

# BEST METROPOLISES

## Best development conditions in European metropolises: Paris, Berlin and Warsaw

Targeted Analysis 2013/2/14

Interim Report | 13/04/2012



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# 1. Executive summary

The ESPON project BEST METROPOLISES aims at identifying and assessing the main driving forces for metropolitan development and their consequences in different spheres; the relationships between processes of socio-economic and spatial development of metropolitan areas; and the impact of institutional arrangements and governance on their development paths. The research results will provide an evaluation of the contemporary processes of metropolisation in the three metropolitan cities under investigation (Paris, Berlin and Warsaw) and their development potential.

The results of the research activities achieved so far have pointed out that, despite many substantial differences among the studied cities, all of them face challenges derived from metropolitan growth. The cities' development history has played a very important role in shaping their current economic, political, and cultural status and processes of spatial development. The initial results of the investigation show the context sensitivity of the three European metropolitan areas regarding spatial dynamics and characteristics. Geo-political and geo-economic changes, specific historical urban and regional development paths and different starting points, in particular as regards the national political environment and the spatial position within a larger macro-regional context, are the key factors influencing the development potential and functioning of these cities in the local, regional, continental and global scales.

Housing conditions in each studied city present unique features. In the case of Paris, the middle income population cannot afford to rent a flat within the city of Paris; in Berlin low to middle income population is not eligible for social housing and has difficulties to find an affordable, suitable flat. In Warsaw low to middle income population cannot afford to buy a flat or rent it on a free market whilst not being eligible for social housing. Each city has a specific approach to social housing as well as different policy measures to improve the availability of affordable housing. The distribution of population distribution has, among other factors, directed the establishment and evolution of socio-spatial and economic structures. The three metropolises are of very different size, shape and growing dynamics. Urban sprawl is a persistent problem in Paris and Warsaw, which is connected with mobility of population, preferences concerning place of residence, economic status of individuals and households, and development of transportation infrastructure.

The highest values of daily mobility indicators are found in Warsaw and Paris. Warsaw is the main destination for many inhabitants of the Warsaw Metropolitan Area and other parts of the Mazovia region. In Paris the new problem is an increasing number of trips between different locations of the outer suburbs. Among the three metropolises Warsaw is the city with the poorest accessibility, where good transport connections between the city and its surrounding area lack. Metro systems play an important role in the traffic of Paris and Berlin; while in Warsaw more than 50 per cent of commuters comes to the capital city by car. Warsaw lacks multimodal stations and park and ride facilities and its increasing motorization rate has been raising traffic jams. In contrast, Berlin can be regarded as a benchmark in management of public transportation.

Regarding international migration, Paris is the most attractive city, followed by Berlin and Warsaw. Legal and illegal immigration might represent a multi-dimensional problem in Paris, where the majority of international immigrants comes from outside the EU. Berlin is also multicultural city with immigrants from different countries, but the migration pressure from abroad and within the country is smaller. Warsaw is a regional and national growth pole, which, however, is still not a main destination for international migrants.

Paris has the longest experience with visionary strategic planning and is presently active in this field. Strategic planning in the Paris region, from the authoritarian but effective transformation of its inner city by Baron Haussmann to its latest strategic documents, displays a consistent, rationalist, top-down planning system which is likely to remain as such. Berlin too has an impressive history of strategic planning, ranging from the Hobrecht plan in 1862 to the 2001 Berlin Studie. However, from thereon Berlin has practically withdrawn from strategic planning in favour of an incrementalist, sectoral planning. Warsaw, since the political and economic transition of 1989, has successfully approached strategic planning, taking into account the new challenges and opportunities brought by the market economy. However, it is still not clear how the city and regional governments will address issues of sustainable development and the strong pressure of developers and other economic stakeholders, which are responsible for urban sprawl.

## 2. Outline of methodology

The primary objective of the Best Metropolises Project is to identify the factors that determine the socio-economic and spatial development of three metropolitan areas: Paris, Berlin and Warsaw. The methodology incorporated an evidence-based identification of the development factors and forces in the three metropolitan areas taking into account the metropolises' large economic, social and historical differences and various conditions for development. The comprehensive diagnosis intended: i) to provide a set of data and information that enables the identification of trends of metropolitan development both European-wide and particularly in the three metropolises; and ii) to serve as a base for the assessment of policy measures used to guide development processes. The analysed policies concern the following three themes: living conditions and factors that influence the choice of habitual residence in metropolitan areas; trends and reasons of intra-metropolitan mobility and mobility between the metropolitan region and adjacent municipalities; and governance of the metropolitan area.

Both quantitative and qualitative research methods are combined in the methodology. The quantitative analyses were based on comparative statistical data (when possible) and aimed to provide the knowledge about similarities and differences in the three metropolises and their functional areas. The studies cities have specific histories and different census dates, therefore the analysed periods of spatial evolution in the three cities differ. The different thematic maps of the project synthesize the major trends in the development of the metropolitan areas. These maps also elucidate the relations between the phenomena and processes studied.

The spatial unit for the analyses has been primarily the Functional Urban Areas (FUAs), however with a possibility to adjust it depending on the theme and spatially on the available data. In such case, it has been preferably altered to the administratively delineated borders of the metropolitan areas. For a more detailed analysis of specific activities, FUAs have been broken down into smaller spatial units (LAU1, LAU2). This allows to carry out Pan-European comparisons and to provide stakeholders from the three cities with useful and updated information on development processes in areas they are especially interested in. The definition and geographical range of FUAs in the project are based on previous ESPON projects (especially ESPON 1.1.1 and 1.4.3) (annex H and fig. D11-D13 in the annex D).

Desk research activities performed focused on the identification of specific key issues concerning the development circumstances and evolution of the studied metropolitan areas. The first phase of qualitative analysis of strategic documents and long-term development visions of the three metropolises has been performed. This analysis will be continued in the next steps of the project implementation in order to provide a better understanding of the relationships between strategic goals and visions, the metropolises' development potentials, and implemented development policies. These results will base the formulation of recommendations for strategic development visions for the three metropolises.

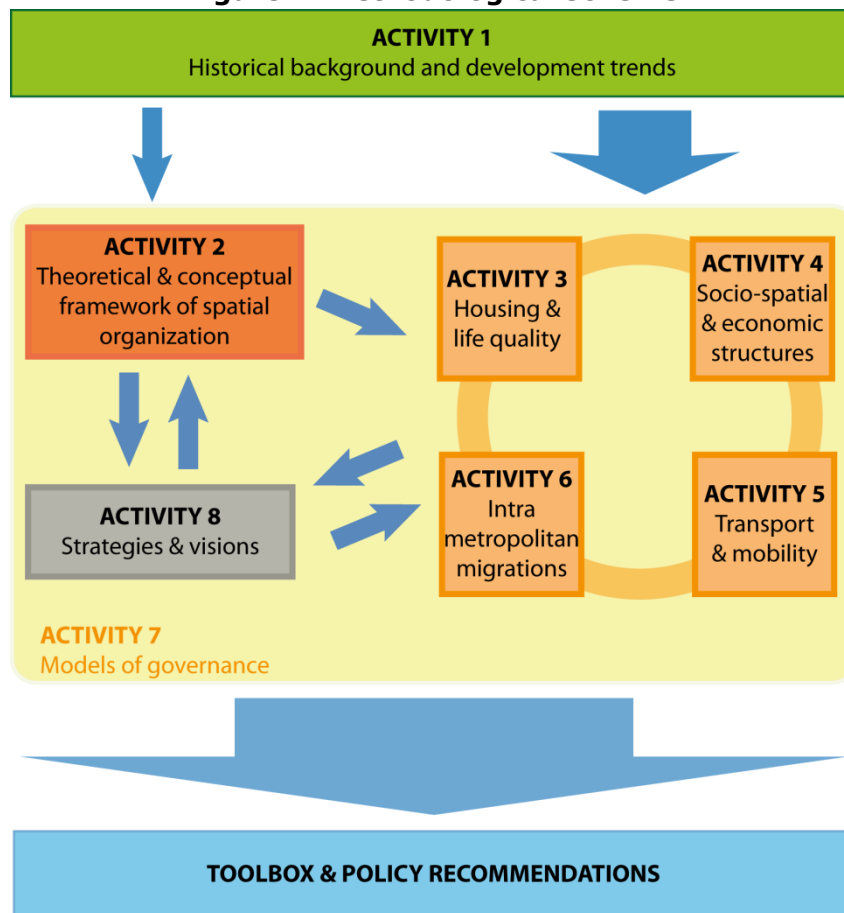
The first phase of contextualization of the development patterns of the three metropolitan areas at hand within a broader European context has also been completed. The identified development trends and drivers will ground theoretical conceptualizations of development processes at the Pan-European level. For the Draft Final Report, the quantitative methods will be complemented with a qualitative approach based particularly on the interviews conducted with selected representatives of three cities (including policy- and decision-makers) in order to



diagnose the main assets and potentials as well as the key problems and weaknesses that the metropolitan areas shall tackle in the upcoming years.

The results of the project accrued until now are presented in this report in eight thematic chapters (4.1-4.8) which serve as pivotal components of the research structure. The cross-thematic approach was adopted to address the main research questions and to provide the information about dependencies and relations between various themes concerning the three metropolitan areas (Fig. 1). Special attention is paid to the direct and indirect relations between four main topics: housing conditions, socio-economic structures, migrations, transport and job accessibility (activities 3, 4, 5 and 6), which differ in the metropolises as a result of their historical background (activity 1) and their particular development (activity 2). In addition, these four fields are directly influenced by the form of governance (activity 7) as well as by development policies adopted (activity 8). The research results will moreover be utilized for the elaboration of a toolbox with policy recommendations addressing strategic development problems of metropolitan areas.

**Figure 1. Methodological scheme**



Source: own elaboration.

### 3. Data and information

A literature review has been carried out to present the current state of the art in the fields of urban development and formation of the metropolitan areas of Paris, Berlin and Warsaw. It has focused on setting the process taking place in the three metropolises within the broader European context. Key information for the project was provided by a study done by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) in 2011 and by the *Second State of European Cities Report* prepared for the European Commission (DG Regional Policy) in 2010. Moreover, numerous, although scattered, scientific research and policy documents were scrutinized for this study. The most relevant literature is referenced in the annex A.

Additionally a wide range of strategic documents on visions and scenarios for spatial development in the three studied metropolises were used. The references, internet links as well as selected examples of historical and current spatial visions can be found in the annexes B and G.

Best Metropolises takes advantage of the large ESPON experience. Particular attention is paid to the projects: TRACC (accessibility); METROBORDER, CAFÉ (mobility and flows); ATTREG (social aspects of territorial development) and FOCI (metropolitan areas). Likewise, results from ESPON 2006 are utilised, especially from the projects Polycentricity (ESPON 1.1.1), Zoom In (2.4.2), Urban functions (1.4.3), Flows (1.4.4), Transport Trends (1.2.1), Transport Policy Impact (2.1.1), Enlargement and Polycentrism (1.1.3) (cf. Annex H)

Because of the wide spectrum of the analysis undertaken within Best Metropolises, data collection covers diversified thematic fields, with particular emphasis on: basic population data (such as population distribution, density and population change); migration and commuting; economic and social data (e.g. employment, socio-professional categories dominance, economic role and rank of the city, R&D expenses); housing (households, housing units, housing prices); and transport system (transport network, data on public transport). The majority of indicators and data were obtained from the publicly available databases collected by Eurostat, national and regional statistical offices (current statistics, national censuses, household surveys). The database were complemented by information available in websites (e.g. public transport system) and provided by the stakeholders. The list of the most important data sources are found in the annex C.

The data intended to cover the FUA of the three metropolitan areas. However, when the correspondingly data is not available the analysis aims to cover a so-called 'extended FUA', which includes the whole space of all NUTS 3 regions partly or fully included in the corresponding FUA. The delimitation of the spatial coverage implies that LAU 2 is the preferred spatial level of analysis, but in case of unavailability of data more generic units (e.g. at NUTS 3 level or core cities) are employed.

Data gaps encountered (for some or all metropolises under investigation) regarded: (a) lack or limited data availability (e.g. household income, purchase prices for flats, housing rental sector), (b) data unavailability at the district level that prevented the analysis of the internal spatial structures of the core cities), (c) data coverage of only core cities, excluding their surroundings (i.e. FUAs), and (d) data availability only for one (or few) point in time and not for time-series, what strongly limits the elaboration of trend analyses.

Apart from the data gaps, complications regarding data comparability were met, including: (a) different conceptual approaches of variables (e.g. social housing in France vs. social housing in Poland); (b) different reference periods and/or points in time; and (c) different spatial resolution (e.g. LAU-2 vs. NUT-3 level) and spatial coverage (e.g. core city vs. FUA).

## **4. Preliminary findings**

### **4.1. Historical background and development trends of Paris, Berlin, and Warsaw**

This activity concentrates on the identification of the key factors and turning points in the urban history of the three studied capital cities. The long tradition of cultural connections between the metropolitan areas of Paris, Berlin and Warsaw dates back to the nineteenth century, when Polish emigrants added important elements to the cultural life of Berlin and Paris. On the other hand, the three cities have experienced very different paths of development due to their diverse roles as national capitals: Paris as the dominant capital of a centralised France, Berlin as the rather provincial capital of Prussia later the isolated outpost of West Germany and today the capital of a federalist country, and Warsaw as the capital of a many times divided and re-created Poland.

#### **4.1.1 Preliminary results**

##### **4.1.1.1 History of Paris**

Paris has the “longest history” among the three metropolises. Its origin goes back to the Gallo-Roman town named Lutetia, which reached up to 8000 inhabitants under the Roman rule. Paris in the year 987 became the capital of the kingdom, turning out to be an important defensive town and education centre in the following centuries. The establishment of a university in the twelfth century initiated an international reputation for the city of Paris. In 1328 the city reached 200 000 inhabitants. In spite of its turbulent history (wars, plague, revolutions), Paris’ image remained as of a city of literature and arts, urban developments and as the example of the first city-planning regulation (laid by Sully).

The first census of 1801 accounted for 5 546 856 inhabitants, which resulted mostly from immigration. The city’s concentration of a large proletarian population living in poor conditions has led to the revolutions of 1830 and 1848, and prompted radical improvements in the urban infrastructure following the concept of the Baron Haussman. However, the further expansion of Paris’ intellectual, artistic and economic influence was limited by the 1870 war against Prussia (with exception in 1860 when city included 8 arrondissements). Despite this war, at the turn of the twentieth century Paris expanded, core city has developed, suburbs (surrounding arrondissements) underwent considerable growth, and living conditions have been improved.

The two world wars had negative consequences to Paris, although the city was not as destroyed as Warsaw or Berlin. In the inter-wars period the urban landscape of Paris was changed by the creation of a public social housing sector under the concept of “Habitations a Loyer Modere” together with a substantial extension of the railway network to the suburbs. After the Second World War, housing (including social housing) and new industrial activity were widely expanded in the suburbs.

The modernization of the region of Paris began after the Second World War and lasted until 1974, when it was hindered by the first energy crisis (so called “thirty glorious years”). The global boom triggered this modernization, leading it in the direction of a globalized economy (which is liberal and based on tertiary sector and

financial markets). It has however its drawbacks: shaken by recurrent crises and bubbles, it presents declining growth rates and deepens social and urban problems. Not only has the economy changed: at the same time devolution altered the political landscape. Paris and surroundings have become a world metropolis. The twentieth-first century opens on an uncertain repositioning in an international scene disrupted by a new world order. Major changes should be required in the current development model (and inspire public policies) to conciliate competitiveness and sustainable development.

A favourable geographical position gives to France and Paris Region a key geopolitical role in the North-West European region. Paris is demographically, politically, economically and culturally dominant in France; but the metropolis is also a national and European motor, and a global metropolis (in addition to London) since the 1980s. It has been for a long time and still is a very mixed region, which now attracts mainly firm's headquarters offices, high qualified executives, researchers and artists.

The metropolitan scale changed at the growth period between 1945 and 1974. Throughout a large suburban sprawl (flats and jobs), peripheral centres emerged, which were often economically successful. This included the development of whole new urban areas (e.g. the business centres of La Défense and Roissy airport), and universities, research laboratories, economic zones etc.. Nevertheless, the challenge of organization of polycentric structure with strong core areas still remains open. The regional debate from 1994 onwards initiated a new period of regional planning, which resulted in the start of the Grand Paris debate with the central State in 2008. A metropolitan economic reorganization implies a new geography in accordance with modern economic criteria (centres located in inner and outer suburbs versus strong core area). However, the capital's economic power keeps it as an overshadowing node.

The current structure of Paris (and its region) makes disparities visible, like in every global city. The discrepancy between higher status population and excluded social categories is expressed by the city's territorial segregation. As a result, social frustration and anger are occasionally bursting in the form of, for instance, riots; black economy and violence may become unbearable in poorer areas. This structural trend remains one of the most important challenges that contemporary urban planning ought to face. It encompasses also the problems of housing, employment, and migration policies. In the case of Paris metropolitan region, particularly young people is affected, especially those from the second generation of immigrants. This phenomenon has resulted in social unrest and civic disaffiliation, electoral abstention or extremist electoral behaviours and contributes substantially to the social and territorial crisis. The limitation of such territorial segregation and social disparities is the most important challenge for future metropolitan competitiveness.

French capitalism has been leaning upon a strong central State since the Second World War. The French Government has set up competitiveness centres for big international firms (whose research centres are located mainly in the Paris Region) and the Grand Paris Project aims at fostering concentrated clusters. This strongly polarized model, which included nine clusters of the so called "new economy" (knowledge-based firms, green economy), is now confronted with a more flexible and networked economic scheme. It intends to boost the development of very reactive and qualified small and middle sized businesses. In this sense, the metropolis of

Paris, with its magnificent historical heritage and the last decades' development trends, has been occupying one of the most important positions in the settlement system of Europe.

#### **4.1.1.2 History of Berlin**

Berlin was founded in the year 1237 at the narrowest crossing point of the river Spree as a commercial settlement on the trade route from east to west. Several city extensions took place in the eighteenth century. The first was the district (Stadtviertel) of Dorotheenstadt, founded in 1673. It was built in well-ordered rectangular patterns, west from the core town. The inhabitants were mainly migrants, especially religious refugees. South from Dorotheenstadt, the Friedrichstadt was founded in 1695, named after the King Friedrich I. It was also structured in small rectangular, very schematic blocks and has filled up the space within the tariff wall by the year of 1734. In this area, most of the inhabitants were civil servants and tradesmen. The other extensions of the space that appeared in the west and southwest configure a third type of settlement in Berlin (in addition to the core town, Dorotheen- and Friedrichstadt), which were unplanned and unstructured, and mostly inhabited by poorer inhabitants.

In the middle of the nineteenth century the number of inhabitants quadrupled, growing up to 460,000, and reaching over a million by the end of this century (PAPE 1995b, p. 19). This happened without a significant extension of the settlement area, but yet led to a densification of the city. Berlin became the capital of the German Kaiserreich in 1871, thus giving impetus to industrial development, which was mostly linked to railway construction (locomotives). Factories were located next to Oranienburger Tor in the north part of the city, next to the river Spree in the east part, and outside the town in the west (ibid.).

In the nineteenth century, housing planning was based on a concentric settlement structure with medium density in the historical core and very high density in the so-called tenements houses ('Mietskaserne') located around the circular railway (constructed 1871-77 on green fields) and partially beyond it. Several small cities developed in the surroundings of Berlin, along the arterial roads, growing as fast as the main city. The space outside the tariff wall was used for agriculture, cemeteries – which were put outside the town for hygienic reasons – and military uses like caserns, parade-grounds and shooting ranges (ibid.).

In the early twentieth century, Berlin, with over two million inhabitants, was a leading industrial centre in Europe and the world. The engines of this development were: Siemens in electronic industries, Borsig and AEG (founded by Rathenau) in mechanical industries,. Berlin also gained importance in the textile industries, and developed journalism and the culture sector. Right after the First World War, the formation of the "Groß-Berlin-Gesetz" brought an important turning point in Berlin's development. It involved the incorporation of 7 cities, 59 rural municipalities and 27 rural districts; the number of inhabitants doubled, totalizing 3.8 million, and the occupied space became thirteen times bigger than of the previous city delimitation (Pape 1995c, p. 20). In the Weimar Republic, social housing was the responsibility of the non-profit sector, which was obliged to provide acceptable housing conditions at affordable rates. Social housing was seen as a "public good" developed for low-income households in exchange for public subsidies (Häußermann and Siebel 1996: 145). The objective was explicitly to provide housing for the growing segments such as key workers and lower middle class families.

A few overlaying patterns of the city structure could be identified. Firstly, the number of floors of housing buildings decreased continuously beyond the ring and likewise the density of population in general. The second pattern was a radial structure, following the railways out of town. They made the early suburbanisation process possible with fast connections, a dense network of stops and low prices. For this pattern, the infrastructure came first and guided the suburbanisation process. A third pattern was visible in terms of the socio-economic structure. Along the circuit railway from north along the east to the south, an almost closed belt of working class districts could be identified. This was contrasted in the west by upper class and upper-middle class representative buildings which characterised areas like Charlottenburg. In the suburban 'Villenkolonien' this trend continued. On the top of these, there were polycentric structures, which were based on the history of independent cities with sometimes more than 100.000 inhabitants (ibid.). All these patterns persisted until the end of World War II (ibid.).

