ESPON

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POLICY PAPER

Stocktaking paper on functional urban areas

November 2024

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Table of contents

1 Introduction

Preparation of this paper has been requested by the Polish Presidency of the Council of the European Union to substantiate discussion on urban policy in the upcoming term (first half of 2025), with declaration to be agreed by Ministers for Cohesion Policy, Urban Matters and Territorial Cohesion at the informal meeting in Warsaw, in May 2025.

This stocktaking paper compiles ESPON's territorial evidence on the role of functional urban areas (FUAs) in the organisation of territories, and it presents key information on both the support for FUAs under cohesion policy and other European policies and how specifically cohesion policy instruments are applied in FUAs. In that context, the document collates observations also by other organisations researching FUAs in Europe.

The paper provides a basis for developing a survey on FUAs among Urban Development Group members, which will then feed into a thematic issue paper to be drafted by the Polish EU Council Presidency in cooperation with the European Urban Knowledge Network (EUKN).

2
Understanding of functional urban areas

The resolution adopted at the 17th Session of the Conference of the Council of Europe of Ministers Responsible for Spatial Planning (CEMAT) underscores that: 'Functional areas should be regarded as tools to formulate policies which can facilitate functional relationships among territories, transcending administrative boundaries fostering co-operation at local, regional and macro-regional level and able to support a balanced polycentric development.' At that time (2017), it was noted that there was no unanimously accepted definition of functional areas; however, in general terms, the term is used to denote 'a cohesive territory that operates politically and/or socially and/or economically as a whole or as a system. Therefore, a functional area is defined by a structure of interactions that occurs in several territorial administrative units (cities, towns, communes, etc.) that work together and are linked e.g. by transportation, communications, economic activities or natural conditions, as well as through common challenges and features.' ([1])

The preparatory study for the CEMAT resolution ([2]) identified more than 20 types of functional areas, including **functional urban areas** as 'the areas of influence encompassing cities' (based on relationships and socio-economic flows that include commuting or opportunities related to education and the provision of services).

The EU–OECD definition of an FUA ([3]) sees it as a combination of the city with its commuting zone, whereof:

- the city is formed by one or more local units that have at least 50 % of their residents inside an urban centre (which is composed of a set of contiguous, high density (1 500 residents per square kilometre) grid cells with a population of 50 000 in the contiguous cells);
- the commuting zone is a set of contiguous local units that have at least 15 % of their employed residents working in the city.

Since 2018, the amended NUTS Regulation provides a clear legal framework at the European level on what can be considered an 'urban area', a 'rural area' and a 'coastal area'. It applies the so-called TERCET typologies – the territorial typologies that have been developed by Eurostat and can be split into three principal groups:

- Grid typologies: serving the purpose of collecting population statistics based on 1 km² grid cells to establish various cluster types – namely, urban centres, urban clusters and rural grid cells.
- Local typologies: based on statistics for local administrative units (LAUs) which generally comprise municipalities or communes across the EU. Statistics for LAUs may be used to establish local typologies, including: the degree of urbanisation (cities, towns and suburbs, rural areas); FUAs (cities and their surrounding commuting zones); and coastal areas (coastal and non-coastal areas).
- Regional typologies: statistics that are grouped according to the classification of territorial units for statistics (NUTS); they provide information at a relatively aggregated level of detail, with data presented for NUTS level 1, level 2 and level 3 regions respectively, detailing larger to smaller territorial units. Only the most detailed statistics at NUTS level 3 are used as building blocks to establish the urban–rural typology (predominantly urban regions, intermediate regions and predominantly rural regions), the metropolitan typology (metropolitan and non-metropolitan regions), and the coastal typology (coastal and non-coastal regions), each of which has a legislative basis.

