality of information and communication technologies |
| **Investment priorities regional development** | 1(a) enhancing research and innovation infrastructure (R&I) and capacities to develop R&I excellence and promoting centers of competence, in particular those of European interest<br>6(c) protecting, promoting and developing cultural heritage |
| **Investment priorities rural development** | (1) fostering knowledge transfer and innovation in agriculture, forestry, and rural areas,<br>(4) restoring, preserving and enhancing ecosystems dependent on agriculture and forestry |
| **Territorial Agenda 2020 priorities** | 1. Promote polycentric and balanced territorial development<br>2. Encouraging integrated development in cities, rural and specific regions<br>3. Territorial integration in cross-border and transnational functional regions<br>6. Managing and connecting ecological, landscape and cultural values of regions |

# Green infrastructure strategy



**Theses: A regional green infrastructure strategy can create synergies between habitat, water, soil, climate and cultural landscape services. It can create a coherent cross-border framework for the designation of 7% of agricultural land as ecological focus area.**

Abstract: Green infrastructure is a network of green areas and landscape features, which connect fragmented habitats for the protection and rehabilitation of biodiversity, while simultaneously providing ecosystem/landscape services in a multifunctional way. The concept can be understood as a lens bundling sectoral views of e.g. water management, climate change adaptation and mitigation, biodiversity conservation, and ecosystem restoration. Spatial planning and land-user involvement is considered a precondition for the successful implementation of Green Infrastructure. It is therefore proposed here to develop a more detailed Green Infrastructure Plan based on the landscape framework elaborated in this project (picture above) as well as other projects' results (Habitat Euregio, Aquadra). A special focus should be set on the 'abundance of water appearances', 'diversified relief' and 'varied green character' of the 3LP (core qualities), since the flow of water in the landscape determined by the relief and managed by different types of vegetation links multiple services and has a high recreational value. Key to planning will be to mobilize knowledge on target species and their needs for propagation and migration as well as on local landscape features and processes providing services. A Green Infrastructure Plan can help to prioritize public purchase areas, but much of the change will need to happen on privately owned land.

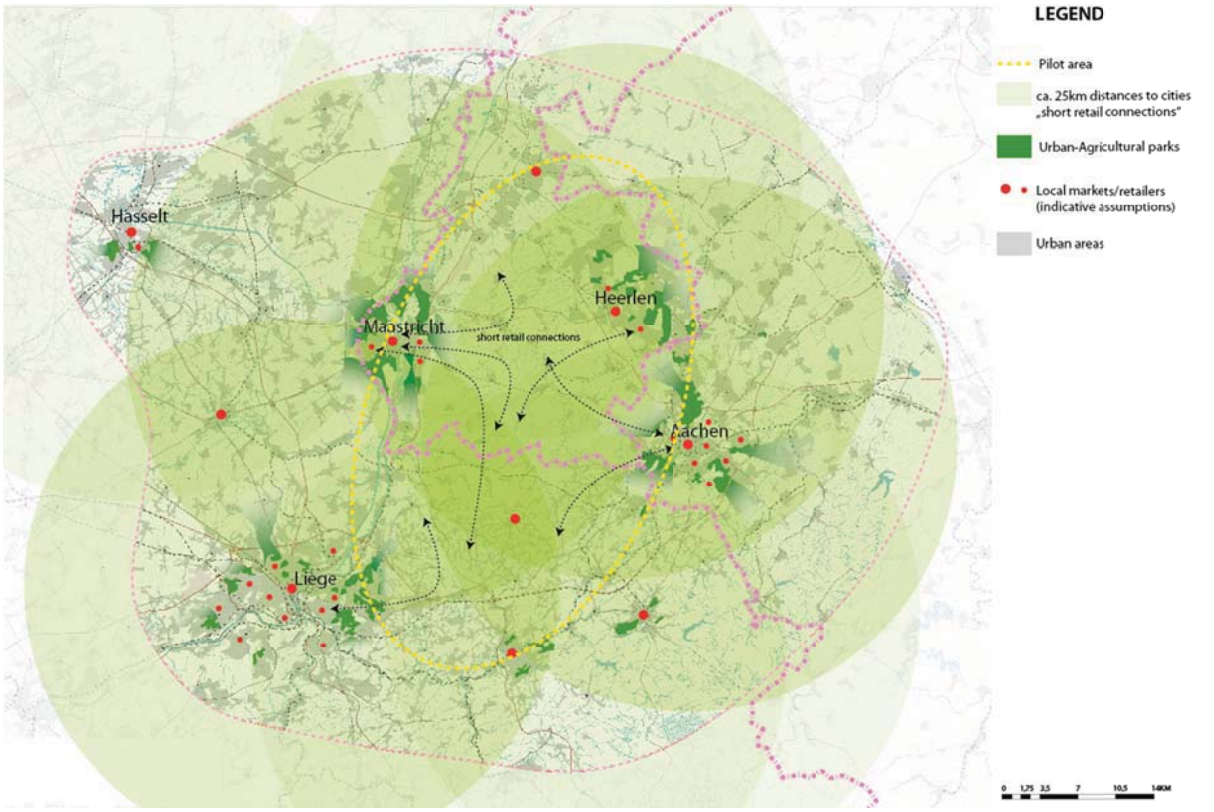
A European instrument which can be ideally used is the designation of 7% ecological focus area of farms receiving direct payments. In cooperation with the competent authorities and agricultural advisory systems the 3LP landscape laboratory could offer a local landscape specific Green