At the end of the World War II almost every house in the historical centre of Berlin was damaged, as well as in the areas close to the core of the city. The city population of 4.3 million inhabitants in 1939 was reduced to only 2.8 million after the war; about 30 per cent of the flats were destroyed and the technical infrastructure was severely destroyed (Pape and Pirch 1995b). However, some highly valuable infrastructure, especially underground supply pipes and some traffic infrastructure, remained in place. Before the western Allies' arrival in Berlin in July 1945, the Soviets demounted an estimated of 75 per cent of the industrial capacity in the western sectors of the city and about 50 per cent in the Soviet sectors. For the sake of comparison, it is worth noting that the war destroyed about 20-25 per cent of the city's industrial capacity (ibid.). The division of Berlin in an eastern part controlled by the Soviet and a western part with a French, British and American sector led to profound changes in the development of the two parts. These were cemented by the Berlin Wall, built on 13 August 1961.

Furthermore, the separation severely influenced the economic situation of Western Berlin. As an island of the western world within the borders of the socialistic GDR (German Democratic Republic), most of the industries were moved to other parts of West Germany (e.g. the headquarters of Siemens and AEG). Concerning the city development, different models and foci were observed in the east and west. The separation led to the development of two diverse housing policies in the Western and Eastern parts of Germany. Within the German Democratic Republic (GDR) and its state-centred housing supply policy, private social housing provision came to an end. The state's economic plan foresaw "mass housing" estates in the rather peripheral areas of Berlin (Droste and Knorr-Siedow 2007: 90). Another example is the transport system. In the east roads were built in a radial system in which public transport focused on tram and S-Bahn systems. In West Berlin it was focused on the U-Bahn (subway) and on the inner city highway in the shape of a (half) ring. With the official reunification on the 3rd of October 1990, Berlin again became capital of the united Germany, and the different administrative and planning structures required to be combined. Thus, many years are needed to integrate the different developments which occurred in the four decades of the city's division (Röhl 1995, p. 24).

For understanding the development of Berlin, the German federalism must be briefly explained. The federal system of the Federal Republic of Germany was in 1949 manifested in the German constitution. It consists of two layers: a national and a

federal states level, the latter composed by the 16 Länder (which include the five Länder added after the reunification). Together with Hamburg and Bremen, Berlin is a city-state which means that the city holds legal powers as of a federal state (the city has sub-divisions in various districts). In 2006 a federalism reform has given more clearly defined competences of the federal entities (e.g. regarding education policy, environmental protection and social policy). The German Länder are historically independent, in particular in planning and development, and the national state decides the allocation of roles, resources and responsibilities through a bargaining process.

#### **4.1.1.3 History of Warsaw**

The city of Warsaw was originated over 700 years ago, however it was founded later than the previous capitals of the Polish kingdom (Gniezno, Poznan and Kraków), making Warsaw then the “youngest” of Polish capitals. Warsaw became the capital in 1596 when the royal court was moved from Kraków. After acquiring such an administrative central role, the city began to expand, attracting new inhabitants and functions. By the end of the eighteenth century the population had reached 120 thousand permanent inhabitants.

In the partition of Poland carried out from 1794 onwards by Austria, Prussia and Russia, Warsaw was the main town of the Russian part (called “The Kingdom of Poland”). In this period the city experienced a substantial decrease of population, economic activities and political significance. In spite of that, during the whole period of partition Warsaw remained a major centre of economic and cultural life of the nation. Economic and political stagnation lasted up to the middle of the nineteenth century. The population increased more rapidly in the second half of the century, after the construction in 1844-1845 of the first railway on Polish lands (connecting Warsaw–Upper Silesian coalfield–Vienna), and particularly after peasant emancipation in 1864 (due to the January Insurrection against Tsarist Russia).

Both population increase and the first wave of industrialisation were connected with the development of the railway system. More lines were inaugurated in addition to the one to Vienna: in 1862 the Warsaw-St. Petersburg, and in 1867 Warsaw-Terespol and Warsaw-Lublin. Finally, in 1877 the construction of the Vistula railway bridge linked west and east banks railway lines, causing a shift in the allocation of industrial activities in urban space. Industrial areas situated along the Vistula valley and dependent on river transport moved to the new western industrial district of Wola, thus forming large working class area. A similar process occurred on the eastern side of the river, in the Praga district.

In 1913 the population of Warsaw reached 884 thousand inhabitants, despite the restriction imposed on the spatial expansion to the limit of the nineteenth century fortifications. This lasted up to 1916, when the city boundaries were extended, bringing over 100 thousand new inhabitants. The rebirth of the Polish state in 1918 brought back the capital status to Warsaw and gave new impulse for development. The city experienced a high level of migration, rapid increase of its outer zone and the formation of the Warsaw agglomeration. The improvement of the railways initiated before the First World War was expanded with new suburban stations and construction of narrow gauge networks, which in Western cities served as the basis for building metro networks. Consequently since 1931 the spread of high density areas outside of Warsaw and the formation of agglomeration occurred in the form of suburbanization belts along the railway network.

Warsaw in 1939 housed around 1 300 000 people within its administrative limits, but in 1945, just after Second World War, only 162 000 people were left. Warsaw had to be rebuilt after the war devastation, since 72 per cent of housing and 90 per cent of industrial buildings were damaged beyond repair. It is worth mentioning that many European cities suffered wartime devastation and many have been subsequently redeveloped, but none on such a scale as Warsaw. The destruction of Warsaw during the Second World War occurred in three main phases: the first was due to the military operation at the beginning of the German invasion (1939); the second concerns the “Ghetto Uprising” (1943) and the destruction of the west-central part of the city; and the third was the one of the “Warsaw Uprising” (1944), particularly after its collapse, when the occupants performed planned and systematic destructions.

Extermination, expulsion of Warsaw’ inhabitants and the destruction of housing infrastructure caused for several decades the increase of the population density in the suburban zones. It overlapped in the 1960s. and 1970s with the administrative restriction to the inflow of new inhabitants and with a deglomeration policy. On the whole, the destruction caused by the Second World War allied with the introduction of communism in 1945 have had decisive consequences for the formation of Warsaw’ spatial structure. It involved the transformation of social and national structure, the physical fabric of city, the political position and administrative function. A substantial role was played by the Decree on Communalization of 1945, which abolished private ownership of land within the city limits. This, even after 1989, remains one of the main obstacles of urban development in the central part of Warsaw. Re-emergence of territorial self government in Poland after 1990, changes of administrative structures and territorial subdivisions of Warsaw. New spatial planning regulations and systemic conditions for economic development have had a decisive impact on development paths of Warsaw metropolis nowadays.

#### **4.1.2 Conclusions**

The historical roots of the current structural conditions of the three studied metropolis present common and specific problems. The structural difficulties of growth concern above all the size and position of the city within the national and global settlement systems. The studied cities present different scale and stages of developments and growth, different administrative and governance structures, different roots of housing problems. Current European Union policy has a homogenising aspect which has also been historically present in modernist planning and architectural concepts throughout the whole twentieth century.

The main historical challenges faced by Berlin concern becoming the capital of the united Germany in the nineteenth century; the consequences of the national-socialist regime; the Second World War destruction and resulting political division of the city; the reunification in 1990 and the current struggle for a higher position in the European and World’s hierarchy.

In the case of Paris, the challenges regards firstly the problems of maintaining the political and economic position of a global city, while keeping one of the world’s highest ranking in the cultural domain. Consequences of such kind of development are problems of ethnic differentiation and tourism growth (both shared partly by Berlin and nearly absent in case of Warsaw).

For Warsaw, the key challenges concern the completion of modernizations and the establishment of a higher position within Central European cities as a “gate to the



East". The historical roots of these challenges are the reestablishment of Warsaw as the capital of the reunited Poland in 1918, the Second World War destruction, the city reconstruction under the rules of the communist regime, and the post-1989 transformation.

In the cases of Warsaw and Berlin, the historical consequences of the totalitarian systems (National-Socialism and Communism for Berlin and Communism for Warsaw) are still visible; while Paris have experience continued democratic and capitalist development, which was, however, marked by an evolving capitalist policy.

Notwithstanding the prevailing differences, some common problems are observed, which, nevertheless, are of different order in the examined cities. Predominantly, such problems concern the future demographic development, suburbanization and urban sprawl, increase of the intra-metropolitan, social and economic disparities as well as affordability of housing. Furthermore sustainable metropolitan governance structures and strategic urban planning remain important challenges.

## **4.2. Theoretical and conceptual framework of spatial organization**

Since the late 1980s, the regional level has gained importance as an arena for a new wave of policy experimentation and institutional reform. 'Metropolitan governance' is increasingly being viewed as a key instrument for enhancing territorial competitiveness as well as for the co-ordination of different kinds of policies within an urban agglomeration. Thus, the "competitive performance" of such urban agglomerations which normally consist of a number of different political administrative territories is not dependent only on the locational "competitive assets" but also on the "governance" of social interactions within metropolitan regions.

Regarding the physical dimension of European metropolitan areas today it seems that the monocentric model in which central city locations are considered as the sole functional focal point for all types of social and economic activity is no longer seen as the norm in the context of evolving spatial patterns across Europe (but also in North America and increasingly in Asia). This re-structuring process is not necessarily characterized only by an extension of the urban fabric, but also represented by a wider array of economic functions and qualified jobs which lead to a broad variety of new centralities, peripheries and intermediate zones. This spatial fragmentation challenges different aspects of spatial planning (such as maintaining mobility, provision of services of general interest, responding to different kinds of housing needs) in general and the political vision to strive for more sustainable urban development in particular. Against the background that metropolitan areas play a key role in climate change mitigation strategies a vital question is for instance the urban form's impact on the resources needed for heating, cooling and in particular transportation at the metro-regional scale (cf. SUME 2011).

Political and economic transformation processes as well as new technologies of the last three decades have played an important role in the change of focus towards the role of metropolitan areas in urban research. Given the role of the internet technologies, trade agreements, lowering transport costs or the strong economic growth of China and India, European networks and their outstanding hubs have been integral to the discussions on European integration and the Single Market. With the Lisbon Strategy, the European Council adopted measures to increase the European

competitiveness and capacity for innovation so that attention was again paid to economic driving forces and centres of innovation. Because of these trends, metropolitan areas in Europe have established an important strategic element of the political discussion both in terms of competitiveness and territorial cohesion. Depending on the national settings and settlement structures, the impact and character of a policy for metropolitan regions in Europe is very diverse as the three countries at hand here, Germany, Poland and France, illustrate quite impressively. These different national starting points – combined with data and methodical problems to capture trends and challenges have thus far complicated scientific and political efforts to achieve a consensual picture of European metropolitan areas.

A more economic figure of thought considers metropolitan areas as playing a critical role in the global network economy. They are conceptualised as being central nodes in the space of multifarious flows since they offer (apparently) the appropriate functional profile to take part in transnational flows of capital, commodities, knowledge, labour, tourists and cultural symbols than cities at a lower level of the urban hierarchy. Their function as important 'hubs' for the interaction of 'talents' and 'their tacit knowledge', as control centres for financial assets or as the major points of origin for the generation of different kinds of innovations (i.e. social, cultural organisational, process-related and material innovations) is increasingly part of the political discourse. Critical in this respect are the so-called metropolitan functions which can be seen as competitive assets in sustaining the metropolitan areas' socio-economic performance in a globalising world (cf. chapter 4.2.2.3). These functions are not limited to metropolitan areas alone, however, when they are combined and concentrated in a certain way, they can cross-fertilize and can thus become characteristic features of metropolitan areas (and specifically of their metropolitan cores) (cf. Schmitt/Dubois 2008, 39).

The debate around metropolitan areas across Europe has also been fuelled by the relatively positive connotation to the term "metropolitan", as it can be seen as an expression of a revitalised desire for urbanity. Thus its suggestive impact is very appealing for marketing campaigns. Hence in this light we suggest to understand the term "metropolisation" as a multi-dimensional process that incorporates those (and other) trends as touched upon above.

The aim of this chapter, however, is not to detail the process of metropolisation as such, rather to make a first attempt to position the three metropolitan areas of Berlin, Paris and Warsaw in a European perspective. Due to the lack of comparable studies, we had to slightly modify these dimension compared to the Inception report. Also we do not want to open the discussion what distinguishes an urban area from a metropolitan area (cf. for instance Blotevogel/Schulze 2009), nor do we want to raise the thorny issue here how to demarcate their spatial scope in the most meaningful way, since this has been done in many earlier studies (e.g. ESPON 1.1.1 – cf. Annex H).

#### **4.2.1. Methodological approach**

In order to contextualize the development patterns of the three metropolitan areas of this project (Warsaw, Berlin and Paris) within a European perspective, a literature review has been carried out (which is by far not completed as mentioned above). In doing so, the following 'three dimensions as regards metropolitan development in Europe' have been considered: economic performance, population trends and urban

form, and classification of metropolitan areas based on their international functions. Regarding the third point, a key study has been carried out by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) in 2011. It provides up-to-date policy-relevant information on functional profiles of metropolitan areas in Europe elaborated in consultation with DG Regio, Eurostat, a panel of experts and a panel of representatives from all EU countries.

Another key reference is the 'Second State of European Cities Report' commissioned by the European Commission (DG Regio) elaborated by RWI, DIFU, NEA and PRAC in 2010. The report uses data from the Urban Audit and integrates a comparison between 320 cities in the European Union and 36 non-EU cities. The Urban Audit provides city data on different spatial levels: core cities, larger urban zones (LUZ), sub-city districts and offers national averages. Metropolitan areas have also been studied by many EU funded research projects. These include among others ESPON projects such as *Polycentricity* (ESPON 1.1.1), *Zoom In* (ESPON 2.4.2), Urban functions (1.4.3) and ESPON FOCI (cf. annex H). The latter has tackled in particular the issue of economic, transport and scientific linkages between cities on different spatial scales.

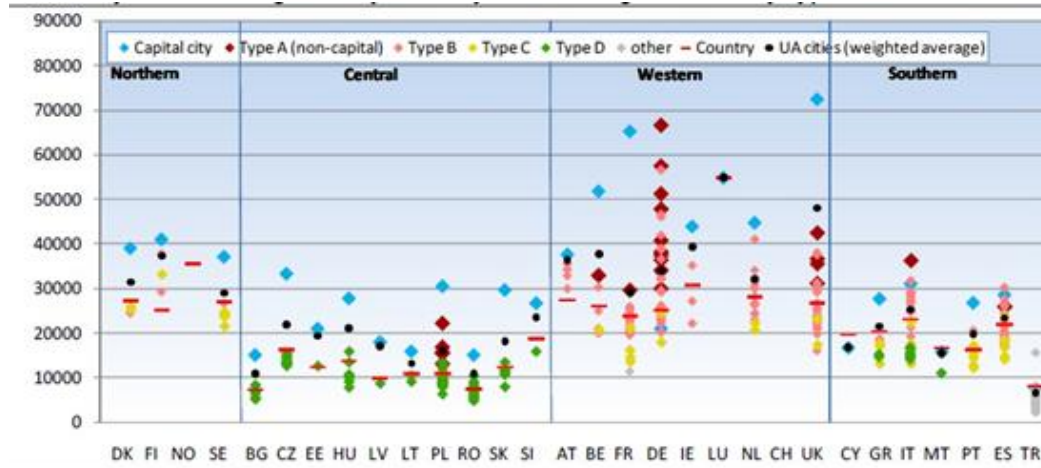
## **4.2.2. Preliminary results: Positioning the three Metropolitan Areas in a European perspective**

### **4.2.2.1. Spatial dynamics: economic performance**

The most commonly used measure of spatial economic dynamic is the regional GDP per capita in Purchasing Power Standards (PPS). In the *second State of European Cities Report* (cf. RWI et al. 2010) it is argued that in terms of national averages of GDP per head in PPS, a clear gap can be seen between most of the capital and in many other larger cities (here Type A) and smaller cities such as Type B, C, and D (fig. D3 in annex D1). In eight European capitals, the GDP per head is more than double compared to the national average which applies to London and Paris, but also to Warsaw, Bratislava, Sofia, Bucharest, Prague, Budapest, Riga and Tallinn (RWI et al. 2010, p.75). Germany is, however, an exception, since Berlin shows a comparatively low performance (under national average) in this respect, which is in sharp contrast to Paris where the city is literally outperforming the other French cities. The same can be said for Warsaw, even though to a lesser extent in regards to the distance to the second best performing polish city.

The Figure 2 shows also that in most European countries there is an above average agglomeration of wealth in cities in general and an exceptional agglomeration in the capital city in particular. In so-called 'principal metropolitan areas' (city Type A), there is a high concentration of wealth: economic prosperity, measured in GDP per head, is above the national average. In 'Regional Centres' (Type B) one can observe a more balanced distribution of above- and below-average urban GDP per head. In almost all 'Smaller Centres' (Type C) and in 'Lagging Regions' (Type D), the economic output per resident is below the national average.

**Figure 2. GDP per head in PPS  
(Core city/NUTS 3 region, by country, macro-region and city type, 2004)**



Source: RWI et al, 2010, 75

#### 4.2.2.2. Spatial dynamics: urban form

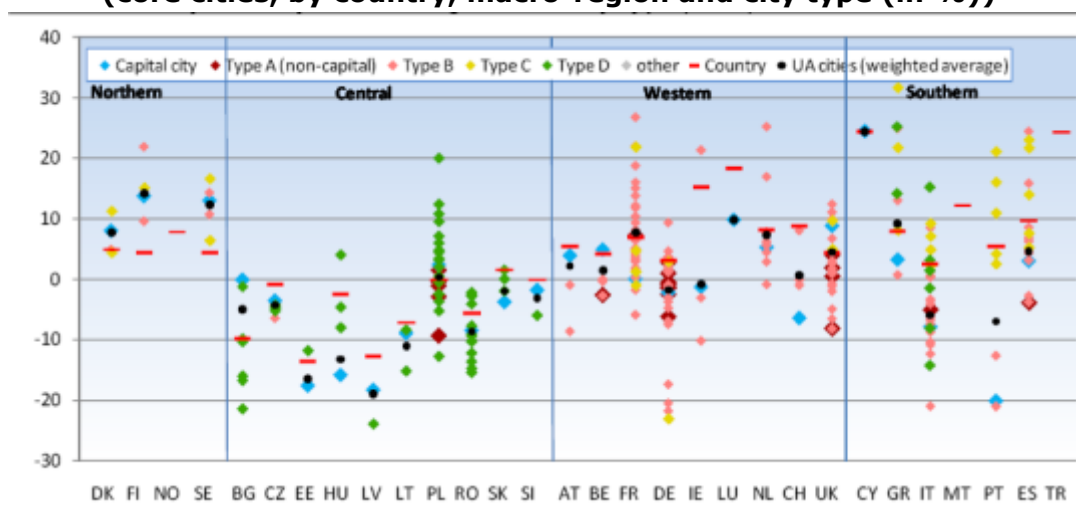
The image of urban growth or decline in Europe is highly diverse and it is very difficult to classify common trends for all cities. A long-term study of urbanization phases and regional characteristics has been performed in the ESPON FOCI project, which has identified the following main features (quotation from ESPON FOCI Annex, 2009):

- “The largest urban land expansion in Europe started in the 1950s.
- The past history was reflected in high diversity of city attributes at the beginning of this period.
- Rapid changes during the last 50 years resulted from combined effects of increasing affluence, mass motorisation for the transport of persons and goods, the introduction of air transportation and the shift from manufacturing to services in urban economies caused a much more dispersed, fragmented and low density urban development. This development did affect existing functions and structures of many cities, in particular less attractive neighbourhoods and obsolete industrial and port areas suffered. Many cities experienced population loss.”

Against the background of these general patterns of development the following chart (Figure 3) gives a clearer view about the total population change between 1991 and 2004 in the three capital cities in question here compared to other European Capitals as well as to the respective cities within their countries. We can see that Paris as well as Berlin (the latter more dramatically) has lost population (here at the municipal level). This lost at the municipal level is however being compensated (at least to some extent), by a slight growth in their suburban hinterland as highlighted for the period 2000- 2006 (ESPON 2010, 17, respectively Fig. 2 in Annex 3). Warsaw municipality has seen a slight growth in this period between 1991-2004 even though not to that extent as some other Polish cities, which has been accompanied as well by a relatively strong suburbanization in the attached hinterland between 2000-2006 (ESPON 2010, 17). Among the Eastern European capital cities, Warsaw is the only one with an increase within this period (1991-2004), whereas Paris and particular

Berlin are one of the rare examples of Western European capital cities that show a negative trend between 1991 and 2004.