(1) See: https://www.coe.int/en/web/conference-ministers-spatial-planning/17th-cemat

(2) See: https://archive.ectp-ceu.eu/ectp-ceu.eu/images/stories/PDF-docs/cemat/CEMAT%20Romania_%20rfeport%20EN_ rev%2001%202018.pdf

(3) Dijkstra, L., Poelman, H. and Veneri, P., 2019. The EU-OECD definition of a functional urban area, OECD Regional Development Working Papers, No. 2019/11, OECD Publishing, Paris, https://doi.org/10.1787/d58cb34d-en.

In March 2020, the UN Statistical Commission endorsed a new methodology to define cities, towns and rural areas, prepared together by the European Commission, the Food and Agriculture Organization of the United Nations, the United Nations Human Settlements Programme, the International Labour Organization, the Organisation for Economic Co-operation and Development, and the World Bank. This new method, called 'the degree of urbanisation' (DEGURBA) (4) classifies the entire territory of a country into three classes (cities, towns and semi-dense areas, and rural areas) and has two extensions:

- The first extension identifies cities, towns, suburban or peri-urban areas, villages, dispersed rural areas and mostly uninhabited areas.
- The second extension adds a commuting zone around each city to create an FUA or metropolitan area.

By using three classes instead of only two (urban and rural), the DEGURBA method captures the urban–rural continuum, with a city and its surrounding, less densely populated spatial units that make up the city's labour market (its commuting zone). This commuting zone generates a daily flow of people into a city and back (home to their dwelling). The method further entails that – morphologically – not all of the areas within an FUA need to be classified as urban areas (in other words, cities plus towns and semi-dense areas) and that, as such, an FUA area may contain rural areas if these belong to the commuting zone of a city.

(4) See: https://unstats.un.org/unsd/statcom/52nd-session/documents/BG-4a-DEGURBA_Manual-E.pdf

3
Challenges for functional urban areas

The ESPON research experience points at the marginal effect of administrative borders on curbing territorial trends. The final report of the ESPON and European Territorial Reference Framework (ETRF) project ([5]) outlines a dynamic situation of overlaying layers of the space of places and the space of flows, with a number of key drivers whose performance is not confined to state, regional or local boundaries, yet it is going to determine the future territorial patterns of development in Europe.

Within the **space of places**, the forces of discontent, division, disparities and divides fuel territorial fragmentation. The **space of flows**, superimposed on the former, skews physical distances, and intensifies spillovers and externalities – as the new network geographies in the global markets put in a privileged position places close to hubs and nodes.

The report further argues that:

- "New territorialities" will emerge with no / soft borders and with a stronger orientation towards networked organisational and governance structures. Over time, these structures are expected to replace hierarchical and silo-driven models of governance.
- Increasingly, there will be pressure on Europe to reinvent democracy in the "society of networks". Political legitimacy will be challenged by trends and outcomes which will "re-shape" the boundaries of Europe's economic, social and territorial spaces. This, in turn, will challenge more traditional (and geographically-anchored) political principles attached to territoriality such as "national sovereignty", "subsidiarity" and "local self-governance".

In that context, **functional urban areas** play an important role. Acting beyond administrative boundaries, they could become a successful laboratory for bottom-up territorial visions and place-sensitive territorial development. It is so as they are capable of combining the three dimensions of cooperation:

- Cooperation between **places** – which can help address interdependencies between territories, as developments in one place depend on the flows between this place and other places and thus on the development in other places. By better addressing challenges at local and regional levels, cooperation of this kind can also support the process of tackling territorial fragmentation.
- Cooperation between **policy sectors** – to help take a more integrated perspective in addressing inter-dependencies, fragmentation and mismatch of functionalities. Improving sector coordination and overcoming the silo structures of policymaking, for example in public administrations and business organisations, within public and private actors in relevant policy issues may result in more powerful and more integrated policy responses to the key challenges. This type of cooperation may also include features of impact assessments to illustrate mutual interlinkages and the impact on other sector policies.
- Cooperation between **societal groups** – aimed to overcome societal fragmentation as a result of increasing regional disparities and (real and perceived) inequalities which can be observed across groups with, for example, different income levels, social status, mobility options, cultural characteristics or religious backgrounds.