Infrastructure Toolbox and 'farm design' services. In sum this will yield much higher benefits than uncoordinated, somewhat arbitrary, single actions. Participants of the small farmer scheme – to whom the 7% condition does not apply – may be offered a voluntary option compensated with instruments from the rural development pillar (thesis paper 3).

| **Green infrastructure strategy – Linkages with regional and European policy objectives and initiatives** | |
|---|---|
| **3LP development themes and aims** | 2003: Nature, water and environment<br>2013 (Destrée study): Sustainable development and valorization of 3LP landscape, environment and biodiversity |
| **Euregio MR 2020** | Sustainable Development, Culture and Tourism |
| **Main sectors/ actors** | Water sector, agricultural & forestry sector, environmental organizations, competent authorities |
| **Local/ regional initiatives** | ▪ Habitat Euregio<br>▪ Aquadra<br>▪ De Nieuwe Grensmaas/Maasvallei River5 Park<br>▪ Wurmtal project (past)<br>▪ Maas River Basin Management Plan>follow up projects such as "Lebendige Gewässer" in NRW/DE<br>▪ FLOODWISE<br>▪ AMICE<br>▪ (…) |
| **Relevant EU policies and instruments** | ▪ Flagship initiative resource efficient Europe<br>▪ EU Green infrastructure strategy<br>▪ Natura 2000 network<br>▪ River basin management plans<br>▪ 7% ecological focus area condition for direct payments<br>▪ Farm advisory systems<br>▪ BISE, WISE, CLIMAT-ADAPT (information systems)<br>▪ Funds: LIFE, EAFRD, EAGGF<br>▪ Rural development measures: afforestation, agro-forestry, etc. |
| **Cohesion policy thematic objectives (CSF)** | (5) promoting climate change adaptation, risk prevention and management<br>(6) protecting the environment and promoting resource efficiency |
| **Investment priorities regional development** | 5(b) promoting investment to address specific risks, ensuring disaster resilience 6(d) protecting biodiversity, soil protection and promoting ecosystem services including NATURA 2000 and green infrastructures |
| **Investment priorities rural development** | 4(a) restoring and preserving biodiversity, including in Natura 2000 areas and high nature value farming, and the state of European landscapes (b) improving water management (c) improving soil management; 5(e) fostering carbon sequestration in agriculture and forestry |
| **Territorial Agenda 2020 priorities** | 1. Promote polycentric and balanced territorial development<br>3. Territorial integration in cross-border and transnational functional regions<br>6. Managing and connecting ecological, landscape and cultural values of regions |




# Agricultural quality production strategy




**Thesis: A regional quality scheme and payments for landscape services can lead farmers to simultaneously co-produce high-quality products and landscape quality**

Abstract: Agriculture is a main actor in the maintenance of cultural landscapes, also within the 3LP. However, agriculture faces increasing societal expectations, risks posed by the global market, administrative burden and the need to proof compliance with environmental and sustainability standards. The promotion of regional quality markets can help to cope with these challenges. Hence, a regional quality scheme, payments for landscape services and urban-agricultural parks are recommended as useful instruments within this strategy.