**Figure 3. Total population change 1991-2004  
(core cities, by country, macro-region and city type (in %))**

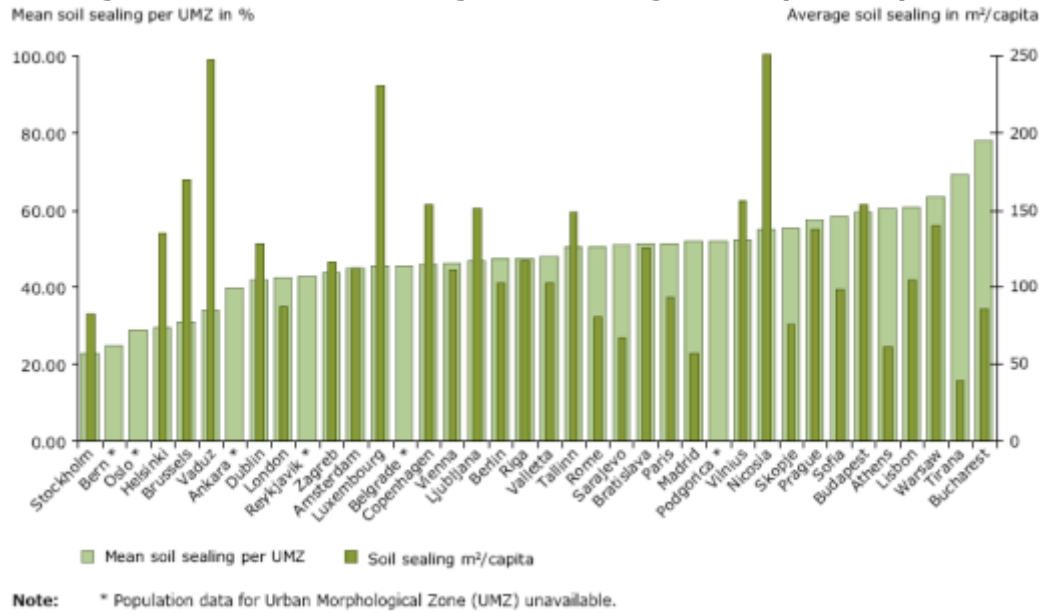


Source: RWI et al. 2010, 65

According to the FOCI study (ESPON FOCI 2010) we can assume a somewhat stable population development (with slight increase) for the larger Warsaw metropolitan area and a little stronger increase for the larger Paris metropolitan area between 2005 and 2030 (here in each case at NUTS 2-level). The metropolitan area of Berlin is surrounded by a larger hinterland that will see a comparatively strong loss of population between 2005 and 2030. Apparently the closer a municipality is located to the municipality of Berlin the less is the decrease. For the Eastern part of the city a somewhat stable development is forecasted. In this light Paris is rather following the trend to be expected as well in other Western and Northern major or capital metropolitan areas (such as Amsterdam, Stockholm or Helsinki), whereas the larger metropolitan area of Berlin can be rather grouped to those that will see one of the most extreme shrinkages in Europe (such as the Baltic Capitals or Bucharest). The larger Warsaw metropolitan area seems to maintain its position as one of the very few metropolitan areas of the New Member States that will see a rather stable population development (as Prague too for instance) (cf. Fig. 2 in Annex 3).

The above mentioned trends naturally have impacts on the changes in land consumption in general and the urban form in particular together with planning and building traditions, the specific city's topography etc. This is, at least partially, reflected in the chart below (Figure 4) on the mean soil sealing in European capitals (here demarcated as Urban Morphological Zones (UMZ) developed by the European Environmental Agency (EAA 2010, 20, see chart below). In particular the figures of soil sealing in m<sup>2</sup> per capita are of interest here, which are around 100 both in the Berlin and Paris UMZ, but almost 150 in Warsaw. The latter can be seen as comparatively high compared to other European capitals, but rather normal in particular for Eastern European ones (since almost the same figures have been calculated for instance for Prague, Bratislava, and Ljubljana, but also for Copenhagen and Brussels for instance!). The figures for the Berlin and Paris UMZ are just below the average of European capitals such as London or Stockholm. The most compact European capitals in this sense are Madrid, Sarajevo, Rome, and in particular Tirana.

**Figure 4. Mean and average soil sealing in European capitals**



Source: EEA, 2010.

#### 4.2.2.3. Classification of metropolitan areas based on their functions

The BBSR 2011 study refers to metropolitan areas as those in which a large variety of metropolitan functions are densely concentrated. Accordingly, metropolitan ‘areas’ are referred to as ‘analysis-based territorial units’ and not as established ‘territorial study units’ such as large city-regions or agglomerations. Metropolitan ‘regions’ are understood in a normative manner as they represent a policy concept (cf. BBSR 2011, p.6). The report identifies metropolitan areas on the basis of the distribution of metropolitan functions across Europe where 8.480 locations are investigated on the basis of 38 indicators (ibid. p.8). The aim has been to compare the spatial distribution of metropolitan functions in the overall area both between individual locations and between metropolitan areas themselves along five ‘functional areas’ (politics, economy, science, transport and culture), whereby each has been assessed by between two and five indicator groups that have been evenly weighted (cf. Fig. 4 in Annex 3).

The composition of the aggregated index regarding the metropolitan functions – politics, economy, science, transport and culture (cf. Fig.6 in Annex 3) differs between the metropolitan areas, but the following basic tendency can be observed: Most of the important metropolitan areas with a high aggregate index value have a rather balanced variety of metropolitan functions. An exception is Berlin where the governmental function dominates. Metropolitan areas with low aggregate index values, however, often show a stronger specialization but some of these areas also have a balanced variety of functions. What became also clear is that depending on the national settlement structures, the impact and character of a ‘policy for metropolitan regions’ in Europe is very different. In such an aggregated perspective, one can say that the metropolitan areas of London and Paris maintain a leading position in terms of such metropolitan functions. They also have much higher values than the other metropolitan areas in terms of economic performance. They are followed by the Randstad, Brussels, Rhine-Ruhr, Moscow, Vienna-Bratislava, Rhine-Main, Rome and Berlin which are the ten other leading metropolitan areas. Their relative significance is however revealed by a regionalization concept, i.e. an

aggregation of a number of cities. Warsaw is finally ranked as 24th among the 125 European metropolitan areas that have been identified and assessed in this study (cf. BBSR 2011, 126-127).

In the study it is argued that the value of the aggregated index together with the variety of metropolitan functions and their ratio are important criteria to assess the significance of metropolitan areas. Consequently four different types of metropolitan areas across Europe have been identified (Paris and Berlin are grouped in the first one and Warsaw in the third) (cf. also Annex 3, Fig. 5).

- 1) A metropolitan area has a great variety of functions if at least four of five functional areas have above-average index values. The classification is based on the average values of all 125 metropolitan areas in each functional area.
- 2) Metropolitan areas that have above average index values for two or three functional areas, still have a considerable variety of functions but also reveal functional focuses.
- 3) Metropolitan areas with a limited variety of functions are those which have above-average index values in only one or no functional area.
- 4) There are also metropolitan areas with one specific functional area having a share of more than 50% in the aggregate index. If this is the case, these are metropolitan areas with a limited variety of functions and a large degree of specialization.

In Annex 3 (here Fig. 7 to 9) the so-called spatial distribution of the functional areas 'economy', 'science' and 'transport' (as well as in an aggregated version) are illustrated as they show quite impressively that (except for the functional area 'science') Berlin and Warsaw show almost similar overall index values. The three maps also show the outstanding performance of Paris as one of the leading European metropolitan areas.

This briefly presented investigations show the context sensitivity when comparing the three European metropolitan areas Berlin, Paris and Warsaw as regards their respective spatial dynamics and characteristics. It goes without saying that the above sketched picture is a result of geo-political and geo-economic changes, specific historical urban and regional development paths and different starting points, in particular as regards the national political environment and the spatial position within a larger macro-regional context. With regards to the specific territorial context, the maps used in this chapter underline that the three metropolitan areas at hand here do belong to different types of European metropolitan macro-regions and thus confirm the categorisation elaborated in the ESPON FOCI project (cf. Fig. 10 in Annex 3).

### **4.3 Housing conditions and life quality**

Because of historical and current development differences, housing conditions in the metropolises of Paris, Berlin and Warsaw vary. Affordability of housing is directly influenced by factors such as the availability of land, dwelling ownership structures, land prices, etc., the access for low-income tenants and middle-income first time buyers and to housing-related public policies (Bramley 1994). Depending on the extent of land availability restrictions and the level of land prices and rents in relation

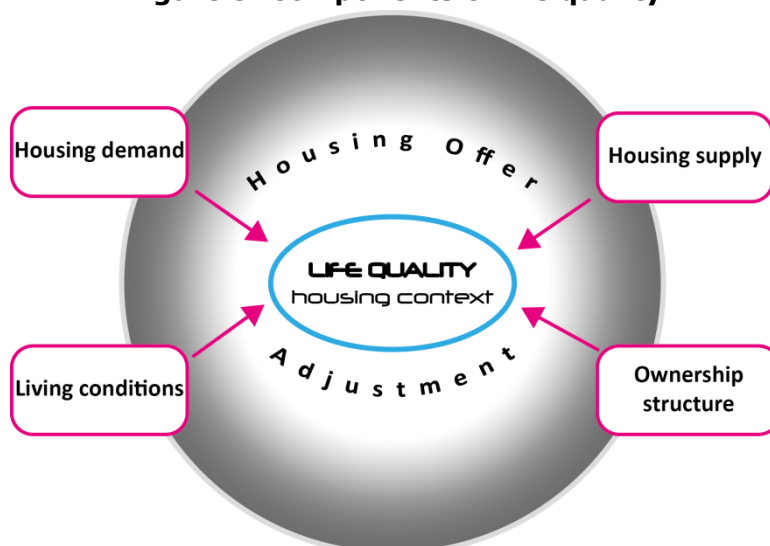
to income, the affordability of housing differs with respect to segments of the population. The analysis here conducted includes both the private and the public housing sectors to address the various needs of the stakeholders.

The factors influencing housing greatly impact on the metropolitan development's specificity and complexity, the latter being not only a characteristic of the project's areas but of other European metropolitan areas too. In this sense, the EU2020 strategy lists housing costs and the Flagship initiative "European platform against poverty" as measures to reduce the population at risk of poverty. Such measures intend to improve access to essential services, housing included.

The following sections aim to analyse housing affordability at the three selected metropolitan areas. For this purpose, examined are the current housing state and trends with a comparison of statistical indicators, qualitative assessments and principal policy actions. A variety of indicators and qualitative measures were employed to investigate 'affordability of housing'. These refer to housing costs, income, household structure and size, flat dimensions and ownership structures. The analysis will support the development of alternative strategies to housing provision adequate to the spatially differing housing demand.

Life quality is here measured in relation to housing conditions. To this end, the project focuses on four major axes: housing supply, changes in the ownership structure and living conditions as well as housing demand (Figure 5). Such approach conceptualises quality of life as result of adjusting the housing offer to the population needs. The comparison of life quality in the three metropolises is elaborated using those four dimensions, and partial conclusions are drawn on each thematic scope (see also a section on the components of life quality in the annex E3).

**Figure 5. Components of life quality**



Source: own elaboration (cf. Annex E part E3)

### 4.3.1 Preliminary results

#### Paris

Population growth has been the highest in the outer suburbs of the metropolitan region of Paris over the past decade and the lowest in the core city (about 4 per cent). The high population density and the constraints of supplying additional housing within the narrow borders of the Paris city (about 2.2 million inhabitants) continuously



pressure housing markets not only in Paris city but also in its surrounding region. Rent and land/flat prices are affected by the fairly even distribution of rental and self-owned housing. Average rent levels have increased more strongly than income over the past decade in Paris, thereby making it increasingly difficult for medium income households to afford housing within the Paris city, despite the relatively high income level in Paris and the Île de France as compared to the remainder of the country. Despite the overall high rent level in the city of Paris and its surrounding suburbs, there are considerable differences between the districts concerning rent levels. Generally, the further away from the city centre the less costly is housing, although there are exceptions such as the outer south-western suburbs. Moreover there is a southwest-northeast diagonal division of the metropolitan region (see also description in activity 4).

In 1894 social housing provision developed in France (*Habitations à Bon Marché*) to address the demand of the employed population who could not afford buying a dwelling. After the Second World War, the social housing sector in France (whose denomination changed in 1950 to *Habitation à Loyer Modéré*, *HLM*) developed rapidly to satisfy the growing demand. It was designed especially for poor and homeless people and since the 1960s, also for middle-class families (Driant 2009, Stébé 2009).

There are current about 800 HLM institutions in France of two kinds, depending on their legal status: (a) public agencies, financed by local authorities and (b) social enterprises for housing, private and non-profit social developers (Levy-Vroelant, Tutin 2007). The former institutions deliver dwellings for the poorest population (also standard dwellings) whereas the latter more often focus on upper categories of social dwellings. The public agencies<sup>1</sup> (*Offices publics de l'habitat*) are usually associated either to local community (operating on the territory of one municipality or a group of municipalities), or a to public institution for inter-communal cooperation (EPCI); whereas social enterprises are created usually by private companies (the majority are *Entreprises sociales pour l'habitat*<sup>2</sup>, *ESH*) and financial institutions (Ali Saïd-Guerain 2009). The provision of social housing vary throughout geographical zones<sup>3</sup> and includes financing the construction and acquisition, fixing rent limits, and allocating housing on the basis of social criteria (e.g. income and number of household's members).

The management and funding of social housing in France undergone important changes in 1977, when a contracting system between the state and social developers was introduced giving access to special subsidies and loans of the public bank (*Caisse des Dépôts et Consignations*). The laws on decentralisation of 1980s and 2004 introduced subsequent modifications. Currently, three rent levels are defined for social housing corresponding to different loans attributes: PLUS for standard social housing (*Prêt locatif à usage social*), PLAI for lower social housing

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<sup>1</sup> Representatives of the local community constitute the majority in the administrative council of the institution.

<sup>2</sup> Société Anonyme – it corresponds to a public limited company. Representatives of local communities as well as tenants constitute less than one third (+ one vote) in the ESH.

<sup>3</sup> There are four zones: I bis (Paris and neighbouring municipalities), I (the remaining part of Paris agglomeration and “villes nouvelles” in the IDF region), II (the remaining part of IDF region, agglomerations and municipalities with more than 100,000 inhab., other “villes nouvelles”) and III (the remaining part of France).

(*Prêt locatif aidé d'intégration*) and PLS<sup>4</sup> for upper social housing (*Prêt locatif social*)<sup>5</sup>. Nevertheless, the income limits allow eligibility for social housing to 70 per cent of the Parisian population (Prandi *et al.* 2006). The growing role of local authorities in social housing (supervising social housing institutions, co-financing social housing programs and controlling local planning) was reinforced by the 2004 decentralisation law that allowed groups of local authorities to distribute social housing state grants (Levy-Vroelant, Tutin 2007).

## **Berlin**

Partially as a result of migration the population of the city of Berlin has grown 2.3 per cent over the first decade of this century (currently about 3.46 million inhabitants). The city's housing market has some distinctive characteristics: it is dominated by rental housing; marked by a continued reduction of household sizes, a persisting increase in the demand for housing units, reduction of vacant flats and increasing rent and land price levels since 2008. However, there are considerable status quo and trend differences among the districts, which are reflected, for instance on the level of rents (IBB 2012). The average rent load is close to 25 per cent of the household income, varying between 10 and 40 per cent depending on the household income level (IBB 2011).

The Berlin surrounding municipalities constituting the FUA have also had population growth, which has been the highest in some municipalities closer of Berlin, while the municipalities especially at the outer bounds of the FUA are experiencing decreasing population. The housing market in the districts surrounding Berlin is nearly equally distributed between rental and self-owned flats. Land prices generally decrease towards the outer bounds of the FUA, while rent levels are more dispersed.

Social housing programmes are a political instrument to ensure affordability of housing for all social strata. Housing in Germany is generally 'social'. This means actions are taken by public authorities when rent levels surpass limits. Moreover local authorities allocate tenants to the dwellings based on social criteria (e.g. income level, household size). The provision of affordable housing is within the competence of the sixteen federal states and is market-based with private construction companies receiving public financial support for the provision of housing (Droste, Knorr-Siedow 2007: 90). Furthermore, the affordability of housing is supported through person-bound support instruments (e.g. Wohngeld, Wohnkostenübernahme). In addition, municipal housing companies as well as cooperative housing care for the social appropriateness of their housing stock.

Berlin has been historically characterized by two different urban planning systems. While the GDR system provided mass housing in the peripheral areas of Berlin in opposition to individual, privately owned housing, the FRG supported the construction of affordable housing as well as private property, also by means of large-scale social housing projects (see also annex E4 Märkisches Viertel) (Häußermann and Siebel 1996).

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<sup>4</sup> PLS was designed for households whose income constitutes no more than 1,3 times the income set for PLUS categories.

<sup>5</sup> As an illustration, the income thresholds in Paris in 2012 for 2-persons households were: 20,028 € for PLAI, 33,378 € for PLUS and 43,391 € for PLS.

## **Warsaw**

Over the last decade, the population in the FUA of Warsaw has grown strongly, about 12 per cent, especially in the south-western suburbs (increase approximately 2 per cent in Warsaw, totalizing 1.74 million inhabitants in 2009). However precise figures are not available due to a large number of unregistered inhabitants (who are assumed to account for 200,000 persons). An increasing pressure on the housing market in the whole FUA is exerted by the population growth and the historical housing shortage, which continues despite the growing supply of dwellings since the 1990s. Currently, a slight increase of vacant recently built dwellings is observed. However, the construction and accessibility of social housing remains very low, whereas the demand for social housing increases. Ownership problems arose as a consequence of abolishing private land ownership in 1945 within the pre-war city boundaries. The reprivatization of buildings since the 1990s introduced conflicts between new owners and tenants, who have been allocated to these dwellings during socialism. Although house prices fell in the last two years of economic crises, there is still a lack of financial resources to consolidate the city's housing market.

Social housing in Warsaw generally indicates municipal rental housing constructed through public financial support and combined with defined allocation criteria – such as income. Those municipal dwellings account for 10.7 per cent of Warsaw's overall number of apartments (2009) and its share has continuously decreased (25 per cent in 1995; 18 per cent in 2000) as a consequence of the policy of selective sales of municipal dwellings to their tenants at reduced prices. Privatisation of rental stock and demolition of the units in poor technical condition outnumbers the newly constructed municipal dwellings. Narrowly defined, social housing managed by the city constitutes a share of municipal dwellings dedicated to the neediest groups of society and is usually of low technical standard. The long-term program for public housing in Warsaw for 2008-2012, set the objectives of increasing the number of social dwellings whilst reducing the total number of municipal dwellings (social dwellings constituted approximately 2.5 per cent in 2007 of all municipal dwellings in Warsaw and 4.8 per cent in 2011).

From the 1990s to 2008, the management of the municipal housing stock in Warsaw was decentralised, resulting in different rent levels adopted by the local council of each district. Nevertheless, the centralisation of the management of the public housing sector in 2008 has led to the standardization of the allocation processes for all districts.

### **4.3.2 Comparisons**

The three metropolises experience an insufficient supply of housing affordable for all population groups; although the dimensions and caused of this shortcoming vary (e.g. extent of population growth – fig. D15 in the annex D2). This comparison highlights similarities and differences as well as strategies on how to tackle imbalances.

Common trends in the three metropolises involve a shift of housing planning competences towards the local level, a need for renovation (especially regarding energy-efficiency) and “upgrading” of social housing's image and demographic development.

However, the housing markets of the three metropolises differ in several aspects, such as size (displayed in Table 1 below). Paris metropolitan area is several times bigger than Warsaw metropolitan area in terms of inhabitants. The metropolises also differ strongly on the city's size in relation to their surrounding area (Table 1).

Furthermore, the age of housing units vary considerably, and higher needs for renovation, rebuilding etc. are observed in the city of Paris. There, the share of housing units built before 1950 (respectively before World War II) is much higher than in the other two cities (fig. D18 in the annex D2), which were more destroyed during the war. The comparison of the three cities' average floor space in square-meters per person shows the largest space of housing units in Berlin (nearly 39 square-meters in average) and the lowest in the city of Warsaw (28 square-meters). In the cases of Paris and Warsaw the need for additional affordable housing is also apparent in the number of households waiting for a flat under a social housing scheme. In the city of Paris this share accounts for about 10 per cent of households (IAO 2011) and has been increasing over the last couple of years. Similarly, there is a high unsatisfied social housing demand in the suburbs of Paris.