(5) ESPON, 2019. European Territorial Reference Framework, https://archive.espon.eu/etrf.

3.1
Facing territorial trends

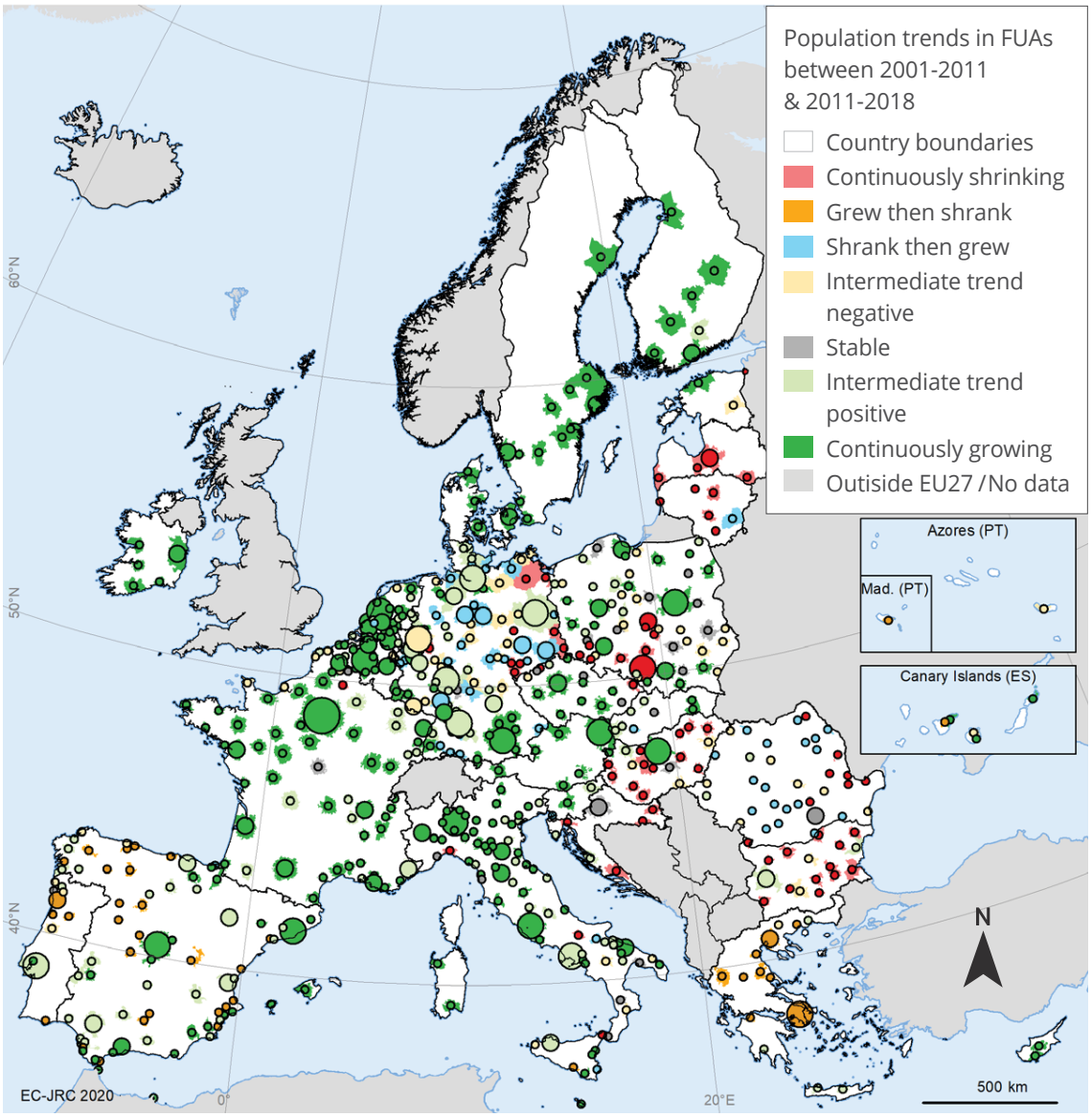
3.1.1
Demographic shrinking

Many cities and their functional areas have been prone to significant and fast-paced development trends resulting in demographic and economic decline. The Joint Research Centre (JRC) Science for Policy Brief ([6]) estimates that between 2001 and 2011, more than a quarter of the 610 FUAs in the EU shrank in population, mostly in eastern Europe, the Balkans and the south of Italy, accounting for about 48 million people (18 % of the 2011 EU-27 population). This shrinkage continued between 2011 and 2018, affecting more than 23 % of FUAs, particularly in Spain and in eastern Europe, while the proportion of people living in these shrinking FUAs decreased to less than 12 % of the EU-27 2018 population.

The JRC stance is that demographic shrinkage will become even more important in the future – due to population loss confronting European countries, and it requires measures fitting the specific shrinkage pattern (Figure 1). In that regard, the demographically shrinking FUAs represent either: (1) continuously shrinking cities (about half of the shrinking FUAs in 2011), mostly in eastern Germany, Hungary, Bulgaria, Latvia, Lithuania, Croatia, Romania and Poland; (2) formerly shrinking cities that later grew (55 FUA mostly in Germany, Romania, Lithuania and Slovakia); or (3) formerly growing cities that later shrank: 39 FUAs in Spain, Greece and Portugal, most likely affected by the 2008 financial crisis.

(6) JRC, 2022. Shrinking Cities. Science for Policy Brief, Joint Research Centre, European Commission.

Figure 1
Changes in FUA population size between 2001 and 2018



Source: JRC (2022)