**Regional quality scheme:** The 3LP landscape laboratory could take the initiative to develop a regional quality production scheme based on international standards in the form of a pilot project. A focus on ecosystem/landscape services already matches many international assessment criteria. Landscape monitoring and quality objectives can ideally provide a regional reference system for voluntary certification of individual farms with the option of group certification. It is further proposed to market the scheme by using the names/labels and most symbolic core qualities of the local landscapes (e.g. Pays de Herve and bocage image) under the 3LP as umbrella. Regional sales may be guaranteed to farmers within the scheme by involving food-processors, retailers and green public procurement.

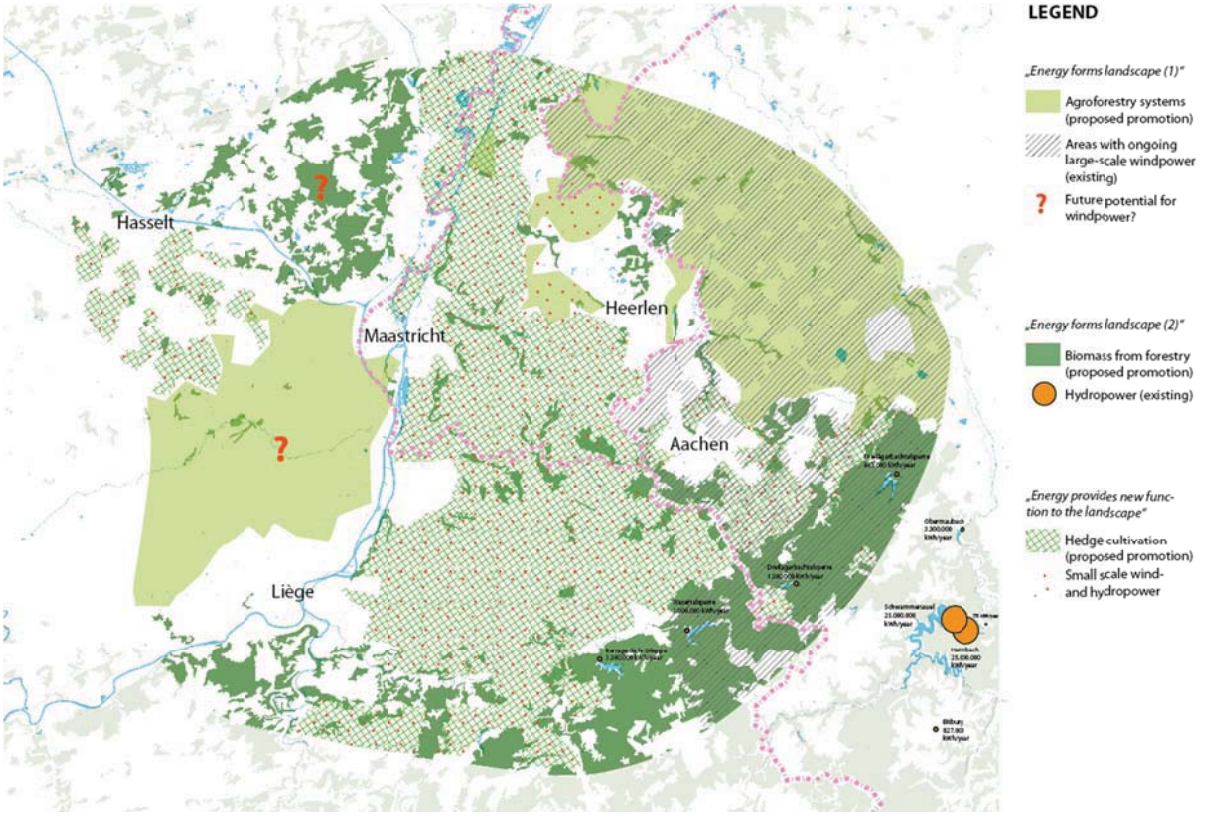
**Payments for landscape services:** the 3LP landscape laboratory could initiate a quality production fund (e.g. from EAFRD/ national rural development programmes, a lottery or a larger environmental organization) to compensate farmers for implementing practices from the Green Infrastructure toolbox coupled to the monitoring system, e.g. for a farm's performance of water retention, water quality production, habitat creation, public access (foot paths, gates, etc.) on their land. Away from intensification with the purpose of maximized yield this will provide incentives to farmers to diversify their production practices towards a true multifunctional output.