**Table 1: Comparison of population and housing units in the three metropolitan areas**

Region	Population 2009	No. housing units 2009
Berlin city	3,442,675	1,894,600
FUA Berlin (without city)	1,145,460	548,505
Paris city	2,211,297*	1,143,000**
FUA Paris (without city)	9,559,000*	3,748,000**
Warsaw city	1,714,446	818,874
FUA Warsaw (without city)	1,212,500	446,599

\* 2008, \*\* 2006

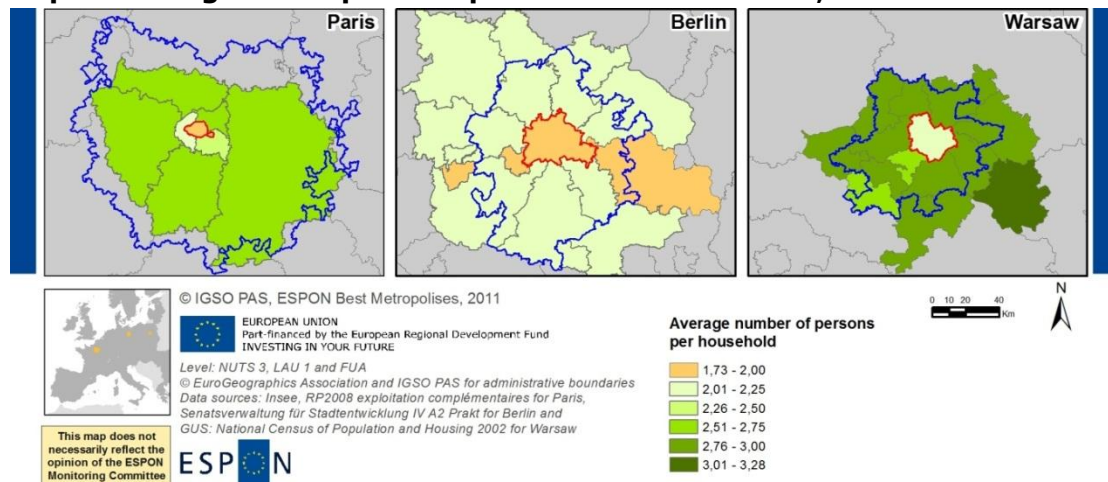
Source: Datenerhebung SenStadt Abt. IV A 1; IBB Wohnungsmarktbericht ; Statistische Ämter des Bundes und der Länder 2011 INSEE, Enquête logement 2006; INSEE, Recensements de la population de 1975 à 1990 edénombrements - 1999 et 2008, exploitations principales - Omphale 2010, recensements d la population, 2006-2007; Główny Urząd Statystyczny

Social and demographic trends in Europe and their consequences on the housing market structure account for some common characteristics in the three analysed cities. First, average household sizes are lower in the city areas as compared to the rest of the FUA (Map 1). This goes along with a high share of one-person households in the core areas – especially in Berlin and Paris, where they account for over a half of all households (fig. D16 in annex D2). Development in the city of Warsaw also follows this tendency with 38 per cent of one-person households. This stands in vivid contrast to the rest of the FUA, where the households are the largest of all investigated areas. It can be assumed that Warsaw and its surrounding will continue to follow the development path of the other two cities, therefore its demand for small and medium-size dwellings will increase.

In spite of common trends, the comparison of the magnitude and structure of population growth in the three metropolitan areas reveals that Paris and Warsaw require a more complex provision of affordable housing (i.e. covering all population groups), while the needs of Berlin are more focused on low income inhabitants. The latter results from a considerable increase of the average rent level and real estate prices, of over 5 per cent in 2009 and 2010 (IBB 2012: 9). This increase is at least partly connected with the low level of housing construction in the last ten years –

which is contrasting with Warsaw, where the number of new housing units has been increasing more rapidly (fig. D19 in the annex D2).

**Map 1. Average no. of persons per household in Berlin, Paris and Warsaw**



Possible solutions for increasing the supply of affordable housing also need to take into account the different ownership structures: (1) In the city of Berlin rental housing dominates whereas in Paris the ratio between rental and self-owned housing is much less uneven. In Warsaw is difficult to estimate precisely the ratios between rental and self-owned sector due the lack of data about dwellings rented on the private market (fig. D17 in the annex D2). (2) Similarly, financial sources of ownership differ considerably as a result of the varying history and organisation of the housing markets. Despite the comparability limitations, the figure D20 in the annex D2 illustrates the dominance of privately owned housing units in Paris and Berlin as compared to Warsaw, where a larger share of housing units is still owned by housing cooperatives (35 per cent in 2009).

The three cities are currently developing or implementing planning strategies for tackling the lack of housing and the often insufficient equipment of the existing stock. In Warsaw, the “Program of Municipal Building Construction 2008-2012” foresees the construction of 4,000 dwellings, especially in the peripheral districts of the city. Furthermore, the plan includes the demolition of buildings with the lowest living standards. Housing policy for the Paris metropolis is the object of the Grand Paris project as well as of the SDRIF (cf. activity 8). Both plans foresee higher construction rates (the former 70,000, the latter 60,000) than the present annual rate of 31,000 dwellings (2002-2006). Furthermore, social housing construction policy is highly influenced by the SRU (*Solidarité et Renouvellement Urbain*), a law on urban planning and housing in France that enforces each community to commit a minimum of 20 per cent of its housing stock to social housing until 2020. Financial sanctions apply to those which do not fulfil the regulation, although due to low significance are not compelling. In 2001 only 13.44 per cent of housing in Paris was fulfilling the requirements of the SRU, 2011 the rate had increased to 17.16 per cent and it is foreseen to reach the 20 per cent goal in 2014 (City of Paris 2011).

In Berlin, it is planned to implement, in the upcoming years, several instruments to tackle the insufficient supply of affordable housing not only for the poorest of the society. However, this may be influenced by the recent elections in September 2011. The relevant guidelines for urban planning are described in the election’s coalition agreement. These foresaw the construction of 30,000 new apartments in Berlin until

2016 with an emphasis on the inner city area in order to counterbalance the rising rent level in certain sub-districts. The role of municipal housing companies as well as building cooperatives in providing affordable living space is planned to be fostered – especially public housing companies are encouraged to increase their stock. Incentives for affordable housing are preferentially set through the allocation of public property. Furthermore, the renovation of the existing stock is stipulated in the urban planning strategies of each city. In Warsaw, the “Local Revitalization Programme 2005-2013” was set up to integrate various policies in the redevelopment of districts’ parts that have lost their previous social and economic functions. The programme also intends to solve the problem of deteriorated urban fabric (particularly tenant houses from the nineteenth and the beginning of twentieth century).

Summing up, after temporary stagnations in the construction of affordable housing in the last decades, the three metropolises have formulated and are currently implementing strategies and concepts on how to increase their housing stock at affordable price/rent levels. Nevertheless, strategies vary in their dimension and approaches – while Paris seems to follow the ambitious goal of dedicating 20 per cent of its housing stock to social housing until 2014, the planned share of affordable housing in Berlin’s new constructions remain rather vague. Yet, Warsaw and Berlin intend to increase the stock of the municipal housing companies in the next years.

## **4.4 Evolution of socio-spatial and economic structure**

The analysis of the evolution of metropolitan socio-spatial and economic structures helps to understand trends and mechanisms that take place in metropolitan areas and to assess cross-cut effects of public policies. Moreover, it allows evaluating the dynamic performance of spatial models with regard to three main issues: reduction of disparities, improvement of spatial structures that enable sustainable development and implementation of economic growth strategies (cf. EU2020).

The activity “Evolution of socio-spatial and economic structure” is built on contributions from ESPON projects on: polycentricism and urban functions (ESPON 1.1.1 and 1.4.3), socio-economic polarization (FOCI), social aspects of territorial development (ATTREG), Transport policy impact (ESPON 2.1.1 and TRACC, etc.); URBACT (urban renewal and regional spatial planning) and other territorial studies (cf. annex H).

This activity adds the spatial and economic perspectives to the understanding of development and problems of contemporary metropolises.

### **4.4.1. Preliminary results**

#### **Paris**

The metropolis of Paris has been for 23 centuries growing from its historical core to stand today as a dominant and attractive capital (18.8 per cent of France inhabitants; 29 per cent of national GDP)<sup>6</sup>. Paris is a dense core city in a strong radial-concentric metropolitan structure (2.2 million inhabitants per 100 km<sup>2</sup> / 11.7 million inhabitants on 12 000 km<sup>2</sup> in Ile-de-France). Population growth is slowing down but remains positive (also in Paris despite 80 years of decrease), mainly due to outer suburbs.

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<sup>6</sup> 46200 € per capita, 6<sup>th</sup> in Europe – Eurostat 2007.

This centralized scheme is mitigated by urban sprawl (inner continuous suburbs from the industrial nineteenth century and the “glorious thirties” in the twentieth, more dispersed suburbs with five “new towns” from the 1960s, which caused the size of urbanized land double in 1960-2000). Only 21 per cent of the area is urbanized because of compactness (339 inhabitants/hectare. in Paris, against 105 and 37 respectively in the closer and more dispersed suburbs) and valuable natural, agricultural and forested sites.

Suburbanization, which is characterised by low-rise housing and high employment dispersal, occurs concomitant with central congestion and high real estate prices and devalued suburban 1950-70s social housing.

The major economic places stand in an extended central area around Paris and the West business centre La Défense in a hierarchical spatial structure whose concentration (served by an efficient central underground network and international rail stations) is seen as a main factor of competitiveness. A highly qualified international tertiary economy emerged in the 1980s and developed the city’s enlarged surrounding and in some outer centres. In the last decade, the creation of new knowledge-economy services centres in outer cities enhanced the complexity of this geography, since they are in disadvantageous urban centres if compared to the intense and well served central area.

Socio-economic and spatial disparities in Paris and its metropolitan area result from physical determinants: wealthy residential areas located in hilly landscapes (south-west) and more popular ones in industrial plains (North, East, Seine valley out of Paris). This reflects a much stretched social spectrum (high international standard of life, on the one hand, and very low income on the other). Spatial dynamics include an east/west divide, where homogeneous social structure prevails both in the Southwest and Northeast; whilst other areas and outer suburb are rather mixed. High real estate’s prices (an average of 8,370 €/m<sup>2</sup> in Paris in 2012) sets a centrifugal motion towards near suburbs, which were formerly for low-income, now medium income population and less added-value’ activities. Local disparities grow e.g. due to degraded social housing areas (in inner and outer suburbs) and old low quality housing (north-east Paris and suburbs nearby).

A more balanced and dynamic metropolis is a main spatial-planning aim since the 1965 regional scheme. The SRU Law<sup>7</sup> enforcing a minimum of 20 per cent of social housing in each municipality has a slow and slight effect. Since 1979, social urban policies such as housing and urban renewal and social support are implemented in the so called “sensitive zones”. These zones are 175 today, congregating 11 per cent of the regional population (1.2 million inhabitants) and underwent 135 renewal projects from 2004 to 2013). Generally with high unemployment and precarious public transport, such zones concentrate a socially excluded population (often immigrants of first and second generations).

Effective redevelopment may be more efficient on large areas (Plaine St-Denis former brownfield, Paris GPRU<sup>8</sup>) but it seldom provides relevant low qualified employment. The increasing social disparities in Paris metropolis raise the standing

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<sup>7</sup> SRU law : Urban solidarity and renewal, December 2000

<sup>8</sup> GPRU : Paris’ Urban renewal program

issue of the best linkage between competitiveness and cohesion, along with new sustainable challenges.

## **Berlin**

The spatial and socio-economic structures of Berlin are strongly linked to its historic development (cf. activity 1). Founded in the 13th century, the city grew to an industrial metropolis with nearly four million inhabitants in the early twentieth century. The merger of formerly independent cities in 1920 contributed to a polycentric urban city structure. More recently, Berlin regained population and is the biggest German city (with nearly 3.5 million inhabitants over 892 km<sup>2</sup>). As a result of the destruction of the city during the World War II, the following East/West division of Germany (leading to separate developments) and the German polycentric urban system, Berlin lost its industrial base and leading position. However it is regaining in new economic fields. According to a synthesis of a variety of indicators<sup>9</sup> Berlin has been ranked 8th in 2010 out of the 30 largest German cities. Its economic situation is also mirrored in the high public debt of 60 billion Euros, the German highest unemployment rate (13.6 per cent compared to 7.7 per cent in Germany in 2010), a relatively low average income and GDP/capita. The city's attractiveness is more based on its symbolic and cultural profile than on a diversified economy.

Separate developments in the East and West of Berlin have been related to various socio-spatial and economic issues. Since the reunification a comprehensive process of urban renewal is underway. Berlin still has two different urban centres with specific developments e.g. with regard to the transport system, rent levels, income per capita; although a number of projects express a major effort to economically unify the city. In addition to the two city centres, Berlin's spatial structure is characterised by several smaller centres, creating a polycentric city structure with individual urban/suburban and socio-economic characteristics. On the fringe of Berlin's administrative boundary various smaller cities are located, Potsdam (about 156,000 inhabitants) being the largest of them.

The metropolitan area (extended Functional Urban Area – FUA- of Berlin and, partly Brandenburg *Länder*) has about 5.17 million inhabitants and a population density of 260 inhabitants per km<sup>2</sup>, which decreases rapidly in the direction of the outer fringes of the metropolitan area. It is characterised by high-quality natural landscapes (e.g. Natura 2000 areas, environmental protection areas) with numerous lakes and forests.

In the metropolitan area socio-economic and spatial disparities are considerable. In average, income levels are lower in Brandenburg than in Berlin. However, these disparities are particularly visible when the FUA area is compared with its surroundings in Brandenburg, rather than within the FUA. The further away from the FUA of Berlin, the less populated and more rural the districts are. Since the 1990s migrations from Berlin, Brandenburg and other regions concentrated in the outer suburbs of the city of Berlin as well in the neighbouring municipalities in Brandenburg. At the same time some large scale housing estates experienced decline (especially in the eastern degraded suburbs).

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<sup>9</sup> Demography, migration, labour force development, labour productivity and development, population forecast, education level, internationality of the population and accessibility.



In Berlin, the polycentric city structure goes along with quite differing socio-economic structures and spatial disparities, on an east-west dimension as well as on a district specific dimension. The city districts vary considerably in terms of income levels, unemployment rates, share of foreign population, etc.

Urban regeneration follows the local population's movements, which are due to housing costs rise in the city areas, and thus cause gentrification. This has led to a movement of low-income population in a snakelike pattern from the city centre via Prenzlauer Berg to Friedrichshain and Neukölln. Rents are in average still cheaper by about 2 €/m<sup>2</sup> in the eastern suburbs as compared to the west of the city.

After the reunification new processes that impacted the metropolitan structure of the city appeared, e.g. retail structures existing in the eastern parts disappeared, being nearly entirely replaced by supermarkets like in West Berlin and West Germany. Over the last 20 years, many shopping malls have been built in many districts of the city as well as in the surrounding cities. In Berlin, they contributed to enforce existing shopping areas, well accessible by public transport. On the contrary, in Brandenburg they are often located outside of existing settlement structures, stimulating private car use. The BB Joint Planning Department (1996) tries to control the spatial expansion (LEP B-B, cf. activity 7).

The well integrated transport network (cf. activity 5) serves commuters within Berlin and across the boundary between Berlin and Brandenburg. After losing its industrial basis the majority of jobs is spread especially in different service sectors across the city. A considerable share of Berlin's employees works in the public sector, partly in the still large public administration but also in important sectors of research, education and health, shaping an innovative economy (biotechnology, media and catering industries) in many places in Berlin (e.g. Adlershof) and around universities.

A strong urban renewal goes with gentrification in several formerly unappealing eastern districts. These new attractive residential areas are also places for an innovative milieu through cultural and artistic activities, which widely reinforce the cultural tradition of Berlin.

## **Warsaw**

Warsaw is Poland's largest city and a cultural, academic, scientific, economic and administrative national spot, besides being a major place for investments in eastern Europe (Węclawowicz 2007). The city concentrates only 4.4 per cent of the country's population, but its GDP share was 13.5 per cent in 2006. The historical processes leading Warsaw to its current position can be divided to two periods of development. The first concerns the reconstruction of Warsaw after the Second World War, conducted with central planning by a imposed totalitarian communist system. The second comprises the post-1989 political and economic transformation towards democracy, market economy and European Integration.

The determinants of socio-spatial and economic structures in the first period had four main aspects: (1) governance was ideologically guided by an absolute subordination of sub-national governments to the central; (2) the formation the social structure by the allocation of inhabitanancies to a particular type of housing and spatial location; (3) attempts of controlling the inflow of people to the city; and (4) forced industrialisation to balance the administrative character of urban employment. The post-1989 transformation, conversely, shifted the main ideological and political determinants in the direction of market and democracy. At the beginning of this period, primary was

the return of market mechanisms together with the evolution of the ownership structure of the land and privatisation and re-privatisation of large share of housing stock. Equally important processes concern the formation of the new social structure produced by employment changes triggered by de-industrialisation and expansion of jobs in the service sector.

The Warsaw FUA lies in the centre of Mazovia Voivodship (region). The core city (517 km<sup>2</sup>, 1.7 million inhabitants, 1.3 million employees) dominates a radio-concentric system. International firms and foreign investors increased the tertiary service sector (58 per cent of jobs in 1988, 70.4 in 1995, and 81.4 in 2005). In 2010, Warsaw contained the country's largest stock of offices and a third of companies headquarters, which were mainly located in the central district of the city (Śródmieście, Wola, Mokotów). Warsaw and its suburban zone (with GDP of 13 100 €/capita) contrasts with the rest of the Mazovia Region which is mostly rural, however which has other five major cities. Half of the businesses in Mazovia Region is registered in Warsaw, comprising 62 per cent of the region's GDP (composed mainly of taxes paid by Warsaw companies) and Warsaw' budget is 3.5 times higher than the rest of the region.

The city is gradually becoming too expensive for an increasing share of its inhabitants, thus residential migration is growing, as well as spatial polarization by the formation of new wealth and poor areas. Working class and former industrial districts (e.g. Wola or Praga Pn) remain less affluent than other newer districts (such as Śródmieście, Żoliborz, Mokotów, Ochota, Wilanów and Ursynów) (Stępnik *et al.*, 2009). Social differentiation within Warsaw is radio-concentric (with old persons mostly in the city centre, families with children mainly in peripheral districts) and sectorial with enclaves of poverty (Smętkowski, 2009). Upper social categories are spread along a north-south axis and in dispersed enclaves (newly built neighbourhoods near tertiary education institutions). Blue collars and less affluent population live along a west-east axis (former industrial districts) and in some peripheral areas.

Suburbanization was substantially intensified during transformation. Under communism, the suburban zone was a buffer for migration toward Warsaw (migration to the capital was constrained by law). Since 1989 it became gradually more attractive to Warsaw wealthier social categories, what intensifies fragmentation and socio-economic disparities in the suburban areas.

The recent economic development promoted high life standards for an enlarged middle class working in the city centre and living in the wealthy suburbs. This development has diffused a modernisation process into the whole region and the eastern part of Poland (Węclawowicz 2002). In Warsaw, a urban renewal scheme for degraded buildings was recently launched. It is implemented through a decentralized Local Regeneration Plan, with which 14 districts manage their micro-programs covering 150 ha in the city. Programs are being slowly implemented without regional support (although linked to a National Plan for Development) and EU funds for regeneration projects (which are mainly for former industrial and military areas). Modernisation is still weak in the areas surrounding core city; middle class and recent migrants prefer new outer suburbs, despite bad daily commuting conditions to the centre (only one subway line). Despite the current project of second underground line, use of car spreads and suburbanization goes on. Tools of urban regulation (without planning urban sprawl) do not mitigate disparities and functional problems

#### 4.4.2 Comparisons

The ability of the all three metropolises to control their spatial development differs as they have developed specific ways of regulation (e.g. with regard to settlement structures) and spatial models for adaptation. Other differences are conditioned by different cultural background and effect in various tools and policies (less or more suitable to complexity of problems and changes). Nevertheless, all three cities face quite similar trends: growing disparities, suburbanization and threats of urban segmentation. This comparison aims at highlighting similarities, differences and strategies on how to tackle metropolitan spatial development challenges.

Three main spatial trends are visible in the three metropolises: (1) continuing the suburban sprawl (with lagging public transport and other services); (2) increase of social differentiation; and (3) urban renewal as an attempt of urban and economic development, which may reduce disparities or, on the contrary, reinforce them. The size of the metropolitan area, its national functions and international role crucially affect these processes.

Berlin and Warsaw have the challenge of being the core of a larger and poorer regions (Brandenburg and Mazovia), which affect the metropolitan governance. Further, in both cities, the metropolitan areas are located within the borders of administrative units (Land and Voivodship), while in Paris the enlarged metropolitan area slips away from administrative divisions being without governance.

Suburbanization is progressing in the three metropolises, under insufficient control in Paris and Warsaw despite efforts and dedicated planning and partly driven by retail centres and new real estate developments in Berlin (with dedicated planning). It results from the limited space in the core cities (high land prices and unaffordable housing in Paris and Warsaw, less so in Berlin, though there is a price gradient as well). A main frame is a global housing crisis, very acute in Paris (quantitative and qualitative), with specific features in Warsaw (a significant group of population with incomes too high for housing benefit and too low for obtaining mortgage).