3.1.2
Urban sprawl and land take pressure

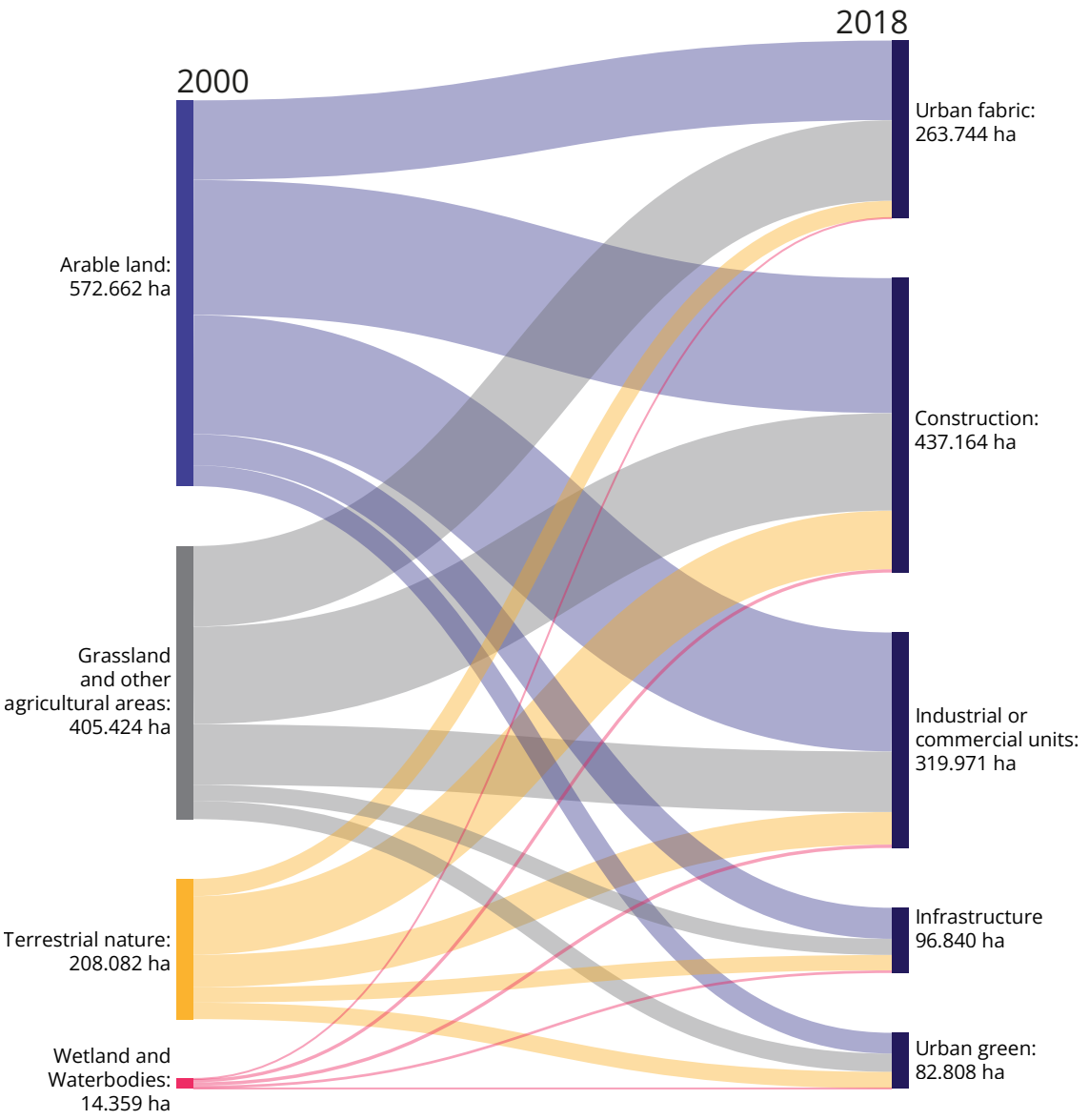
The so-called land take denotes the conversion of undeveloped land (natural and semi-natural but also agricultural) into artificial land repurposed for human settlements and infrastructure facilities. It primarily occurs in urban and commuting zones, and by affecting croplands, pastures and forests it disrupts ecological functions and reduces ecosystem resilience.

Key impacts of land take in urban areas are soil sealing, where all soil functions are lost, and landscape fragmentation ([7]).

(7) European Environment Agency, 2021. Land take and land degradation in functional urban areas, EEA Report 17/2021, https://www.eea.europa.eu/publications/land-take-and-land-degradation.

Between 2000 and 2018, the pace of urbanisation, driven by economic development and demography, but also by such phenomena such as second homes and tourism, resulted in about 2.87 million hectares of land in the ESPON countries changed from one main category to another, that is, about 0.6 % of the entire surface area. Almost half (44 %) involved a conversion to urban land (Figure 2). Artificial land cover increased from 19.2 million to 22.6 million hectares; the vast majority purposed for urban uses such as homes, businesses and infrastructure ([8]).

Figure 2
Land use changes in Europe (ESPON countries)