**Urban agricultural parks:** agricultural ensembles at the fringes of cities hold special economic potentials, due to their proximity to urban consumers of food, recreational- and social services. Due to its polycentric settlement structure, the 3LP contains many examples of this situation. To harness this potential, it is proposed to promote the transformation of such areas into urban agricultural parks. Within these parks, farmers could cooperate with local inhabitants as well as landscape architects and diversify their operations towards quality products, recreational opportunities (e.g. through park-like design of croplands, do-it-yourself gardening, etc.), direct sales or even gastronomy. Additionally to economic benefits, it is hypothesized that a resulting park-like character would significantly increase the attractivity at the overlap of cities and countryside.

| **Agricultural quality production strategy - Linkages with regional and European policy objectives and initiatives** | |
|---|---|
| **3LP development themes and aims** | 2003: Agriculture, Urbanization and Infrastructure, Tourism, Nature, water and environment; 2013 (Destrée study): Development of a label of regional origin and quality |
| **Euregio MR 2020** | Regional Marketing , Economy and Innovation, Sustainable Development |
| **Main sectors/ actors** | Agriculture & forestry, food processing and retail industry, agricultural chambers, extension and advisory services |
| **Local/ regional initiatives** | ▪ Euregio met Smaak<br>▪ Groene Gastvrije Gordel<br>▪ Foodlinks<br>▪ Pays de Herve – Futur<br>▪ Mergelwind e.V.<br>▪ Pferdelandpark |
| **Relevant EU policies and instruments** | ▪ Common Agricultural Policy (CAP)<br>▪ Green public procurement (GPP)<br>▪ Agricultural advisory systems<br>▪ Funds: EAFRD<br>▪ Rural development measures, e.g.:<br>Quality schemes for agricultural products and foodstuffs,<br>agri-environment-climate payments,<br>Natura 2000 & Water framework directive payments |
| **Cohesion policy thematic objectives (CSF)** | (3) enhancing the competitiveness of small and medium-sized enterprises, the agricultural sector and the fisheries and aquaculture sector<br>(4) supporting the shift towards a low-carbon economy in all sectors<br>(6) protecting the environment and promoting resource efficiency |
| **Investment priorities regional development** | 6 (d) protecting biodiversity, soil protection and promoting ecosystem services including NATURA 2000 and green infrastructures/ (c) protecting, promoting and developing cultural heritage |
| **Investment priorities rural development** | 3(a) better integrating primary producers into the food chain through quality schemes, promotion in local markets and short supply circuits, producer groups and inter-branch organizations/ 1(b) strengthening the links between agriculture and forestry and research and innovation |
| **Territorial Agenda 2020 priorities** | 2. Encouraging integrated development in cities, rural and specific regions<br>4. Ensuring global competitiveness of the regions based on strong local economies<br>6. Managing and connecting ecological, landscape and cultural values of regions |