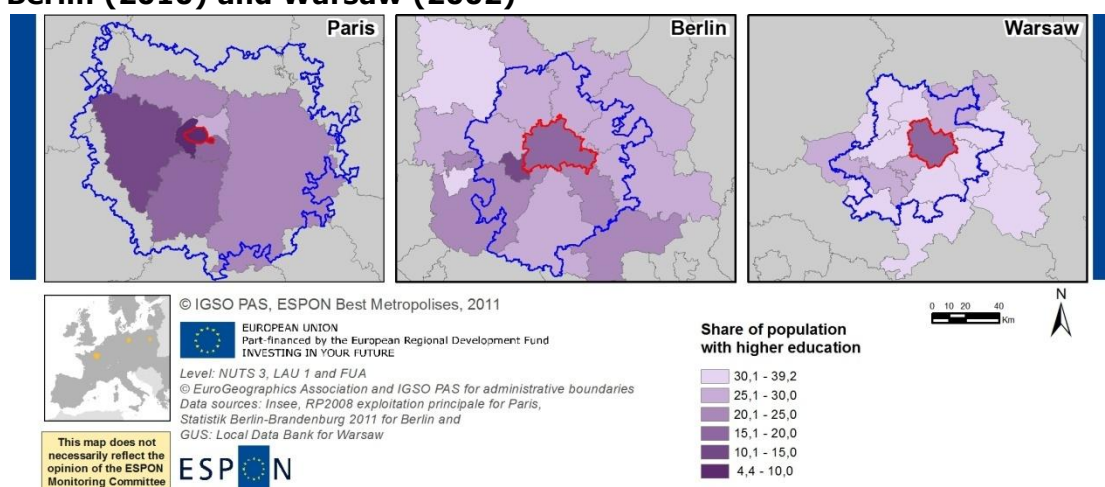
Berlin is the only metropolis out of three analysed whose structure is quite polycentric (and seems to be a more sustainable type). While Berlin is less densely populated, congestion in Paris central area is both very attractive (urban intensity) and repulsive for families, which effects in centrifugal migrations (cf. activity 6). Weakness of peripheral centres leads to unstructured urban sprawl both in Paris and Warsaw (partly also in Berlin-Brandenburg but on a much more regulated scale and with spatial variations due to history). The spatial change was quite continuous in Paris, while affected by historical upheavals in Berlin and in Warsaw, where strong transformations are still at work.

All three metropolises are currently developing or implementing planning strategies on transport, whose efficiency differ according to joined policies and existing infrastructure. Berlin has the most intermodal system, unified between east and west and covering quite well the whole area of the city with good quality services and large choice of modes. Paris has a more hierarchical system, historically performing in the city and surrounding area, weakening towards the suburbs (priority to public transport is recent) and still building an additional mode. Warsaw has the lowest rate of metropolitan network coverage, with historical tram network and second subway line under construction.

The efficiency of development models may be analysed through the link between urbanization and transport. Berlin has the best rate (and the lowest motorization rate) despite the recent suburban developments. Paris must urgently improve its old network (congestion, quality of service) and plans to set up a new 155 km network to serve developed and developing areas (target: 2025 and more). Warsaw put effort into exchange and renovating its transport rolling-stock but with weak support for new suburbs (lack of coordination and car's priority). Finding solutions for more polycentric and enlarged structures stands as a problem, in particular in Warsaw and Paris (despite major and long term investments). Joining competitiveness and cohesion challenges (e.g. serving both leading economic centres and main urban areas through transport) stands as a current metropolitan debate.

Disparities in all the three metropolises have been increasing, with a higher intensity and longer history in Paris (due to its international role), quite intensive in Warsaw (new urban developments and degraded post-industrial and post-military areas). This trend, which is very difficult to control, is fostered by: lack of housing (more or less everywhere); physical and image degradation of the 1950-70 neighbourhoods; a too slow movement of renewal (Warsaw); and also by new social behaviours (NIMBY, communitarianism, etc.) which indicate weak social cohesion. However large renewal projects take advantage of economic dynamics for redevelopment opportunities (e.g. least in the central areas of Paris and Berlin). Unfortunately the danger is that places without prospects of employment, efficient transport solutions and access to services (e.g. education, Map. 2) may never change.

**Map 2. Share of (total) population with higher education in Paris (2008), Berlin (2010) and Warsaw (2002)**



It is worth noting that the existing tools for counteracting disparities at metropolitan scale are not very efficient. In Paris, despite a number of local and regional measures (regional planning scheme, law on social housing rate, specific urban policies, social housing sector, etc.), processes of economic and urban redevelopment are driven by global dynamics. Integrated policies should be implemented both at a metropolitan (which are often inexistent) and territorial (regional and local) levels in order to set structural change. In Warsaw, the urban revitalization program lacks support of other governance levels and relevant financial means. In Berlin, however, the urban negotiated renewal (IBA) leads to positive results, and the diversified structure of affordable housing fosters integration.

## 4.5. Transport, job accessibility and daily mobility

Transport within the EU 2020 strategy is one of the main flagship initiatives which should lead to efficient use of resources in Europe. Metropolitan transport infrastructure contributes in different ways to a smarter, more sustainable and more inclusive growth. The overarching goal of the Common Transport Policy – CTP (EC, CTP, 2009) is the promotion of an efficient, sustainable, safe and secure transport system capable of enabling mobility whilst minimizing costs for users for the whole Europe. The metropolitan transportation network strongly influence the decision on accommodation places. The key objectives and initiatives of Roadmap to a Single European Transport Area are quality, accessibility and reliability of transport services, improved safety, security and promotion of more sustainable behavior and integrated urban mobility. Clean urban transport, including option of walking and cycling, a higher share of travel by collective transport, the use of smaller, lighter and more specialized road passenger vehicles and the use of Intelligent Transport Systems contribute all to urban transport management (COM, 2011, 144 final). The objective of this activity is to identify the relations between transportation systems, accessibility of work places, daily mobility of inhabitants including modal split and public transport management in the metropolitan areas of Paris, Berlin and Warsaw.

### 4.5.1. Preliminary results

#### Paris

The urban sprawl in Paris is associated with a process of car democratization (an extensive use of cars started around 1960. with lack of appropriate public transport), increasing number of detached houses and longer daily trips. Presently the radio-concentric road network in the whole central area is overcrowded. Among the European most congested cities in 2011 Paris was on the ninth place (29.9 congestion level). In core city 50 per cent of traffic takes place on the *Boulevard Périphérique*, a dual carriageway (mostly four-lane in each direction) ring road which marks also the boundary between the city and the suburbs. Two other rings are prepared for suburb-to-suburb traffic: the A86 (5-7 km from the Périphérique, west section completed in 2011) and the A1 (Francilienne, 30 to 40 km away from Paris, west section will be completed in 2015). Although two major ring-roads are completed, shortcomings as major traffic jams at the rush hours are still observed, especially at the northern and eastern edges of the city (also on the south , at the A6 to Orly Airport). According to the INRIX *France Traffic Scorecard*, nine of the top-ten worst traffic bottlenecks in France are either at the Blvd Périphérique or at the A86. Seven among the ten occur at the *Boulevard Périphérique*; whilst and two (third and tenth ranked) on the A 86 *super-périphérique*<sup>10</sup>.

Parisian public transport system is generally well-developed in the centre. However, the public transport connections are disparate in the suburbs. Optimal performances are in the core city with:

- a tightly structured subway RATP network (214 km, 14 lines, 245 stations, 4.5 million passengers a day and 21 thousand passengers a day per kilometre of metro line),

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<sup>10</sup> <http://www.inrix.com/pressrelease.asp?ID=106>

- the radial suburban-transport network RER - *Réseau Express Régional* (built in the 1970s and serving the main suburban “new cities” with its 586 km, 5 lines, 257 stations, 2.14 million passengers a day and 3.7 thousand passengers a day per kilometer of RER line),
- the national and international railway system (SNCF).

The public transport networks in Paris region are progressively becoming insufficient not only in the distant suburbs but also in those dense suburbs near the core. The metro is overcrowded and the RER network is similarly deficient. The share of the population without access (“non-accessibility”) to public transport was estimated as follows: 3 per cent in the core city; 45 per cent in the inner suburbs, and an impressive 79 per cent in the outer suburbs. The public transport non-accessibility to jobs in the Paris region is of 32 per cent, while in the core city is only 0,7 per cent. In inner suburbs, it is also 32 per cent while in the outer suburbs 63 per cent (INSEE).

Notwithstanding, Paris has been successful in reducing individual traffic and increasing the use of public transport. Between 2000 and 2007, the share of metro travels in the total inner-Paris travel increased by 14 per cent; during which the RER’s share rose by 10 per cent and the one of SNCF’s 21 per cent. These three means of transport account for 58 per cent of the total daily travels. The bus share, however, has decreased by 16 per cent and that of cars by 24 per cent. Private motor vehicles represent only 37 per cent of the total travel (Kopp 2011). Tram lines are developed within the city and suburban areas (3 line constructed and 4 more planned). The Autolib (electric car sharing system) and the Vélib (bicycle sharing system) active since 2007 in the city and proximate suburbs have been contributing to provoke positive changes in the modal split.

Since 2008, new possible extensions of the public transport network have been discussed (between the SDRIF’s Arc Express and the State’s Grand Paris project). This leads to negotiations of assumptions of a project called “Grand Paris Express”, which is based on “double curl” subway (155 km) serving a range of existing and future economic clusters and developing areas in the near and outer suburbs (cf. fig. D21 in the annex D2 – map of Grand Paris Express). It is planned to develop a diverse and multimodal transport system based on a stronger public transport, multimodal railway stations.

In the Paris region, the Regional organizational authority (STIF – *Syndicat des transports d’Île-de-France*) controls public transport in Île-de-France. Since 2000 a contract between STIF and RATP (*Régie Autonome des Transports Parisiens*) defines the duties of each side and the quantity and quality of transport services which companies must provide. This gross-cost contract replaced the former deficit-balancing subsidy. RATP directly operates most of the public transport both in Paris and Île-de-France region including Paris Métro, tram and bus services and part of the RER network (with SNCF).

## **Berlin**

Berlin as compared to Paris has fewer problems with congestion due to its remarkably low rate of motorization. The city has good connections with the rest of German motorway network. Besides its inner-city motorway (Stadtring A100), Berlin has several motorway and other expressways linking the city with the surrounding Berliner Ring, which is 196 km of bypass. The Berliner Ring in turn is linked with several motorways connecting Berlin with other cities in all directions. Since 2008 a

new motorway links the Schönefeld Airport and the science park of Adlersdorf with the internal ring *Berliner Stadtring* A100. Although at the A100 the traffic volume exceeds 200 thousand vehicles a day and traffic jams also exist, Berlin's traffic is the least dangerous in European capitals with only 1.64 deadly accidents per 100,000 inhabitants in 2010. The European average is of 3.95 (SenStadt Verkehrslenkung). The inner ring road in the eastern part of the city has not yet been constructed, and road infrastructure in this area was built in a radial system focussing on *Alexanderplatz* (SenStadt Verkehr (a)). On the south, the main argument for the extension of the A100 in the south-east of Berlin lies on the requirement of integrating two different road systems and reducing traffic in the housing areas. It is also argued, that a quick link between the new international airport and the eastern and north-eastern suburbs is needed (SenStadt Verkehr (b)). However, a polemic is involved because the extension is conditioned by the destruction of allotments and housing estates, and would additionally create a higher traffic burden and air pollution at the newly created hour-glass spots where the extended highway would end (SenStadt Verkehr 2010).

Berlin has a very efficient public transport network and a high share of public transport in the modal split. The network consists of:

- metro U-Bahn (146 km, 10 lines, 173 stations, 1.36 million passengers a day and 9 thousand passengers a day per km metro line)
- trams (190 km network in use),
- Berlin rapid transit system of S-Bahn, a subsidiary company of the Deutsche Bahn AG (German Railway Company); (332 km, 15 lines, 166 stations, 1.06 million passengers a day and 3 thousand passengers a day per km S-Bahn line),
- national / international railway system (the construction of new central railway station *Hauptbahnhof* finished in 2006, which is an interchange station with east-west and north-south tracks at different levels) with several inner-city railway stations).

Average walking times to get the nearest U-Bahn, S-Bahn or tram stop for Berlin inhabitants inside circular train rarely exceed 10 minutes and usually lasts less than 5 minutes (SrV 2008). The environmental zone within the S-Bahn-ring, the expansion of paid parking zones, the implementation of the Metroline concept for busses and trams (cf. annex F2), high number of extra bus lanes (102 km), city-wide bicycle rental system and Call a bike system, 650 km of bicycle tracks on side walk with different construction than pedestrian part of sidewalk and 760 km of other bicycle roads support sustainable development of the city. At the boundary of the city centre of Berlin exists a 37.5 km long S-Bahn railway called the Ringbahn or "Hundekopf (dog's head)". S-Bahn service is carried out by the S 41 (clockwise) and S 42 (counter-clockwise) circle lines, with 400,000 passengers a day.

The tariff regulations for public transport in the Berlin- Brandenburg region are controlled and organized by *Verkehrsverbund Berlin Brandenburg* (VBB), which is an organization owned and controlled by the states of Berlin and Brandenburg and the counties within the region. A single tariff applies to all modes of transportation with slight variation of price within the three zones that cover the city of Berlin and approximately 15 kilometres beyond its borders. Single traffic companies or municipalities are not allowed to make own tariffs, but yet must comply with the

common regulations. This system is a major advancement compared to the previous one effective until 1999, in which each traffic company had its own tariff.

## **Warsaw**

According to a survey carried out by TomTom GPS manufacturer, in 2011 Warsaw was the second most congested European city (the first is Brussels). Warsaw situation in this concern has deteriorated between 2010 and 2011. The main reason provoking such congestion is that the city still does not have a completed ring road and most of the traffic has to go through the centre. Further delays in traffic are due to roadwork in the south-western part of Warsaw Metropolitan Region (A2 motorway linking Lodz with Warsaw, S2, S7 and S8 express roadways) and in the north (S8 express road and the North Bridge route). All investments, when completed in 2012, should ameliorate the traffic. However in eastern Warsaw the lack of bypass road would be probably still considered as a one of major obstacles for commuters. The delays in the construction of this part of bypass are caused by both environmental issues (existence of protected areas) and the high costs involved in the provision in the south of a tunnel under the most affected area of Warsaw (the district of Ursynów). At Warsaw boundaries in 2010 the traffic volume was the highest (54-56 thousand vehicles per 24 hours) mainly on four major axis leading out of the city: *Krakowska* street (direction to Cracow); *Jerozolimskie* Avenue (directing to a densely populated area in the southern-west); *Puławska* street and *Pułkowa* street (direction to Gdansk) (Generalny Pomiar Ruchu, 2010).

The decreasing share of public transport and increasing motorization rate are major problems concerning modal split. The public transport network of Warsaw is based mainly on bus and tram routes. The average walking time to the nearest public transport stop for Warsaw inhabitants is of six minutes; while for the inhabitants of the suburban areas it is of seven minutes, which is regarded as satisfactory (Warsaw Traffic Survey 2005). There is only one metro line (23 km, 21 stations, 0.55 million passengers a day and 24 thousand passengers per kilometre of metro line). The metro in Warsaw is the most crowded mean in the city public transport system. The first part of the second metro line (7 stations) is under construction and is planned to be finished in 2013.

Rail connections to the suburbs in the metropolitan area are carried out by a variety of operators. One is the Fast Urban Rail (*Szybka Kolej Miejska* - SKM), operating 3 lines linking the suburban cities of Pruszków, Otwock, Sulejówek and Legionowo with the centre of Warsaw. A regional rail operator in the Masovian Voivodship is the *Koleje Mazowieckie* - KM. There is also a suburban light rail line linking Warsaw with Grodzisk Mazowiecki, operated by the *Warszawska Kolej Dojazdowa* (WKD) (36 km, 4 stations and 24 stops, 0.018 million passengers a day).

An integrated ticket was introduced (the ZTM-KM-WKD Integrated Ticket) to facilitate the travel through Warsaw metropolitan area. Such ticket can be used in different modes of transport, like metro and suburban railways for long and medium terms (ranging from a day two three months) . However, there are still problems with the cost allocation between Warsaw and other municipalities.

### **4.5.2. Comparisons**

There are different needs and opportunities concerning transport infrastructure investments and public transport management for the studied cities and their



surrounding areas. Four issues were selected for comparison: 1. Metropolitan transport network: its efficiency and accessibility, 2. Sustainability and public transport investments, 3. Jobs locations and commuting flows, 4. Public transport management.

Berlin is characterized by very good individual and public transport networks, high level of safety, very low level of congestion and motorization rate and relatively good access to the suburbs. Paris needs to improve the mutual accessibility of the most distant suburban towns. The Grand Paris Express project is therefore urgent. Warsaw suffers from congestion, bottlenecks and long travel times to the city centre in the peak hours and the increasing motorization rate became one of the main causes of traffic jams. The insufficient metro system (still only one line in operation) is a major weakness of public transport in the capital of Poland. The metro system plays an important role in the traffic in Paris and Berlin while in Warsaw more than 50% of commuters come to the capital city by own car enhancing the problem of insufficient number of park and ride facilities (cf. Table 2).

**Table 2: Mobility indicators for Paris, Berlin and Warsaw**

	<b>Congesti on level (ranking number)*</b>	<b>Annual average km run by car (year)</b>	<b>Number of deadly accidents per 100 thous. inh.**</b>	<b>Metro traffic (thous. passengers a day per km metro line)</b>	<b>Number of parking places</b>
Paris	29.9 (9)	21015 (2001)	3.04	21	60***
Berlin	17.2 (38)	12400 (2007)	1.64	9	43****
Warsaw	38.1 (2)	18500 (2005)	3.35	24	12***

\*According to TomTom GPS (ranking number of European cities, 2011 for Paris and Warsaw and 2010 for Berlin) (<http://news.motorbiker.org/blogs.nsf/dx/europe-most-congested-cities-of-2011.htm>).

\*\* EGT (2001); SrV (2008); Warsaw Traffic Survey (2005)

\*\*\* European average was 3.95 (2010).

\*\*\*\*Parkopedia database ([http://en.parkopedia.de/park\\_and\\_ride/berlin/parking/](http://en.parkopedia.de/park_and_ride/berlin/parking/);  
<http://www.parkopedia.fr/parking/paris/>; <http://en.parkopedia.pl/parking/warszawa/>); park and ride facilities (VBB).

The average travel time in the off-peak hours are quite similar to each other in three cities. However, there are strong differences in the peak hours among the studied metropolises (for details cf. table D1 in the annex D2).

A sustainable metropolis put emphasis on low environmental impact and on the most carbon-efficient modes of transportation. Paris and Berlin are successful in increasing the share of public transport. In Warsaw public transport still plays crucial role but its share is decreasing. New solutions like the electric car and bicycle sharing systems of Paris and Berlin or the public transport investments and transport on demand in Paris might be regarded as benchmarks for Warsaw authorities (Table 3).

Paris, Berlin and Warsaw as the capital cities are the major destinations for commuters. All three metropolitan areas include numerous commuter towns that form a commuter belt and labour market area. In Paris the main problems in commuting are that the average trip length and the number of trips between outer suburbs have significantly increased to more than one third of all the trips in the Paris region (Berger, Brun 2006, Navarre 2002). Therefore the commuting flows in Paris region

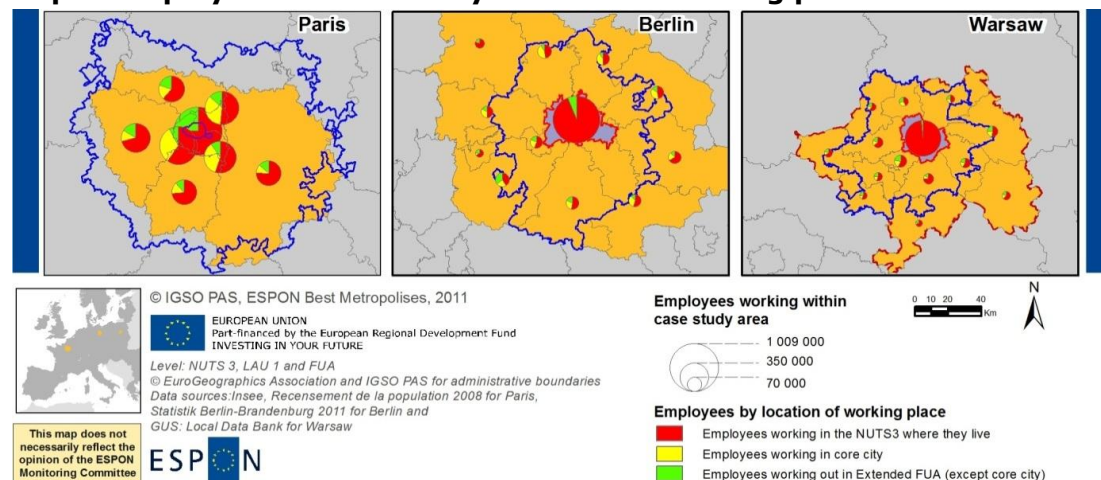
are higher than in Berlin and Warsaw metropolitan areas. The commuting matrix of Berlin and Paris resembles a “spider web” network which may be spatially effective (maps 3 and 4).