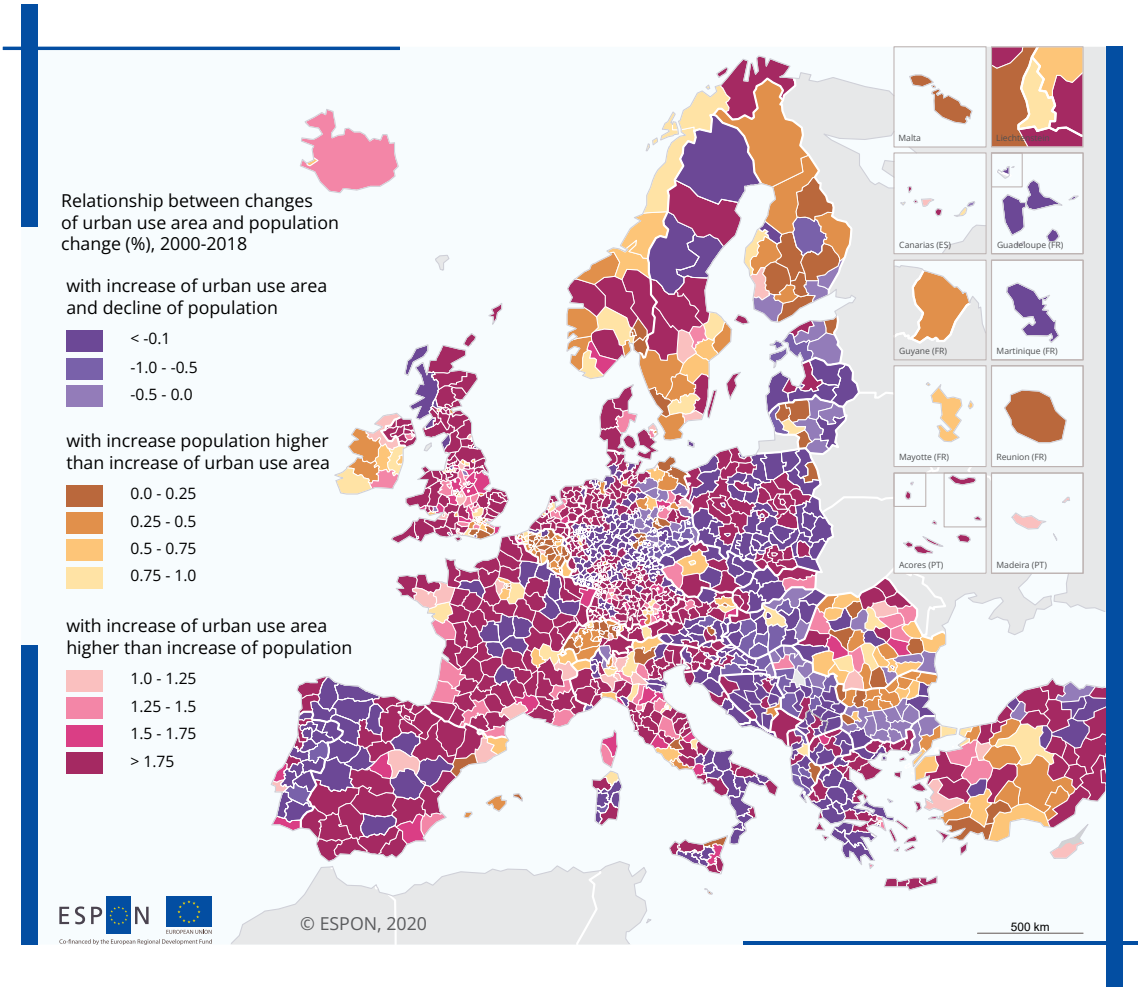
Source: ESPON SUPER (2020)

The content and pace of urban land conversion also varied in Europe. Over half of these conversions took place in four countries: Germany (21%), Spain (15%), the United Kingdom (UK) (10 %) and Poland (9 %). In total, 8.6 times more land was converted to urban/artificial use than vice versa. Only in Romania (-0.8 %) and Bulgaria (-0.1 %) did the share of urban land decrease between 2000 and 2018 as a whole.

(8) ESPON, 2020. Sustainable Urbanization and land-use Practices in European Regions (ESPON SUPER), A Guide to sus-tainable urbanisation and land-use, https://archive.espon.eu/super.

At the NUTS 3 level, high conversion rates are visible in Poland, France, Spain and Turkey, including the suburban areas of cities such as Prague, Budapest and various Polish cities (Figure 3).