# Smart & small scale renewable energy strategy



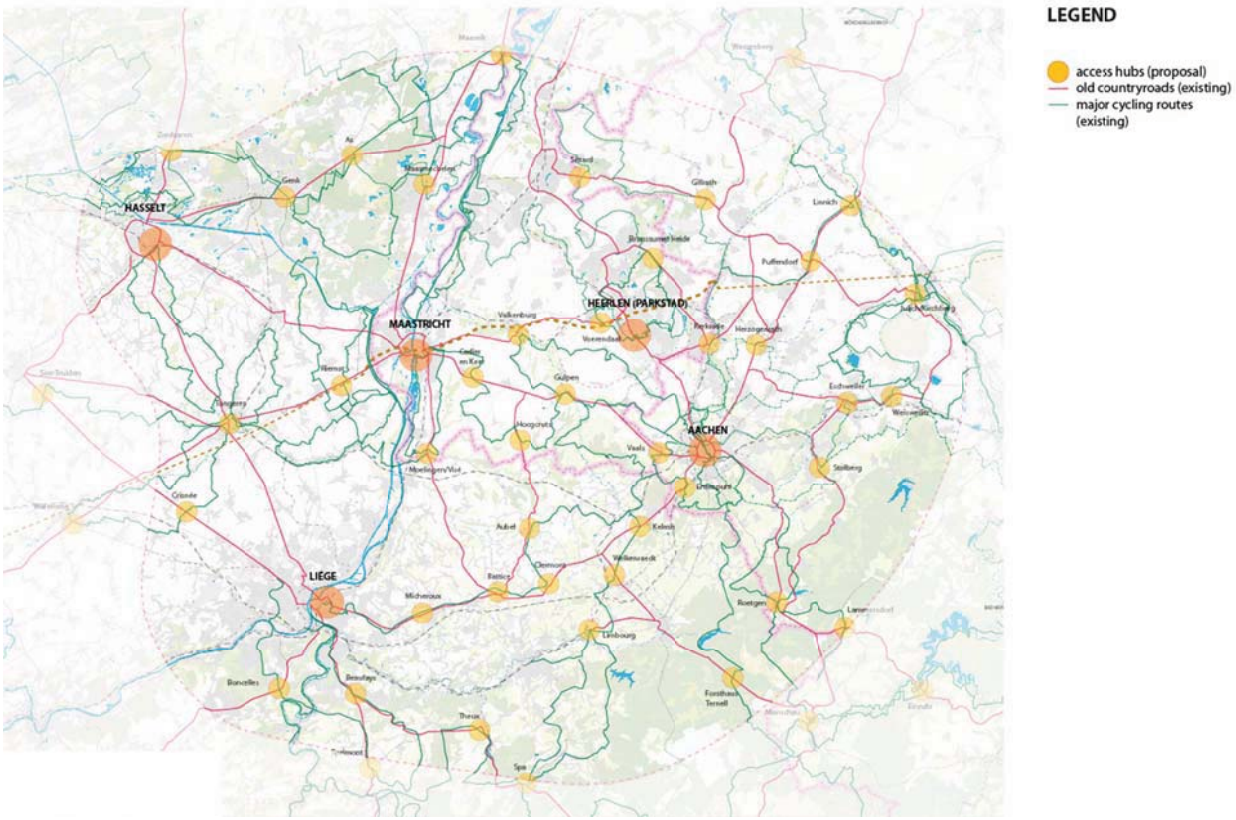

**Theses: A smart mix of small scale renewable energy technologies can create attractive modern cultural landscapes. Complementary biomass production can yield both bioenergy and multiple landscape services as added value.**

Abstract: Renewable energy use shaped cultural landscapes in the past both in positive and negative ways (e.g. Dutch wind mills as landscape icons or forest devastation at the beginning of industrialization). Today, large scale renewable energy applications, like large wind and solar power fields or maize cultivation for biogas production, highly change the face of the landscape and are often opposed by local citizens or conservationists. In contrast to predominantly technological efficiency-led solutions there are often alternatives that even enhance the value of the cultural landscape. It is therefore proposed to pro-actively develop a smart mix of small-scale renewable energy applications in the region, with a focus on complementary biomass production. Practices like agro-forestry, contour hedges, permanent grassland, short rotation plantations etc. do not only produce biomass resources, but can also prevent erosion, retain water, treat waste water, provide habitat and create attractive landscape features, etc. They can be integrated with systems for food production and thus do not compete with, but improve agricultural production. Similarly, small wind turbines, small hydro, and solar roofs etc. can be used and designed as characteristic cultural landscape features in an ecologically viable way. The 3LP landscape laboratory (thesis paper 1) could help to account for added values of landscape services in cost-benefit analyses with regard to quality of life, heritage and identity, as well as resources for the tourism sector. It can also take a leading role in collaboration with renewable energy excellence and competence centers for the further development of these technologies and practices from an innovative landscape perspective, i.e. combining traditional and cutting-edge knowledge, place-based landscape expertise and smart grid technologies.