**Table 3: Sustainability trends and solutions**

	Major trends in modal split	New solutions	Public transport at the boundary of the city
<b>Paris</b>	Successful in reducing car share and increasing the public transport share between 2000 and 2007 but still high rate of motorization and car usage	Autolib (electric car sharing system) and Vélib (bicycle sharing system) in core city and surrounding areas Bus transport on demand in Roissy (cf. annex F1)	Grand Paris Express (fig. D21 in the annex D2)
<b>Berlin</b>	Share of public transport in modal split at the stable high level	Nextbike and Call a bike systems Metroline concept (cf. annex F2)	S-Bahn railway Ringbahn “Hundekopf” at the boundary of the city centre (fig. D22 in the annex D2)
<b>Warsaw</b>	Share of public transport is decreasing from 70% in 1993 to 61% in 2005 (Reksins 2007)	Warsaw Public Bike system is going to start in June 2012	Warsaw North Bridge route including tram line

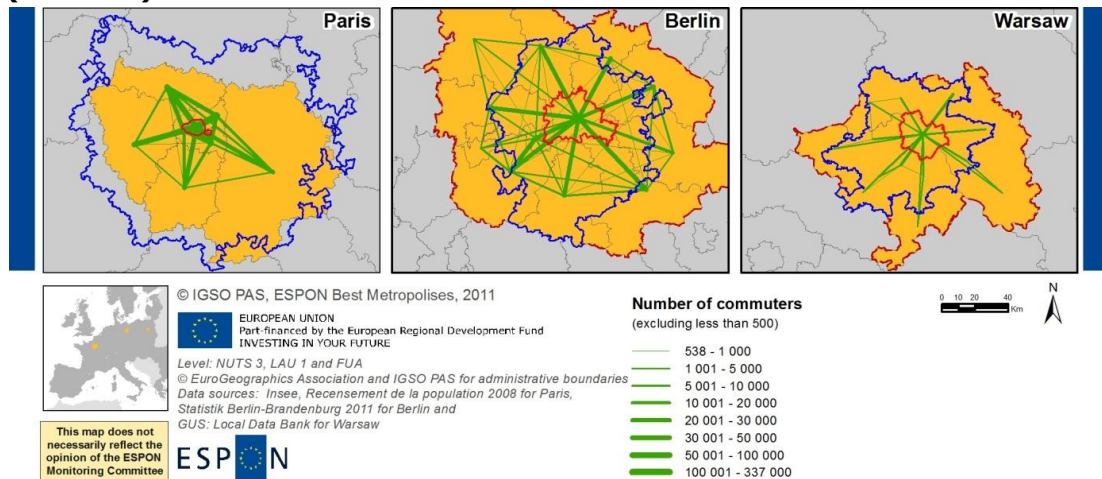
Source: own elaboration.

**Map 3. Employed inhabitants by location of working place**



The poor accessibility of Warsaw and lack of good individual and public transport connections between the city and its surrounding area is a hindrance for a large number of commuters. Moreover, the lack of both multimodal stations and park and ride facilities is a big problem of the Warsaw metropolitan area.

**Map 4. Commuting flows between NUTS 3 (Paris and Berlin) and NUTS 4 (Warsaw)**



Concerning the organization and management of public transport, Warsaw needs to develop new ideas in particular in relation with the neighbouring municipalities. In Paris the regional authority controls public transportation including regulating tariffs in the region. However, the main problem in the capital of France is connected with mobility of inhabitants within outer suburbs which have a rather poor public transport system. The investment that is aimed to solve partially this problem in the future is the Grand Paris Express (fig. D21 in the annex D2). With regard to the management of public transport Berlin can be seen as an example where a solution was found which is well adjusted to the special needs. The VBB, which is the responsible organization, covers and is owned by both states, Berlin and Brandenburg, and Brandenburg counties and manages the public transport system (for details cf. annex F3).

## 4.6. Intra-metropolitan migrations

The phenomenon of intra-metropolitan migrations is a crucial factors shaping metropolises. Population flows between the core city and its suburbs triggers urban sprawl and influence areas like transport, quality of life, provision and availability of services etc. Revealing migration flows and volume contribute to sustainable development of metropolitan areas, effective use of tools of Cohesion Policy and to decrease disparities between rural and urban areas.

### 4.6.1. Preliminary results

#### Paris

Paris region has a slow population growth, which is a result of a negative migration but a positive natural increase, due to a high birth rate (Paris – 15.4 per mille, France – 12.1 per mille) and to the immigrants profile (young and fertile newcomers, immigration with families). The net migration rate in Île-de-France -IDF is the lowest among the 22 French regions. However, according to an INSEE (National Institute for Statistics) forecast, a regional light growth should go on until 2050.

Paris region became more and more specialized on highly qualified employment, with a large middle class society whose profile is yet increasingly extended in the extremes. The group of newcomers to Paris region is mostly composed of single persons or childless couples, young people looking for studying and working

opportunities to begin their career. Among newcomers, poor households from abroad are also present. Among outgoing the population of families (in search for better quality of life, affordable and adequate accommodations in other regional metropolises, home-return) and pensioners (home-return, heliotropism) constitutes two important categories. Furthermore, people in illegal situation (200-400 thousand persons in France) and homeless (10-12 thousand in Paris and 100 thousand in France according to the Ministry of Home Affairs, plus respectively 33 and 100 thousand in shelters, being 33 per cent of the latter in the Paris Region INSEE) create an invisible geography of mobility in insalubrious housing (Paris, Seine-Saint-Denis), slumlords or emergency shelters, mainly in the near suburb and around the *Périphérique*.

**Table 4: Previous place of living of inhabitants in IDF region (5 years earlier).  
Population aged 5 years and more.**

Place of living in 2002	Inhabitants of IDF in 2007
In the same region	10,037,339
In the same local community	8,248,250
In the same apartment	6,945,732
In other region or abroad	810,492
Total	10,847,831

Source: Insee, RP2008 exploitation principale.

The issues of residential mobility and housing demand in Île-de-France have been questioned from several perspectives. Four kinds of motivations to change a place of accommodation might be distinguished: economic, family reasons, professional and social (Bonvalet 2010; Authier, Lévy 2010). M. Berger (2006, 2010) and N. Tabard (1993) highlight the differentiation of households localization within Île-de-France region: white-collars are more often owners of a single family house in the most attractive western and south-western suburbs closer to Paris, which reflects a continuum of the North-East/South-West subdivision of Paris into “poor” and “rich” districts (Pinçon, Pinçon-Charlot 2004). The owner-occupiers as well as the private renters are usually more mobile and change their place of accommodation more often when compared to the population living in the HLM social dwellings (*La mobilité résidentielle... 2009*; Guillouet, Pauquet 2010). According to the National Housing Survey in 2006, 1 538 000 households (31.4 per cent) in Île-de-France region have changed their dwelling during the last four years, whilst 2 559 000 households (52.3%) have stayed in the same apartment for at least eight years (*La mobilité résidentielle... 2009*).

Between 2001 and 2006, the net migration rate between Île-de-France region (IDF) and abroad was positive. However, Paris Region loses in migration flows to other regions (556 000 inflow compared to 902 000 outflow). As a result, between 2001 and 2006, Île-de-France region lost 66 inhabitants per 10,000 population each year (Charrier 2009). It is worth to stress that internal migrations within the region play more an important role than the external: 7.9 per cent of IDF inhabitants moved to other region in the five years previous to the survey, whereas 8.6 per cent of IDF inhabitants has changed the place of accommodation within the region. Moreover, two thirds of inhabitants in the region have stayed in the same apartment between 2003 and 2008 which indicates a decline of residential mobility within IDF (Berger, Brun 2006).

## Berlin

Since Berlin has become the German capital its concentration of service industries has increased steadily, now being on a level higher than ever. This was conducive to a change in the structure of employment, and, to some extent, attracted a highly qualified labour force. In 1990 over 300 thousand jobs were lost in the industrial sector, which were not replaced by the employment growth in services (Statistik Berlin-Brandenburg). Between 2000 and 2005, the number of employees decreased from 1150 to 1010 thousand. Since then employment has grown again, and in 2008 a total of 1100 thousand jobs were counted.

Eastern Germany is customary origin of migration (e.g. Brandenburg represent 16.3% of the total in-flow to Berlin). Therefore depopulation is a serious problem, especially in the smaller towns and rural areas; because of the poor opportunities in the local labour market, workers move toward regions in western Germany rather than to the capital. It is worth mentioning that Berlin, although being a city that generally attracts migration, an increased outflow of people over large distances to the western direction has been observed. From 131 thousand people who emigrated in 2010, while the largest share (16.3 per cent) got settled in Brandenburg, high inflows were directed to Nordrhein-Westfalen (7.8 per cent), Bayern (5.5 per cent) and Baden-Württemberg (4.9 per cent).

Migration levels are generally closely related to the economy and development of higher-level functions (or lack thereof). Recently, inflows rose to a level close to 150 thousand people per year (2010). The inflows seemed to be rather stable, without significant fluctuations, since 1990; however they have grown over the last few years. Due to the spatial character of the city, outflows of population outside of Berlin's borders are diminished by movements between the districts of the city.

**Table 5: Origin and destination of inflows and outflows from and to Berlin in 2010**

State of origin / destination	In-migration		Out-migration		Migration balance
	total	%	total	%	total
Germany (total)	88,158	59.7	70,168	53.6	17,990
of which Brandenburg	24,115	16.3	25,853	19.7	-1,738
of which Nordrhein-Westfalen	11,460	7.8	7,631	5.8	3,829
Foreign countries (total)	59,611	40.3	60,783	46.4	- 1,172
Total (Germany and foreign countries)	147,769	100.0	130,951	100.0	16,818

Source: Statistik Berlin-Brandenburg.

Outflows from Berlin were lower in the early 1990s (a little over 80 thousand people per year) and consistently grew, reaching the highest volume in 1997 and 1998 (about 130 thousand people yearly). Since then, annual outflows decreased and stabilized at the level of 100-120 thousand people yearly. In this later period, firstly a weak tendency for decreasing was observed, and since 2005 it moved in the opposite direction (increasing).

Berlin is characterized by a relatively high residential mobility. Recently around 300-350 thousand people change their place of residence per year (Stadtprofil Berlin). This comprises about 10% of the city population. There are two types of migration: one refers to the process of concentration or internal displacement within the inner-city neighbourhoods, while the second is a stronger de-concentration

processes, which includes typical suburbanization in the Berlin neighbourhood. The population of the inner-city area is generally not declining.

Migration (both internal and external) in the inner-city involves mainly population with non-German origin. Newcomers are concentrated in the central parts of Berlin and there are some areas within the city where the share of foreign immigrants in 2008 exceeded 30% of the total population. This may give rise to social differentiation, spatial segregation and the emergence of social disparities (more on this subject in activity 4). Some of the central districts of the city are experiencing also the outflow of the native German population, who is moving to the fringe districts of the city or to outside of the city borders. Neighbourhoods of single-family houses are mostly located along the city's boundary, while in other suburbs of the city larger estates with several housing units predominate. However, flows of opposite direction are observed: some central districts of Berlin (e.g. *Friedrichshain-Kreuzberg*) are becoming more and more popular for young, creative inhabitants (artists, students etc.).

Processes of population outflow from the central districts to the areas outside the city borders before reunification were practically blocked due to political situation; while the western part of the city was surrounded by state borders, the eastern was under strict legal restrictions reducing population placements and safeguarding large reserves of land within the administrative boundaries of the city. The acceleration of the suburbanization processes were recorded only after the fall of the "Berlin Wall". From 1990 to 2010 occurred several characteristic periods of migration. Until 1998 (and especially since 1993) a relatively rapid increase of outflows was observed, reaching slightly above 40 thousand people in 1998.

Accordingly, the number of inhabitants in Berlin's suburban areas is growing. An estimation (*engeren Verflechtungsraumes*) for the years 1990-2008 establishes that the population in the city's outer zone increased from 787 to 1029 thousand, a 31 per cent relative increase. Data from the Berlin City Hall shows that in the years 1990-2009 nearly 0.5 million of inhabitants moved from Berlin to its neighbourhood area, while the inflow from that area to Berlin was much smaller (0.2 million). This characterises a re-urbanisation process whose intensification in the last few years is balancing migration outflows.

## **Warsaw**

The metropolitan area of Warsaw has had a varied pace of population increase, as shown by the analysis of recorded inflows for the period 1996-2010. Both the highest absolute and relative values (the latter as proportion of the total population), indicate principally the path of the suburban areas. The pick of inflow occurred in 2007, when about 35 thousand people were registered as new inhabitants in the suburban zone, a relative rate of about 30 per mille. At the same time the outer zone (suburbs) accumulated the largest share of migrants.

The dynamic of outflows have also varied, but not as strong as in the case of inflows. Around the year 2001 there was a sudden increase in the outflow rate, which was not observed in the inflows. There were quite high rates of relative outflows in the outer zone (up to 13 per mille per year).

The registered net rate of migration over the whole period (cf. Table 6) was positive for Warsaw and suburban area, with a constant upward trend, only weakened in

2007-2009. In 2009 a profound decrease in rate of net migration in Warsaw was observed; nevertheless it remained positive and recovered in the following year.

**Table 6: Migration balance of Warsaw Metropolitan Area in the years 1996-2010 (in five-year periods)**

Net migration, thous.	1996-2000	2001-2005	2006-2010	Total 1996-2010
Core (Warsaw)	13.5	33.8	25.6	73.0
External zone (suburbs)	35.1	52.6	62.0	149.7
Total	48.6	86.4	87.6	222.7

Source: Based on data of the Local Data Bank, GUS.

From this synthetic balance emerges the conclusion that the strengthening of the residential suburbanisation process in Warsaw external zone is permanent. However, it should be noted, migration to the capital was stopped growing. This is connected to a lower availability of housing in the core and to the increase in housing prices in 2007.

The cartographic analysis shows that the phenomenon of suburbanization increases steadily, particularly in the south-western part of the external zone, adjacent to the borders of Warsaw. In the suburban city of Piaseczno and its vicinity the inflow per 1000 inhabitants in all three periods (cf. Table 6) was above the average of 30 per mille registered new inhabitants.

Outflows in all periods were more equally distributed spatially than the inflows. In the city districts, the registered outflow was higher in 1996-2000 and 2006-2010. Outflows also grew especially in the cities located in the external part of the Warsaw Metropolitan Area.

Positive net migration was characteristic of the municipalities located around Warsaw (called "Warsaw ring", cf. Degórska, Deręgowska 2008), which was nevertheless decreasing towards both external borders of the region and to the city centre. In the latter, however, negative values were not reached. Taking into consideration that the population is partially underestimated, migration may be stronger than registered. Negative values of net migration were noticed in some towns surrounding Warsaw, especially those larger and more distant from the city (e.g. Nowy Dwór Mazowiecki, Wołomin). In these municipalities an increased outflow (in relation to the surrounding areas) and a reduced inflow were typical.

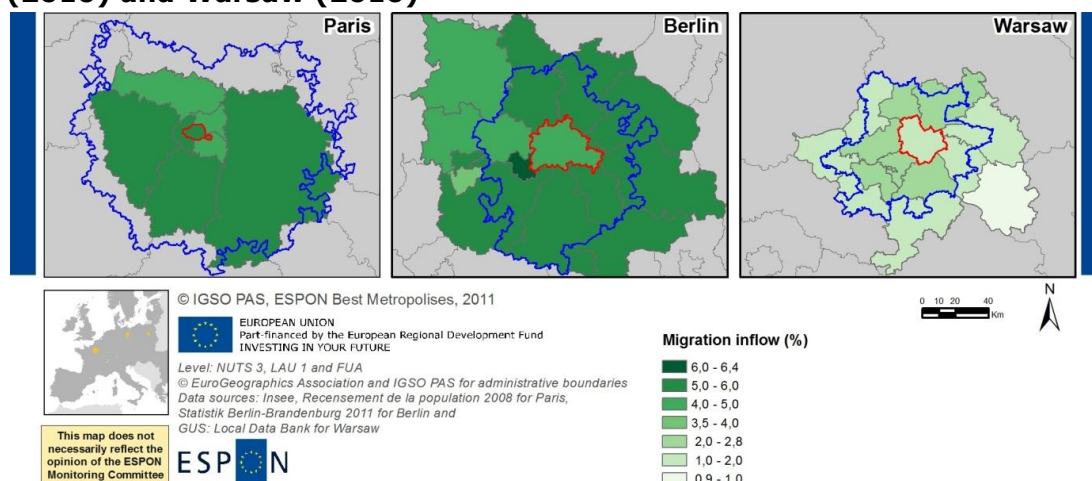
The inter-communal migration matrices for 2003, 2006 and 2009 indicate a regular exchange of population in the Warsaw Metropolitan Area. The figure D28 displayed in the annex D2 shows the large share of outflows from Warsaw in relation to the total inflows. The analysis indicates that migration flows were related to the spatial proximity of current and previous places of residence. Residents of northern Warsaw often chose the municipality *Łomianki*; *Stare Babice* for those from the western part; and from southern districts, *Piaseczno* (Potrykowska and Śleszyński 1999).

#### 4.6.2. Comparisons

The highest population inflows occur in Paris, followed by Berlin and then Warsaw. In the latter, a large part of the migration is not registered (in the three cities metropolitan migration are underestimated, however in different degrees, cf. Map 5). The immigration volume is associated with the city's attractiveness for work and residence as well as with the availability of migration resources in source areas. This in the exemplary cases of Paris and Warsaw, is associated with capital functions that

attract highly qualified personnel, associated with the location of the public administration, management offices and various other factors (Paris has clearly the position of a global city). Berlin is characterized by a much weaker concentration of business professionals than Paris (concerning highly skilled industry labour despite a strong presence of cultural and educational labour force in Berlin). This relatively weaker position is conditioned by its lower attractiveness and higher unemployment, in relation to other major German cities, especially in the western, northern and southern parts of the country. This is, probably a result of the economic profile of the city, which is much less dominated by high-tech industries and certain business services than other capital cities. To a large extent this is the result of the polycentric German urban system. It is worth mentioning that, on the one hand, for the country's general development a polycentric system is not a negative feature since it prevents excessive accumulation of growth factors in one place. On the other hand, it is diminishing international competitiveness of Berlin.

**Map 5. Migration inflows in Paris (yearly average in 2003-2008), Berlin (2010) and Warsaw (2010)**



The projection of migration flows to the three countries is not high enough to foster a process of concentration of services and the development of the labour market, for which it would be required increasing the role of foreign immigration.

In Berlin and Paris foreign immigration from abroad plays a considerable role. As a result, both cities have a multicultural character, though spatially differentiated: while in Berlin it regards more city itself, in Paris it refers to the surroundings. The total volume of immigration of foreigners in Paris and Berlin is larger than in Warsaw. Such type of immigration goes along with spatial concentration and segregation processes. Both aspects are problematic in terms of social cohesion in cities and the general migration policy. In Warsaw, the share of foreign migration is marginal, particularly in relation to the outflow (even considering that the flows of foreign migrants are only partially recorded). However, if Warsaw experiences higher quality of life and income, it may follow the paths of Paris and Berlin and in the future face increased migration. In the metropolises, migration contributes to an increased socio-spatial polarization. Fast-paced migration circulation is visible in the researched cities, especially in Berlin (in recent years, 8-10 per cent of the population changed residence) and Paris (in the four years before the 2006 Census, 31 per cent of households changed their residence). These two aspects may contribute to the aggravation of processes of social inclusion and increased alienation, or even stimulate socio-spatial segregation. Spatially, this implies efforts in planning,



development of public spaces and communities, and encouragement of local actions. Due to lower natural population growth (even shrinking natural population) along with relatively high migration rates, the overall population structure will change considerably in terms of age and education structures. This will affect future demands for infrastructure, services etc.

**Table 7: Main migration indicators of Berlin, Paris and Warsaw metropolitan areas**

Indicator*	Berlin (2010)		Paris (annual average of the last four years before to the census in 2006)		Warsaw (2010)	
	core	external zone*	core	external zone**	core	external zone***
in absolute values (crude, in thous.)						
Population	3,387.6	1,594.4	2,211.3	9,448.0	1,720.4	1,532.8
In-flow	147.8	87.7	101.5	361.5	19.5	32.3
Out-flow	131.0	83.1	191.0	274.2	15.6	18.8
Net-migration	16.8	4.5	-89.5	87,3	3.9	13.5
in relative values (‰, per 1,000 population)						
In-flow	43.6	55.0	45.9	38.3	11.3	21.1
Out-flow	38.7	52.1	86.4	29.0	9.0	12.3
Net migration	5.0	2.8	-40.5	9.3	2.3	8.8
Share of foreigner/immigrants (inflow+outflow) in total turnout	43.2	16.0****	N.A.	N.A.	3.0	0.8

\* Counties (kreise) – NUTS 3: Barnim, Dahme-Spreewald, Havelland, Märkisch-Oderland, Oberhavel, Oder-Spree, Potsdam-Mittelmark, Teltow-Fläming and city Potsdam; \*\*Region Île-de-France; \*\*\* NUTS3: Warsaw-East and Warsaw-West; \*\*\*\* Brandenburg.

Source :France: Insee, Recensements de la population - Etat civil; Germany: Statistik Berlin-Brandenburg; Poland Local Data Bank, GUS.

The suburbanization trends differ considerably among the three cities. Paris Metropolitan Area is characterized by the strongest periurbanization phenomenon. The deconcentration process is viable in terms of living conditions, but unfavourable for the efficiency of transportation (life quality) and settlement systems (urban sprawl). This creates many challenges for transport policy, planning land use and settlement infrastructure. The tendency is that a proportion of the inflow will be increasingly composed of elderly population, mainly due to natural biological processes. In Warsaw, the periurbanization phenomenon is marginal, while suburbanization (closer distances) is dominant, especially to municipalities adjacent to the city. However, the Polish capital among the analyzed cities is characterized by the highest degree of urban sprawl, whose consequences for the efficiency of transportation and settlement are similar, to the ones in periurbanization (increased need of transport and municipal services) As a result of the administrative boundary, in Berlin the suburbanization process takes place both within the city borders and across the city border. Within the city border it is limited by the available space, while across the border it has slowed down over the last couple of years due to regulation, and is now leading to a nearly balanced migration between Berlin and Brandenburg.