Figure 3
Development of urban use areas in relation to population development 2000-2018



Source: ESPON SUPER (2020)

As claimed by the EEA (9), between 2012 and 2018, land take in FUAs of the EU 27 and the UK increased by 3 581 km² and soil sealing grew by 1 467 km², mostly at the expense of croplands and pastures. Almost 80 % of land take took place in commuting zones, which, in contrast to city centres, provide more wildlife habitats, support carbon sequestration, allow flood protection, and supply food and fibres. The major land take pressure was the expansion of industrial and commercial units, residential areas and construction sites.

Across Europe, the highest increases in land take in **commuting areas** occurred in Romania, Lithuania and Poland, ranging from 6 % to 10 % between 2012 and 2018, predominantly through the expansion of industrial and commercial sites, as well as residential areas. In case of **core cities**, the increase in land take was less than 1 % in the equivalent time period. The highest increases, of more than 3.5 %, took place in core cities in Slovakia, Lithuania and Luxembourg. The main contributor of land pressure in the core cities was the expansion of industrial, commercial and construction sites (10).

(9) European Environment Agency, 2021, ibidem.

(10) European Environment Agency, 2021, ibidem.

3.1.3
Socio-spatial inequalities

The physical growth of many urbanised areas in Europe through new housing investments in the outskirts results in the thinner urban tissue, with poorer access to infrastructure and services in the fringe areas. The urban sprawl phenomenon described in the previous section of this paper causes externalities not only in terms of land use conflicts, land take and environmental degradation, it also translates into higher costs of infrastructure and services provision ([11]).

The pressure of population growth on the suburbs leads to increased infrastructure and public service costs in the entire FUA, while transport and mobility bottlenecks become prevalent due to traffic congestion, pollution and inefficient public transport infrastructure.

As the demand outpaces supply, the rising housing costs displace lower-income residents, changing household structures and contributing to socio-spatial segregation not only between the core and commuting zones of an FUA, but also between neighbourhoods and districts of the central city.

Across Europe, variations in population density and remoteness already offer a picture of places facing problems with access to services. While congestion in large cities can become an issue, the concentration of potential user services already facilitates providing services such as education and healthcare at scale. However, population decline directly affects the provision of public services by shrinking the pool of potential users, leading to provision shortages and forcing facilities to close. While insufficient access to public services may cause a deterioration in the quality and diversity of services available, a weak local market results in underutilisation, poor maintenance, and ultimately withdrawal or clustering of services ([12]).

Provision of public services is most challenged in the so-called **lagging regions** – suffering from ageing population due to the outflow of young people, low accessibility, the lack of employment opportunities and infrastructural deficiencies. Interestingly, across Europe enclaves with poor access to services can be identified in peripheral areas of larger metropolitan regions and in parts of some FUAs. Still, these patterns differ in terms of number, size, fragmentation and shape depending on the location, being either:

- mountain areas (examples: parts of the Alps, Pyrenees, Apennines, mountains in southern Norway and the Carpathian Mountains),
- rural areas farther from the main road axes,
- interstitial areas between agglomerations,
- areas along national borders (examples: Portuguese–Spanish border, Bulgarian–Romanian border, Norwegian–Swedish border),
- internal peripherical areas (so-called inner peripheries, i.e. areas of poor access to services of general interest).

Addressing these disparities requires targeted interventions and support mechanisms that boosts the innovative service delivery and better territorial governance involving a stronger role of small and medium-sized towns and cities as growth poles in such regions ([13]).

Provision of public services may also be compromised by increasingly frequent and extreme weather events that may wipe out critical infrastructure, leaving communities isolated and at risk. It implies spatial considerations as more remote and rural areas tend to have a concentration of elder residents who may be particularly vulnerable, for example to heat waves. This puts a lot of pressure on public services to adapt and respond in new ways ([14]).