| Smart & small scale renewable energy strategy – Linkages with regional and European policy objectives and initiatives | |
|---|---|
| **3LP development themes and aims** | 2003: -/- not specifically addressed<br>2013 (Destrée study): Climate and Energy (as additional topics) |
| **Euregio MR 2020** | Economy and Innovation, Sustainable Development |
| **Main sectors/ actors** | Energy sector, agriculture & forestry, local communities/ municipalities, research & development |
| **Local/ regional initiatives** | ▪ Bioenergieregion Eifel<br>▪ STAWAG Smart Lab<br>▪ Integriertes Klimaschutzkonzept Städteregion Aachen<br>▪ Indeland<br>▪ (…) |
| **Relevant EU policies and instruments** | ▪ Europe 2020 sustainable growth: 20/20/20 headline target<br>▪ Energy 2020 strategy<br>▪ Flagship initiatives Resource Efficient Europe/ Innovation Union<br>▪ Renewable Energy Sources Directive<br>▪ Biomass action plan<br>▪ Horizon 2020 research & innovation programme<br>▪ Community Lead Local Development<br>▪ Funds: EFRD, EAFRD |
| **Cohesion policy thematic objectives (CSF)** | (1) strengthening research, technological development and innovation<br>(4) supporting the shift towards a low-carbon economy in all sectors<br>(6) protecting the environment and promoting resource efficiency |
| **Investment priorities regional development** | 4(a) promoting the production and distribution of renewable energy sources, (d) developing smart distribution systems at low voltage levels<br>1(a) enhancing research and innovation infrastructure (R&I) and capacities to develop R&I excellence and promoting centers of competence, in particular those of European interest<br>6(c) protecting, promoting and developing cultural heritage; |
| **Investment priorities rural development** | 5(c) facilitating the supply and use of renewable sources of energy, of byproducts, wastes, residues and other non food raw material for purposes of the bio-economy |
| **TA 2020 priorities** | 3. Territorial integration in cross-border and transnational functional regions<br>4. Ensuring global competitiveness of the regions based on strong local economies<br>6. Managing and connecting ecological, landscape and cultural values of regions |




# Cultural heritage and accessibility strategy




**<u>Thesis:</u> An access hub network providing physical, informational and emotional access can support 3LP cultural heritage-/landscape maintenance.**

<u>Abstract:</u> Cultural landscapes including their characteristic and symbolic elements (e.g. cultivation patterns, land use mosaic, monuments, architectural style etc.) provide identity/sense of belonging, recreational opportunities and constitute a valuable resource for the tourism sector. The 3LP offers a great variety of local landscapes, a manifold cultural heritage, diverse touristic attractions and a dense network of interesting roads, bike paths and trails. However, an overview of such assets is difficult to obtain and navigation through the many choices is complicated.

Therefore it is proposed to introduce a cross-border access hub network as a structuring element, which makes use of the existing situation by punctual interventions: Access hubs are located at selected locations, always at crossings of historic major roads with important bike paths and hiking trails. Each hub provides 3 forms of access simultaneously: First, **physical access** by improving overall public mobility (e.g. including e-car, e-bike sharing and/or P&R, ramble bus etc.). Second, **Informational access** is offered with infotainment (e.g. about landscape formation and history, ongoing and future landscape projects, touristic offers, specific sites etc.). Finally, **emotional access** is enabled by different storylines/ narratives, participative action, land art events and installations and the enjoyment of regional products.

Increasing the demand for landscape quality by an access hub network can in turn lead to support for the supply side, i.e. the maintenance of landscape heritage areas and elements. In order to select from an abundance of possibilities, it is proposed to apply filters for choosing from existing routes, destinations and narratives at 3 scales:

A **European scale filter** can highlight sites of European significance or those representing the development of the European community (European narrative, e.g. Carolingian times, coal and steel community, treaty of Maastricht etc.) A **3LP scale filter** can collect sites, areas and elements symbolic for the Three-Countries-Park and border situation (e.g. Drielandenpunt, old transition points etc.). Particularly, a **Local identity filter** can identify the different landscapes of the 3LP by names (e.g. Pays de Herve, Heuvelland, Jülicher Börde etc.) and their specific character/touristic and civic potential. Subsequently, it is possible to promote a selection of each landscape's sites and routes offering best landscape experience (including views, access to water, biodiversity hot spots, traditional elements, quality farm access, direct purchase etc.). To enable the described access hub system and the selection of landscape heritage areas and elements, the 3LP landscape laboratory could provide the capacity to communicate with the land owners concerned, eventually raise additional funds or coordinate citizens' contributions and voluntary actions etc.