A variety of legal and administrative approaches to spatial policy in suburban areas has been developed in the three cities. The most liberal one is that of Poland. Due to non-regulated suburbanization, in the metropolitan area of Warsaw the threat of decreasing living and environmental conditions is the greatest.

The observed trends in the studied metropolitan settlements require a more context- and place-based policy. This requires adaptation, which could be giving up large objects (services/business centres), in favour of smaller ones, more evenly distributed in space. This would limit daily or weekly commuting for purposes of work, service and shopping. On the other hand, it is necessary to try to manage migration flows in the desired location; however, because of the varied approaches to spatial planning in the countries, this demand seems difficult to meet.

## **4.7. Models of governance and social participation in development and spatial planning**

Governance models for metropolitan areas turned out to be an emerging and increasingly widespread topic among researchers and practitioners of the area of territorial development. Within the new scales interplay taking place in particular in Europe, guiding the development of metropolises has become a challenge for regional and local governments. Effective governance models and management methods are expected to secure conditions for sustainable development, reduction of social disparities, and more even distribution of growth (cf. "Europe 2020"). Such models are shaped to a large extent by institutional and organizational solutions and the respective relationships between different levels of governance (central/state level, regional and local/municipal levels). Citizens' engagement in governance and management practices is an important factor, which may facilitate governance processes and limit conflicts resulting from the variety of development goals adopted by different groups of interests. Models of governance depend on specific national and regional contexts (history, culture, administrative structure, division of power, responsibilities, competencies, etc.) and on the relationships among actors active at the public scene that happen under specific institutional, cultural and political conditions.

Governance regards not only established institutional structures, but also the operational efficiency of various fields that are regulated by public authorities. Promoting development requires appropriate policies; and new forms of governance may contribute to bring about a collective ability to change paths of social and economic development.

In the cases of Berlin and Warsaw the borders of the metropolitan areas are not identical with borders of FUAs used for spatial analysis under the Best Metropolises project. In the case of Paris these borders are almost identical. However, common in the three metropolises is that currently there are still no institutions with ascribed responsibility for the metropolises' development. Therefore an effective coordination of policies within the metropolitan space remains below its potential achievement.

### **4.7.1 Preliminary results**

#### **Paris**

The Metropolis of Paris has a strong economic and demographic potential and plays an important role in the national and global cities' networks. Paris, as the capital city

of a centralized country, dominates the French settlement system, which include also some other dynamic regional capitals. The devolution process initiated in 1982 has progressed quicker in the other 20 French regions than in Ile-de-France. The Paris Metropolis is divided in 8 districts (*départements*) (a stable institution since 1789), while Paris is divided in 20 districts (*arrondissements*) with limited power.

A politically strong city government in Paris allied to other features as regional authorities with strategic competences, districts with socially oriented policies, numerous small cities (1280) exercising urban planning or housing development policies, and a relatively weak inter-municipal cooperation contribute to a quite unsuitable frame for promoting a comprehensive and coherent approach to metropolitan development. The central government is back in the political game after a period of withdrawal and new actors emerged from local territories; thus a new metropolitan scene is being shaped.

The central government has been involved in the Paris Region's governance for decades. The mandate of the first elected mayor of Paris started in 1977, and the regional council was elected for the first time in 1986. Planning tools of the central government agencies are also used by the regional authorities on strategic areas. The reforms of 2009 and 2010 weakened the territorial institutions by removing the business tax, thereby feeding the political debate on metropolitan governance.

The central government took part together in 2008 in the development of a revised regional planning scheme. A new development plan, called the Grand Paris Project, was elaborated and its means of implementation were transferred via a special law to the regional government. In 2011, the regional and the central governments reached a agreement on a development plan until 2013 (a regional planning scheme will include the Grand Paris project).

A bottom up movement was promoted by the city Paris in 2003, which involved the establishment of technical cooperation with neighbouring municipalities. From 2009 onwards, the Paris Métropole (that brings together 193 territorial institutions in the whole region) has become the main space for building a shared metropolitan vision. A public debate (politicians, professional bodies, researchers, etc.) arose through these different (and perhaps converging) initiatives. The central government has been presenting a more competitive and hierarchical perspective on the metropolis development; whilst the Paris Métropole has been opting for a more even development (at the regional level) and a new kind of metropolitan governance. This debate is expected to continue after the upcoming elections of April-June 2012.

Decision-making power in the Paris Metropolis is rather dispersed among various public agents (central government, Region, Paris City, surrounding cities and now the Paris Métropole, an influential informal actor). These are now collectively involved in the metropolitan project, but not yet shared a prospective vision for the metropolis. Furthermore, as in every complex metropolis, planning tools are less efficient, because of weakened vertical coordination on different territorial levels (housing, urban sprawl, etc.) and lack of inter-municipality cooperation (SCOT, the territorial coherence scheme, coherent with the SDRIF, unique regional scheme in France). The EPA (Public planning authorities) on strategic areas from the 1990s hardly implemented urban and economic renewal. Current tools (e.g. new EPA, CDT; territorial contracts; State-municipalities for urban development near Grand Paris new rail stations) are at the beginning. Four public planning and study agencies support

regional or territorial planning processes. Cities and inter-municipalities often hand urban projects over to half public societies (SEM).

Regarding infrastructure technical fields, the only metropolitan authority is the one responsible for transport (STIF, regional trade) and its networks (in relationship with SGP, a firm dedicated to the Grand Paris transport project' implementation). Against the current acute housing crisis, the Region and the Paris Métropole are looking for a common metropolitan solution. Others fields (waste, water, energy) are provided with territorial arrangements, with public regulation and private and public operators.

Citizen participation on urban redevelopments is widely widespread on the local level, although it is more difficult for new projects. Public consultation and debates are legally obliged for major projects (e.g. SDRIF revision in 2008, 2 simultaneous inquiries on State and Region transport projects in 2009). The forms of consultation remain rather traditional, though some are very innovative (website debates' Plaine Commune inter-municipality, Pavillon de l'Arsenal' activities in Paris).

A big exhibition was another matter of public interest: the central State launched in 2009-10 a consultation on the "Post Kyoto" Paris Metropolis (ten international teams led by architects, called "Grand Pari" - big bet). The final exhibition took place in a museum, with a huge public and media impact through images, and the International Workshop (AIGP) which gathered the architects extends the buzz. This way large part of public information was presented in attractive way suited to the broad audience.

## **Berlin**

Within the German federal system (16 *Länder* after reunification), the metropolitan area of Berlin covers the State of Berlin (12 Districts / Bezirke) as well as parts of Brandenburg that surround Berlin's borders (in total Brandenburg has 14 districts / *Landkreise* and 4 city districts). The East-West division of Berlin observed from 1961 to 1990 has led to the establishment of two distinct planning systems. After the reunification, Berlin has been organized in 23 districts, which were reduced to 12 after an administrative reform in 2001. After a merger of Berlin and Brandenburg was rejected by a referendum in 1996, common spatial planning initiatives have been supported in both states' governance structures. Since 1996, there has been a Joint Spatial Planning Department for Berlin and Brandenburg, established by the Berlin Senate for Urban Development and the Brandenburg Ministry for Infrastructure and Agriculture. It is responsible for developing planning strategies and instruments for the whole administrative area, as well as for the individual sub-areas within the two federal states. Together with local stakeholders and communities the Joint Spatial Planning Department develops a framework for the further social and economic development of the region.

Pragmatic solutions for metropolitan planning and projects' implementation were fostered after the 1996 referendum failure. These solutions include, among others, the establishment of the State Development Program (LEPro, with objectives and principles for regional planning and polycentric development), State Development Plan of Berlin and Brandenburg (LEP BB, development of regional centers, infrastructure planning, growth and innovation), and the State Development Plan for the new Airport location (LEP FS). All initiatives were putting forward the concept of Berlin-Brandenburg as the "German Capital Region".

In the field of transport policy, Berlin and Brandenburg have established the VBB (*Verkehrsverbund Berlin-Brandenburg*) which manages the transport system in the two states (see also activity 5). The planning cooperation between Berlin and Brandenburg is still an ongoing dynamic process which is being adjusted to increase its efficiency.

Berlin Metropolis has a tradition of local social participation, expressed - among others – in the urban revitalization process after the Second World War, and which got even stronger after the reunification of Berlin. Forums (IBA) enabled an active dialogue of city government with citizens and stakeholders. This ongoing dialogue has become a model for management of local projects and is benchmarked around Germany and Europe.

The German governance system strongly supports active social participation. In Berlin public participation has historically been influenced by the post-war reconstruction and the reunification process. A current example of such participation is the consultations on the flight routes for the new airport.

## **Warsaw**

The Warsaw Metropolis is part of the Mazovia Voivodship (region) and consists of Warsaw (the capital city of Poland) and 72 surrounding municipalities. Since the systemic transformation of Poland in 1990 the municipalities enjoy great autonomy to decide on possible paths of development and to elaborate their own spatial development plans. Before that date, under an oppressive political regime and within an institutional framework of centrally planned economy, spatial planning had a hierarchical nature and formulation of development policies was centralized. The current institutional framework (public administration structure) is a result of decentralization and devolution of power that started with the establishment of territorial self government on the local (i.e. municipality level) in 1990. The second phase of the administrative reforms took place in 1999, when the self governing counties (*powiaty*) and the regions (*voivodships*) were established.

From 1990 to 1993 the city of Warsaw was divided into seven autonomous municipalities, and in 1994 into eight. In the period from 1994 to 2002, the number of municipalities increased to eleven. In 2002, a new law re-centralized Warsaw administrative and management structure and the eleven municipalities were replaced by 18 districts (*dzielnice*) (cf. fig. D13 in the annex D2). Thus, although the administrative and institutional framework has changed, no new legal structure has been created to guide development of a forming (and rapidly growing) metropolitan area.

The issues regarding the development of Warsaw metropolis are incorporated into the Warsaw Development Strategy until 2020, which was adopted in 2005. Also the regional government of the Mazovia Voivodship prepared in 2010 a Metropolitan planning scheme (Study of Spatial Development Plan for Warsaw Metropolitan Area). Despite such documents there remains no clear agreement on which institution will lead metropolitan development. Institutional adjustments to the new context of a developing Warsaw metropolis are presently quite limited. However, there are examples that the metropolitan dimension of development is being grasped by governments of Warsaw and municipalities from the metropolitan area. One of them is the “agglomeration ticket”, a common ticket for public transport of Warsaw and the surrounding area. Furthermore the municipalities from the metropolitan area

established the association “*Metropolia Warszawa*” which aims to lobby for new solutions concerning the governance of the Warsaw metropolis. The city of Warsaw and regional authorities cooperate also in specific areas that are of interests for both parties: among them is the revitalization of Warsaw and other cities from the Warsaw Metropolitan Area and other parts of the Mazovia Voivodship.

During the socialist period the city experienced fast growth related to industrialization processes. The year of 1990 was a turning point in the city’s development history and the beginning of de-industrialization. Since this year Warsaw has been open for large private investment in real estate (offices, housing, retail centers) and has developed as a specialized services center. Despite some efforts focused on revitalization of urban space, large parts of the city (especially the central one) still need renovation. Improvements of the transportation system are also needed. Although the city is well served by public transport, another metro line is an urgent need to bring together the two parts of the city located on different banks of the Vistula River.

A development problem of Warsaw metropolis is that instruments to control development processes are rather weak. Spatial development plans cover only selected areas within the city borders. But suburbs are growing rapidly, as well as urban sprawl, which brings a urbanization pressure to hitherto typically agricultural areas located in the vicinity of Warsaw. Recent development trends, especially trends of spatial development, call for planning intervention and must be treated as a subject of metropolitan governance.

Under the communist regime opportunities for genuine social participation in public life were very limited. Social movements were under rigid control of the central government and its communist party apparatus. Centralized governance and management systems left no room for citizens’ involvement in decision-making processes. The situation changed after 1990. The decade of 1990s was a period of numerous spontaneous social movements and establishment of many non-governmental organizations representing interests of different groups, including local communities. The division of Warsaw into municipalities until 2002 also contributed to increased social participation. It was the time of discovering local democracy and its “practical usefulness”. The legal environment encouraged and promoted social participation. The situation slightly changed in 2002, when the system of administration and administrative subdivisions in Warsaw was reformed. The city became then one municipality and the governance system was centralized. It was diagnostic that for some years the city had no statute (defining responsibilities and powers of district’s authorities) and decisions concerning development were made almost solely by the staff of the mayor of Warsaw.

Contemporarily, since the year of 2006, the city authorities initiate and support different forms of public participation. The Center of Social Communication, a organizational unit within the city hall, plays a important role in different activities focussed on social participation. The program of urban revitalization may serve as an example of innovative and efficient approach to citizens’ involvement in decision making process. At the regional level there are planning agencies that also practice consultations with inhabitants and other stakeholders. Development plans for metropolitan area prepared by the Mazovian Office for Regional Planning Office were widely discussed with all interested parties in the region. In 2011 and 2012 extensive consultations of development strategy and spatial development plan for the region have been organized using different media and channels of communication.

### 4.7.2 Comparisons

The impact of the national state on metropolitan development, including its governance, is very strong. A common model for the three metropolises is not achievable and a simple transfer of experience from other European metropolitan cities is not straightforwardly possible. What can be transferred is the experience on how progress in developing governance models can be achieved.

In the Polish case the search for a metropolitan governance model is at its earliest stages. The dynamic development of the Warsaw metropolis and rapid urban changes in surrounding areas may threaten sustainable paths of development. Berlin set pragmatic solutions of cooperation with Brandenburg, perhaps a first step toward a more global metropolitan arrangement. Paris is involved in an original dual process with quite uncertain but dynamic situation: top down from the central government, and bottom up from territorial governments.

The system of relationships among actors has been less or more conflicting. The international role of Paris sets a doubled attention paid by the central State on the capital Metropolis. Reinforcing the aim of economic competitiveness may interfere with coherence and sustainability goals supported by territorial authorities. This direct conflict between the central government and sub-national territorial units is not so evident in Berlin. The same situation might be found in the case of Warsaw.

The three cities face similar metropolitan development problems (social and economic disparities, urban sprawl, housing or transport problems, etc.), but the means and tools used to deal with them differ. Berlin and Warsaw have gone through dramatic historical events when their social, economic and spatial development had been interrupted and cities structures destroyed for decades. Paris has experienced a continuous evolution without main ruptures since the last World War. However, the efficiency of governance stands always as a current problem that must be addressed through planning activities, technical arrangements, policies, and cooperation. In these fields each metropolis may have innovative practices or tools, as well as good and eventually transferable examples.

In Berlin and Paris planning is supported by advanced instruments while Warsaw's system is still evolving. Among the main challenges remains the ability of regulating urban growth, vertical cooperation, global coherent vision, and balanced development. Financing has become everywhere a big issue related to these objectives, in the wealthy Paris Metropolis as well as in Berlin or Warsaw (respectively 168.8, 97.8 and 82.2 per cent of the European average GDP/inhabitants in 2007, according to Eurostat data 2010). Achieving a more balanced financial redistribution at the metropolitan scale is currently a big issue for Paris Métropole. No matter how efficient governance structures are for the development of planning strategies, providing sound governance for the implementation of such policy-decisions is of similar importance.

Social participation in the three metropolises is mainly influenced by the historical development and the cultures of participation manifested to different extents, in a variety of forms and dimensions of social participation. Each metropolis tests such participation on different levels and with, innovative forms, therefore many good examples of governance actions are found in Paris, Berlin and Warsaw.

More difficult is to open public participation on less concrete or large scale topics. Laws may set efficient arrangements (inquiries, referendum, etc.). Thus new forms of

public attraction (exhibition in Paris or IBA in Berlin) may be appealing. This could be an issue of discussion between the three metropolises to assist adaptation to each cultural context. However, creating a public debate (institutional, political, civil and academic) seems to be the only way to ensure improvements towards a metropolitan model of governance.

## **4.8. Development strategies, visions and recommendations**

In activity 8 documents about long-term strategies and visions for the three metropolitan areas are reviewed, compared and evaluated. Based on the results of the theoretical framework defined in activity 2 and the empirical evidence presented by activities 3 to 7, the project team will make recommendations for the development of each city taking account of the experience and best practices in the two other metropolitan areas. The main effort so far was to get an overview of previous and current strategic documents of Paris, Berlin and Warsaw. This section presents this overview and a first comparison of the current strategic documents of the three cities. Annex B contains a list of references and Internet links to relevant sources and selected visualisations of historical and current spatial visions for the three cities.

### **4.8.1. Preliminary results**

The three cities differ in the way they have planned their future development during history. However, all of them have a history of public deliberation and discussion of their future role and spatial development.

#### **Paris**

Among the three studied cities Paris was the first to introduce a strategic plan to fundamentally change the irregular medieval structure of the city. In his *grand plan* for the reconstruction of Paris (1853-1870) Baron Georges-Eugène Haussmann adopted both Baroque ideas of broad spectacular avenues and the rational grid layout of North American new towns implemented in the 18th century – a spirit later taken up and exaggerated to the extreme by Le Corbusier in his utopian *Plan Voisin* of 1925.

In 1960 the *Plan d'Aménagement et D'Organisation Générale de la Région Parisienne* (PADOG) initiated by President de Gaulle aimed at easing the congestion in the central city by restructuring the disorganised settlement system in the region. It was replaced in 1965 by the much more ambitious *Schéma Directeur d'Aménagement et d'Urbanisme* (SDAU) which, to cope with the rapid population growth, structured the region by the new business centre *La Défense* west of the old city and eight new towns linked by fast commuter rail lines (RER) and radial and circular motorways. Because the actual economic and population growth was slower than expected after the first energy crisis, in the 1976 SDAU the scheme was downscaled to five new towns, and an environmental protection (green belt) strategy was outlined.

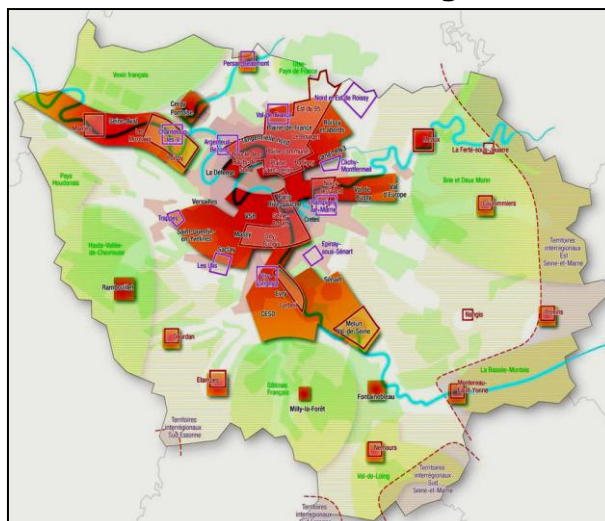
The first *Schéma Directeur de la Région Ile-de-France* (SDRIF) of 1994 dealt with a reappearing growth and its consequences, which require improving public transport, constraining urban sprawl and protecting the environment. This document was revised in 2008 because of continuing urban sprawl and new challenges, such as climate change, energy scarcity and growing social disparities and rising house prices in the suburbs. The SDRIF is managed by the *Institut d'aménagement et*



d'urbanisme Ile-de-France (IAU). Figure 6 summarises the spatial strategy of the SDRIF of 2008.

The present situation of the Paris region is quite unusual because of a disagreement between two major plans. The SDRIF managed by the *Institut d'aménagement et d'urbanisme Ile-de-France* (IAU) and approved by the Regional Council in 2008 is conflicting with another master plan, the *Grand Paris* project.

**Figure 6. Schéma Directeur de la Région Ile-de-France**



Source: La géographie stratégique et prioritaire (2008)

The *Grand Paris* project was initiated by the French President Sarkozy in 2007 to generate a new global plan for the Paris metropolitan region. The project replaced the growth targets for the Ile de France of 12 million inhabitants and 6 million jobs in 2030 and 60,000 new dwellings per year by 13.5 million inhabitants and 7 million jobs in 2030 and 70,000 new dwellings per year. At the core of the project is the new regional rail system (Grand Paris Express) with about 150 km of a new automated regional metro system linking the major centres in the region and nine planned new development clusters. In 2008 ten international multi-disciplinary teams were invited to present their visions for the future spatial structure of the Paris metropolitan area.

A convergence between the two documents, the SDRIF and the Grand Paris project, is currently being discussed, and aims at establishing a renewed SDRIF until 2013. Nevertheless the observing competition between state and regional planning gives rise to important open questions.

In addition, but fully compatible with the SDRIF, there is the *Plan Local d'Urbanisme de Paris* (2006) according to which the following issues are of strategic importance for urban development: (1) improvement of the quality of life of citizens through incorporation of principles of sustainable development into planning procedures: to reduce energy consumption and greenhouse gas emissions, water, air and soil pollution; to prevent noise, to provide more green space, to protect the cultural heritage and to reduce social inequalities, and (2) establishment of cooperation among local authorities to support the development of Paris as the heart of the agglomeration.