| **Cultural heritage and accessibility strategy - Linkages with regional and European policy objectives and initiatives** | |
|---|---|
| **3LP development themes and aims** | 2003: Landscape and Cultural History, Tourism, Infrastructure, Water and Environment<br>2013 (Destrée study): innovative projects for urban-rural exchange, development of sustainable mobility solutions |
| **Euregio MR 2020** | Culture and Tourism, Mobility and Infrastructure, Regional Marketing, Sustainable Development |
| **Main sectors/ actors** | Tourism & transportation sector, culture & creative sector, tourist agencies, environmental organizations, voluntary sector |
| **Local/ regional initiatives** | ▪ Mobility Euregio<br>▪ TIGER<br>▪ Maastricht Cultural Capital initiative<br>▪ Via Belgica/Grensrouten/St. Pietersberg/ Grensschap Albertkanal and other smaller projects<br>▪ Greenmetropolis (past)<br>▪ Bloesemlint<br>▪ (…) |
| **Relevant EU policies and instruments** | ▪ Culture work plan<br>▪ Strategies for smart specialization / sector cultural & creative industries<br>▪ European Destinations of Excellence (EDEN)<br>▪ European heritage label and heritage days<br>▪ Funds: EFRD, EAFRD |
| **Cohesion policy thematic objectives (CSF)** | (1) strengthening research, technological development and innovation / (2) enhancing access to, and use and quality of, information and communication technologies / (7) promoting sustainable transport and removing bottlenecks in key network infrastructures / (6) protecting the environment and promoting resource efficiency |
| **Investment priorities regional development** | 7 (c) developing environment-friendly and low-carbon transport systems and promoting sustainable urban mobility/ 6 (c) protecting, promoting and developing cultural heritage |
| **Investment priorities rural development** | (6) promoting social inclusion poverty reduction and economic development in rural areas |
| **TA 2020 priorities** | 1. Promote polycentric and balanced territorial development<br>2. Encouraging integrated development in cities, rural and specific regions<br>3. Territorial integration in cross-border and transnational functional regions<br>4. Ensuring global competitiveness of the regions based on strong local economies<br>5. Improving territorial connectivity for individuals, communities and enterprises<br>6. Managing and connecting ecological, landscape and cultural values of regions |

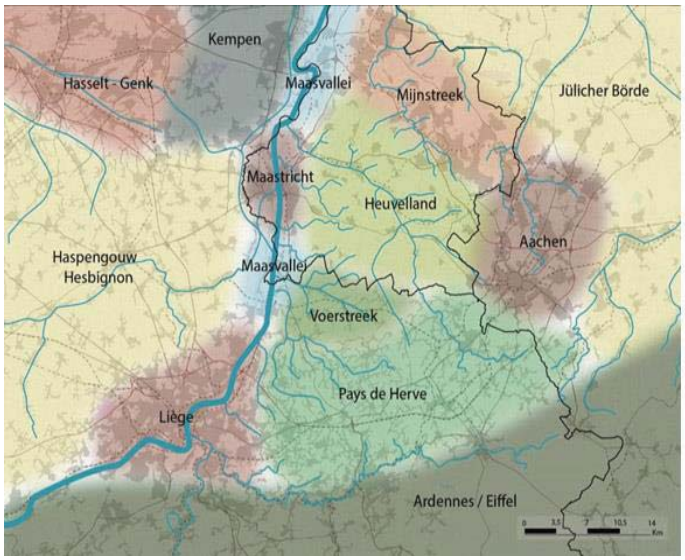




## V.10. Discussion Paper on the “Cross-border regional landscapes and EU policy” used for “Phase C - The interface between the 3LP landscape perspective and EU policy” in the expert meeting on 04.06.2013.

The discussion paper is based on the themes of the 3LP development perspective (2003), the EU policy analysis, the guiding principles of the Landscape Perspective and the previous experience and knowledge of the project team.

# European landscapes:
# Providing values and context for EU policy implementation




Introduction: Traditionally, European Union policy is mostly of standardized and sectoralized nature and is oriented towards economic growth and job creation (Europe 2020). Many policies have a territorial impact and induce landscape change – both in positive and negative ways. In a cross-border context, such as the Three-Countries-Park, standardization facilitates territorial cooperation through providing common goals, standardized procedures and indicators (e.g. Water framework directive, Natura 2000 & Green infrastructure) etc. However, effective policy implementation should take a place-based approach to build on regional asset and to reveal potentials for regional development (Territorial Agenda 2020). A place-based approach is also conducive to the protection and development of landscape quality and diversity - which are explicit aims of the European Landscape Convention (ELC). For the 3LP, a cross-border region with more than 16 landscapes with distinct character and identity, it is assumed that especially three aspects of European Union policy pose risks to landscape quality and diversity, which could be turned into strengths by pro-active landscape development. Following three pairs of risks and chances will guide the discussion:

(1) *Risk*: Uncontrolled growth at the cost of landscape degradation if landscape qualities and values are not taken into regional account. *Chance*:
→ **Landscape as asset - contributing to smart, sustainable, and inclusive regional development**

(2) *Risk*: 'Territorially blind' standardization without enough room for regional and local specification creating 'uniform' landscapes. *Chance*:
→ **Landscape as place - contributing to cohesion and place-based policy implementation**

(3) *Risk*: One sided implementation of sectoral policies in a non-integrated manner causing land-use conflicts and trade-offs between various landscape demands on multiple scales. *Chance*:
→ **Landscape as common ground - contributing to horizontal, vertical & territorial integration**

**(1) Landscape as asset:** The landscape – "an area as perceived by people" (ELC, Art. 1a) – is both the place of economic activities and of non-commodified value creation. Its features, processes and ecosystems largely contribute to economic productivity, quality of life and human well-being. The European Landscape Convention transcends the conventional aesthetic and heritage concept of landscape value by referring to the whole territory, outstanding as well as ordinary and degraded landscapes, and sustainable development.

*Question: Which concepts can be used to frame landscape as an asset and a place of value-creation in whole territories? (Do you use such concepts in you daily work? What are your experiences? How to link these concepts to smart, sustainable and inclusive growth targeted by the Europe 2020 Strategy?)*

**(2) Landscape as place:** Each landscape – "whose character is the result of natural and/ or human factors" (ELC, Art. 1a) shows an individual shape and history and a unique configuration under constant change. It could be considered 'a place' itself or a 'composition of places'. Thus, the strength of landscape policy is that it inherently encounters a 'place-based' approach. Therefore, landscape policy could provide the context and a reference system for the place-based implementation of sectoral policies with a territorial dimension such as environmental policy, but also economic sector policies like energy and agriculture as well as culture and tourism etc. Furthermore, the landscape provides a sense of belonging and local-regional identity. It therewith contributes to social and territorial cohesion and the "consolidation of the 'European identity'" (ELC, preamble).

*Question: What means the goal of territorial cohesion and the place-based policy approach of the Territorial Agenda 2020 with regard to landscape policy? (How can landscape be used to contextualize standardized policy? How to link landscape character/ landscape assets with the goal of territorial cohesion?)*

**(3) Landscape as common ground:** landscape conceptions vary with language, culture and disciplines. However, landscape can be understood as both a perceived mental construct and part of physical space together forming peoples' living environment. It accommodates various land uses and sectors, placing different demands on landscapes. Demands are also appear on different levels and scales, e.g. by local inhabitants and visitors up to European policy and international conventions. These demands and different governance systems need to be integrated horizontally and vertically in a multi-level approach. Furthermore, different functional units like landscape character areas watersheds, habitat networks, urban commuter areas need to be considered simultaneously with administrative units.

*Question: What are suitable 'landscape governance' arrangements across sectors, scales and functional units, especially in a cross-border situation? (How can the ELC instrument of landscape management be used? How to link landscape policy with spatial planning and territorial development?)*

Final Discussion: **Message towards EU policy makers**

Whether and how 'landscape' should and could be positioned in EU policy?

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