## Berlin

Like Paris, Berlin made in the 19th century major efforts to modernise its historically overcrowded and unhealthy urban fabric by means of advanced engineering principles. In 1862 the city commissioned the civil engineer James Hobrecht to prepare a visionary plan for the fast growing Prussian capital, a plan which has determined the growth and layout of Berlin's inner suburbs until today. At the occasion of the first international urban planning conference in 1910, the city opened the Greater Berlin (Groß-Berlin) competition yielding radical plans for the growing metropolis, such as the circular belt or radial sector plans by Eberstadt et al. (1910). Since then there has been an almost continuous sequence of visionary plans for the Berlin (cf. Appendix B).

In 1958, more than thirty years before Berlin was reunited, the City of West Berlin launched an international urban planning competition *Berlin Capital* (Hauptstadt Berlin) in which 150 international architectural teams produced their visions of a reunited Berlin as capital city of Germany. In 1987, in the final period of the German Democratic Republic, the City of East Berlin published a strategic plan for the development of the socialist capital (Magistrat von Berlin, 1987). This was the last time that long-term strategic planning occurred in Berlin. In 1999 a master plan for the inner parts of the reunited city (*Planwerk Innenstadt*) proposed a return to traditional forms of urbanism by the reconstruction of the 19th century city blocks.

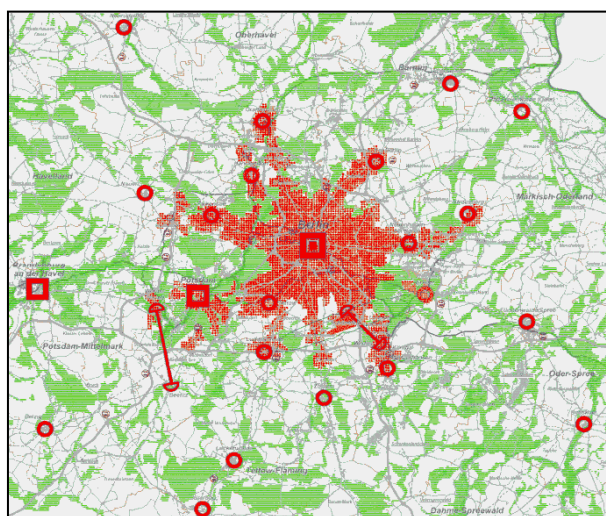
In 2001 the Senate of Berlin commissioned the *BerlinStudie* (2001) to develop future strategies to face the challenges of the 21st century in the fields of competitiveness, employment, knowledge, information and communication technology, attractiveness for young people, migration, social equity, environment, sustainability, participation, intercity co-operation and capital functions. Although the Governing Mayor of Berlin Wowereit endorsed the *BerlinStudie* as an "encouragement for action" in 2003, it is not an official strategic document of the city government. Berlin does not have and has not had since its reunification a single and comprehensive document that determines its most important government goals and measures. Instead, Berlin urban development policy is based on three types of strategic concepts and documents that are more or less integrated and binding: (1) an open set of long-term forecasts and strategic concepts for the most important urban development issues (including a population projection for 2030), (2) a defined set of more binding spatial and/or sectoral long-term development plans on climate protection, energy use, transport, urban centres, etc.) and (3) a well-defined and binding set of priority urban action areas, containing urban development, urban restructuring, urban regeneration, and social development areas.

The pragmatic, incrementalist planning philosophy of Berlin is also reflected in the way it collaborates with the surrounding Federal State of Brandenburg. Although there is a Joint Spatial Planning Department (*Gemeinsame Landesplanungsabteilung*), which prepared a common State Development Programme (*Landesentwicklungsprogramm* or LEP) in 2009, it has not been possible to agree on a common policy to curb urban sprawl in the huge suburban "grease belt" (*Speckgürtel*) around the capital city. Figure 7 shows Berlin in the LEP.

Since the abandonment of the *BerlinStudie* as unifying *Leitbild* for its future development, Berlin has continued its conservative, traditional planning doctrine. The only major planning effort in recent years was the re-edition of the *Planwerk*

*Innenstadt* and its extension by similar plans for the inner suburbs. In essence, Berlin has no long-term, comprehensive planning vision.

**Figure 7. LEP Berlin-Brandenburg: Settlement structure**



Source: Gemeinsame Landesplanungsabteilung der Länder Berlin und Brandenburg, 2009.

## **Warsaw**

Strategic planning for Warsaw started with the rebirth of the city as the national capital in 1918. Already in 1916, still under German occupation, a first plan for Greater Warsaw was set up (Józefacka, 2011). In the interwar period a master plan for the city designed by its chief urban planner Róžański remained unimplemented. After the destruction of the city by the Germans in World War II, a plan for the reconstruction of the city was proposed in 1949 by the state president and later prime minister Bierut. In 1956 a first General Plan for Warsaw was approved (Ciborowski, 1985), while at the same time that a new city centre of predominantly Soviet modernist architecture was built - the Marszałkowska Housing District (MDM) and the huge Palace of Culture and Science ruling over the city.

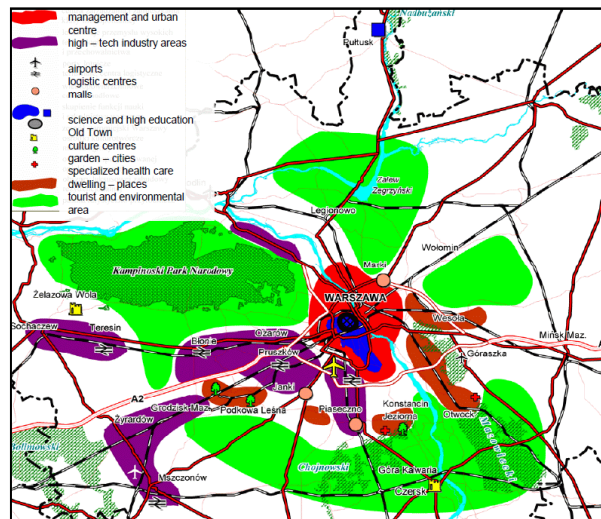
After the political and economic transition of 1989 it was hypothesised that the Berlin-Warsaw axis might develop into a high-growth intensity zone by attracting modern economic activity from both West and East (Domanski, 1999 after Korcelli-Olejniczak, 2007). Berlin and Warsaw share a number of common characteristics (Korcelli-Olejniczak, 2007): their common geographic situation along a major historical West-East axis, their common membership in the Baltic Sea Region and their similar position in the eastern peripheral parts of their national territory.

There are two recent strategic documents on the future development of Warsaw: The previous Warsaw Strategy (*Strategia Rozwoju*) of 1998 was to guide the development of the city until 2010. It postulated the transformation of Warsaw into a European metropolis able to compete effectively with Prague, Budapest and Vienna, but also emphasised the need to sustain its existing metropolitan functions as the national capital. The study pointed out activities that were threatened by destructive competition between the four cities but did not identify functions that could expand as a consequence of inter-metropolitan complementarity and collaboration (Korcelli-Olejniczak, 2009). In 2005 the Warsaw Strategy was updated and extended to 2020. The new strategy presents a SWOT analysis, a vision and strategic objectives divided

into sub sections and illustrated by a number of detailed programmes. In 2006 the Mazovian Office for Regional Planning developed the following structure plan for the Warsaw metropolitan area (Figure 9).

Recently a number of new strategic documents were issued by the City of Warsaw: the *Social Strategy of Warsaw for the years 2009-2020* (2008), the *Local Revitalisation Plan for the years 2005-2013* adopted by the City Council in 2008 and the *Strategy of Sustainable Transportation System Development for the years 2007-2015*. In 2011 a new study on a Spatial Development Plan for the Warsaw region was prepared and adopted (Mazovian Office for Regional Planning, 2011).

**Figure 9. Warsaw metropolitan area development nodes**



Source: T. Sławiński, Mazovian Office for Regional Planning, 2006, with kind permission by the author.

#### 4.8.2. Comparisons

It is too early in the project to draw final conclusions about the strategic documents in the three cities and to compare them in a rigorous manner. However, the brief summary presentation of the history of strategic planning in the three cities allows a first comparison along four issues (see Table 8):

- *What strategic documents exist?* Only Paris and Warsaw have comprehensive plans for the spatial development of their regions. Berlin and Brandenburg have an indicative regional plan with no binding character.
- *Have the strategic documents a long-term perspective?* The *Schéma Directeur de la Région de Ile-de-France* and the *Grand Paris* project have 2030 as target year. The State Development Programme and Plan of Berlin and Brandenburg do not state a target year. The Warsaw Development Strategy of the City of Warsaw and the Development Strategy of the Mazovia Voivodship indicate 2020 as target year.
- *Are there competing strategic documents?* This is particularly relevant in the Paris region where SDRIF and the Grand Paris project still exist side by side, although efforts to reconcile them are underway. Similar conflicts exist in Berlin because the non-binding character of the State Development Plan of Berlin-Brandenburg. No comparable conflicts seem to exist in Warsaw between the city and Mazovia.

- *Do the strategic documents address housing, transport and governance?*  
Population and housing are addressed in the strategic documents of all three cities. All three cities aim at improving the provision of affordable housing (cf. activity 3). Also transport plays a major role in the strategic documents of all three city regions: most spectacularly in Paris with the Grand Paris Express. Remarkably, governance issues are not treated explicitly, even avoided in the existing strategic documents.

In summary, Paris has the longest experience with visionary strategic planning and also is the most active in this field among the studied cities. The history of strategic planning in the Paris region from Haussmann's plan to the latest strategic documents displays a consistent, rationalist, top-down planning system which had and is likely to continue to have in the future a major impact on the spatial organisation of the wider Paris region. The drawback of the Paris region is the yet undefined competition between the Grand Paris project and the SDRIF.

**Table 8: Comparison of strategic documents**

Issue	Paris	Berlin	Warsaw
What strategic documents exist?	Schéma Directeur de la Région de Ile-de-France, Grand Paris and Plan Local d'Urbanisme de Paris	State Development Plan of Berlin-Brandenburg	Warsaw Development Strategy and Mazovian Voivodship Development Strategy
Have the strategic documents a long-term perspective?	2030	2020	2020
Are there competing/contradictory strategic documents?	Schéma Directeur de la Région de Ile-de-France and Grand Paris	---	---
Do the strategic documents address housing, transport and governance?	Housing and transport	Housing and transport	Housing and transport

Source: own elaboration.

Berlin too has an impressive history of strategic planning from the Hobrecht plan to the *BerlinStudie*. However, from thereon Berlin has practically withdrawn from strategic planning in favour of an incrementalist, sectoral planning. It remains to be investigated whether this is a disadvantage or may represent a more successful strategy for a new type of metropolis of the 21st century.

Warsaw has since the political and economic transition of 1989 successfully approached strategic planning taking account of the new challenges and opportunities of a market economy. However, it remains to be seen whether the region and city governments will be able to harness the strong economic interests of developers and other economic stakeholders and mitigate urban sprawl.

## 4.9 Stakeholders' involvement

Stakeholders have played an important role in the project implementation assisting in data collection and providing valuable comments on preliminary results of studies. In

the upcoming period stakeholders will be involved in qualitative studies (in-depth interviews) aimed at governance related problems. The interviews will be conducted to identify approaches to metropolitan development and perception of development problems. Among topics covered by qualitative studies are: relations between central city of metropolis and surrounding area, drivers and dynamics of metropolitan development, current paths of metropolitan development and their social, economic and spatial consequences, formulation and implementation of development policies, governance and day-to-day management, institutional options concerning organization of the system of metropolitan governance.

To meet specific needs of Warsaw's stakeholders an analysis to determine unfulfilled demand for housing is under preparation and will be performed in close cooperation with representatives of the city's authorities.

Additionally workshop for Warsaw's stakeholders on transport, job accessibility and daily mobility will be organized. This workshop will be used to present results of studies and to collect additional information that will be useful in analysis of current and future spatial development of Warsaw metropolis including its functional structure.

Results of studies will be used for preparation of materials dedicated to metropolitan areas' development problems that are being faced by Paris, Berlin and Warsaw. These materials will be made available to all interested parties via website. They will also be used as a part of materials prepared for the closing conference.

## **5. Towards the Draft Final Report**

### **5.1 Upcoming tasks in project activities**

Results of the project accomplished so far illustrate sophisticated nature of development problems of Paris, Berlin, Warsaw. Continuation of work under different activities is needed to obtain a comprehensive picture of ongoing development processes. Completion of all activities will be followed by cross-cutting comparative analysis, which allows elaborating conclusion of practical and theoretical character.

#### **Activity 1**

The works of activity 1 so far have focused on the identification of the key factors and turning points in the urban history of the three capitals, taking into consideration the impact of the historical heritage on the development processes of the studied central cities and their metropolitan areas. Future actions will focus on: assessing the cities' positions in the global, national and regional urban systems; describing and assessing the development trends of the three metropolises in the context of spatial, social, and economic development processes in Europe.

#### **Activity 2**

For accomplishing the objectives of activity 2, up till now an analysis positioning the three metropolitan areas of Berlin, Paris and Warsaw in a European perspective vis-à-vis global trends on spatial organization. Hence, three dimensions as regards metropolitan development in Europe have been analysed: economic performance, population trends and urban form, and classification of metropolitan areas based on their international functions, with a respective analysis of such dimensions in the three metropolitan areas in question in this project. For the draft final report a complete picture of the key empirical trends and drivers of metropolitan development under the condition of globalization, European integration and national interests. will be elaborated; consequently deepening the analysis of the three dimensions regarding metropolitan development above cited. This shall contribute to the identification in a macro-regional perspective of common challenges and hypothesis regarding metropolitan future development paths. Furthermore an in-depth literature study will be made in an attempt to identify the main drivers of "metropolisation" in relation to the three dimensions above. The analysis will be moreover contextualised within the theoretical debate on metropolitan development and functions.

#### **Activity 3**

The main focus of activity 3 till the present moment was to analyse situation of housing market (development in historical context, structure, affordability, etc) in all three cities and its surroundings, as well as evaluate and determine origin of shortage of affordable housing, additionally review of different political strategies how to counteract this shortage has been performed. For the final report it is foreseen to deepen the analysis of instruments for ensuring affordable housing comprising an analysis of the affordability of municipal and social housing based on revenue thresholds; general estimation of the group of people whose housing needs are not satisfied, including both contemporary inhabitants and those who would like to settle down in the city but are not able due to the lack of economic resources (Warsaw case). Additionally, some illustrations of the applied instruments will be added; the focus on political and strategic planning in the three cities will be strengthened with

regard to housing; and recommendations based on the assessment of problems related to the affordability of housing and their proposed solutions will be elaborated.

#### **Activity 4**

An analysis of the determinants of current socio-economic and spatial structures was hitherto the centre of activity 4. It has focused on identifying the existing disparities of spatial and socio-economic nature in the three analysed cities and examining the processes that affect metropolitan structures, as well as conducting a careful comparison of such processes with their historical contexts. Further work regarding the thematic of activity 4 towards the final report will focus on: (1) deepening the analysis of spatial evolution of three metropolises (e.g. through cartographic analysis; typology of socio-spatial changes; scenarios concerning the evolution and change of the socio-spatial structure), (2) analysing and comparing policies that attempt to change the socio-spatial and economic structures of cities and their metropolitan areas, (3) studying tools and solutions aiming at reducing social disparities, (4) exemplifying territorial regeneration phenomena of social, economic and urban nature, (5) developing recommendations for each city to assist them with tackling the existing problems.

#### **Activity 5**

The main goal of activity 5 is to identify relations between transportation systems in metropolitan areas, accessibility of work places, and daily mobility of metropolitan areas inhabitants. Up to now, the study in for the activity 5 has focused on the analysis of individual and public transport, public transport accessibility (within the core city and in the suburbs), its sustainability and modal split, as well as public transport management in the three cities approached in the project. The remaining research in activity 5 regards: (1) deepening the analysis of public transport management with particular attention to tariff solutions in the zones out of the boundaries of the main cities; (2) examining travel times of individual and public transports between the core city and suburban cities; (3) deepening the analysis concerning transport sustainability and mobility in Paris; (4) strengthening the study of new solutions for sustainability, (5) formulating recommendations for each city, taking into account the best practices in the two other metropolitan areas.

#### **Activity 6**

Within activity 6 an analysis has been conducted, which comprises mainly the following aspects: determination and evaluation of the overall volume of inflows and outflows in relation to the resident population in the metropolitan areas of Paris, Berlin and Warsaw; identification and investigation of the impact of migration on the socio-spatial structures of the city; and an investigation of migration structure and development of suburbanization processes. Further tasks of activity 6 towards completing the draft final report will consist of: (1) clarifying the effects of the intensity and direction of migration on the process of social differentiation (to be achieved in close and intense co-operation with activity 4); (2) a more detailed explanation of the issue of substitution of migration settlement by commuting to work (to be achieved in close and intense co-operation with activity 5); (3) a more detailed explanation of the impact of housing affordability at the level of migration (in close and intense co-operation cooperation with activity 3). These issues indicate the need for further integration of activities 3, 4, 5 and 6 at the stages of elaboration of the conclusion. This premise is consistent with the methodological assumptions of the project and



contributes to enhance the validity of the research. In addition a selection figures, maps and other graphic presentations will be added.

### **Activity 7**

The forthcoming actions within activity 7 involve deepening the analysis of technical and thematic governance. The themes to be covered are those related to metropolitan efficiency, i.e. spatial planning, transport, housing. These themes, and therefore also the study of governance models, are deeply intertwined, with the activities 4, 8, 5 and 3, as one can observe in this Interim Report. For the Final Draft Report, also experiences of local innovative urban revitalization that include public participation, as well as efficient forms of large scale public involvement will also be analyzed. Activities will be focused on political and strategic planning in the three metropolises with regard to global territorial coherence, balanced economic development and public regulation means in mixed financing (cf. activities 4 and 8).

### **Activity 8**

The work of activity 8 so far has reviewed the history and recent development of long-term strategies and visions in the three metropolitan areas and compared with respect to (1) their current state, (2) their time-perspective, (3) their consistence and (4) their relevance for the themes of this study: housing, transport and governance. The next steps of activity 8 towards the Draft Final Report will be to compare and evaluate the current strategic documents of the three cities with respect to six more issues: (5) their treatment of goals and goal conflicts, (6) whether they deal with trade-offs between conflicting goals, (7) their innovativeness, (8) their operationality and feasibility (9) their openness and flexibility and (10) whether they have been publicly discussed, and to make recommendations for each city for further developing their visions taking account of the experience and best practice in the two other metropolitan areas.

### **Activity 9**

The forthcoming tasks of activity 9 such as workshop, closing conference and in-depth interviews were described in chapter 4.9.

## **5.2 Toolbox**

The research activities undertaken for the Best Metropolises Project have covered a wide range of issues relevant for the development of the three metropolitan areas. Within the activities policies and measures to guide development processes and mitigate development challenges were examined. To enhance the impact of the results of such research, Best Metropolises offers the stakeholders a toolbox comprising a set of findings, guidelines and recommendations regarding:

1. potential paths for further metropolitan development,
2. potential barriers and bottlenecks for metropolitan development,
3. possible policies implemented in order to facilitate metropolitan development,
4. potential legal and organizational measures to be employed in order to secure the necessary conditions for effective intervention in metropolitan development processes.

The toolbox is instrumental in defining factors required for the success of the implementation of strategic visions and goals of metropolitan development. Technically, the toolbox consists of a separate document, and will be part of the

annexes. The content of the toolbox will be related to specific parts of the Final and Scientific reports, with the purpose of linking recommendations with detailed information on specific phenomena and processes identified in the three metropolises.

The toolbox is composed of three sections: the first one provides information on development determinants and paths of future development. These potential paths are presented within a broader European perspective. The second section contains information on the most important development problems identified (including living conditions, intra-metropolitan mobility and governance of metropolitan areas) and the way they have been addressed. This section includes a table presenting the main housing problems and the policies for tackling them. The third section contains policy recommendations based on the research results.

Although containing detailed data and information, the toolbox is not supposed to and do not contain any specific, “ready to use” solutions. Instead, the toolbox offers *via* the recommendations potential solutions by providing information on the necessary conditions to achieve development goals. Recommendations are also accompanied with an outline of positive results and possible threats that might be brought by employing a specific recommendation.

In the first section of the toolbox the Driver-Pressure-State-Impact-Response (DPSIR) approach is used to present the particular nature of metropolization processes in the three cities. The DPSIR is an efficient analysis framework that allows to link different phases of development processes and to examine how responses (in the form of public policies implemented) work and whether they change anything. Common drivers as well as those specific for certain cities are identified, and their consequences (pressures, state, and impact) described.

In the second section of the toolbox, the identified development problems / gridlocks of the three metropolises have their following aspects described:

- definition / description of the problem
- actors
- approaches
- policies
- factors for success
- additional relevant issues.

The third section of the toolbox contains policy recommendations: a bunch of policy options that policy makers may chose from to address development problems of their metropolis. The recommendations provided are structured in thematic groups and address situation of specific metropolises. The recommendations are phrased in a standardized format. They begin with a description of the issues which require policy decision. Subsequently, a policy analysis is presented, based on the results of studies of research tasks fulfilled under other activities. Next, policy options with their respective justifications (including anticipated impact) are elaborated. Justifications have solely technical (normative) character and do not serve as a base for evaluation of appropriateness of specific policy option. It is up to policy makers to make decisions which options fit the best their needs.

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