(11) The Urban Agenda for the EU Partnership on Sustainable Use of Land & Nature-Based Solutions, 2019. Mainstreaming functional urban areas cooperation as a tool to mitigate urban sprawl. Guidelines and recommendations, https://futurium.ec.europa.eu/en/urban-agenda/sustainable-land-use/news/action-5-guidebook-promoting-fua-cooperation-tool-mitigate-sprawl.

(12) OECD and EU-JRC, 2021. Access and cost of education and health services, https://www.oecd-ilibrary.org/urban-rural-and-regional-development/access-and-cost-of-education-and-health-services_4ab69cf3-en.

(13) ESPON, forthcoming. Delivery of essential services in lagging regions and areas with special needs, Executive Report.

(14) OECD and EU-JRC, 2021, ibidem.

3.1.4
Climate adaptation

Twenty-two per cent of the European population lives in territories with high levels of vulnerability to natural hazards, such as: river floods, windstorms, droughts, seismic hazard and landslides (Figure 4). In terms of spatial distribution, the most vulnerable territories are located in Hungary, Romania, Bulgaria, Greece, Italy, Spain and Portugal; while some areas in Estonia, Latvia, Lithuania, Poland, France and Czechia show significant figures, too ([15]).

Heat-related problems tend to culminate in cities. The urban heat island effect involves synergistic ties between high temperature and air pollution causing discomfort not only among the elderly population but also those with chronic diseases and persons of lower socio-economic status. Furthermore, health risks during heat extremes are greater in people who are physically very active. This is important for outdoor recreational activities, and it is especially relevant for the impacts of climate change on occupational health. Another hazard – storm surges and flooding – can affect inland water reservoirs being habitats for freshwater organisms and sources of drinking water for towns and cities ([16]).

Moreover, cities are increasingly strained with climate-induced migration, particularly in conflict-affected countries. The World Bank estimates that by 2050, climate change could force the internal migration of over 200 million people, most of whom would move to these already densely populated urban areas, while seasonal forms of migration are going to shift to permanent displacement due to the increasing uninhabitability of many places. This trend is exacerbated by the lack of dedicated affordable housing in most cities. Within the modelled 'Eastern Europe and Central Asia' region, 5.1 million inhabitants (2.3 % of the total population) are forecast to see internal climate migrants ([17]).

Due to a complex character of socio-economic impacts resulting from the interplay of climate change-related phenomena, regions, cities and local governments need to find appropriate cooperation mechanisms to pursue disaster risk management and climate change adaptation ([18]).

As observed by the EUKN, the OECD report ([19]) highlights the need for a territorial approach that extends beyond administrative boundaries as FUAs are critical zones to effectively mitigate the effects of climate change. Few climate plans exist at the scale of FUAs, however, climate action is most effective when fitted to the unique needs of a region. The territorial approach faces challenges such as the sectoral nature of climate action, which can lead to conflicting policies, and a disconnect between cities and regions, as climate mitigation is still frequently regarded as a global rather than a local issue. More so, climate action is a long-term investment and process that does not suit the short-term goals of government agendas.

As evidenced by the EUKN research, on national and regional/city level, a lack of capacity shows to be a reoccurring issue. In cooperating at the FUA level, this allows cities to combine resources and capacities on a larger scale. An example of a governance mechanism is in Glasgow in the UK, where the creation of the Metropolitan Glasgow Strategic Drainage Partnership ([20]) brought together local authorities and national agencies to mitigate flooding risks and enhance water quality. To promote climate actions at the metropolitan level, it is recommended to first collect and analyse climate data to identify emission reduction opportunities and establish collaborative governance mechanisms with municipalities in metropolitan areas.

(15) ESPON, 2021. Territorial impacts of natural disasters (ESPON TITAN), https://archive.espon.eu/natural-disasters.

(16) European Environment Agency, 2017. Climate change adaptation and disaster risk reduction in Europe, https://www.eea.europa.eu/publications/climate-change-adaptation-and-disaster.

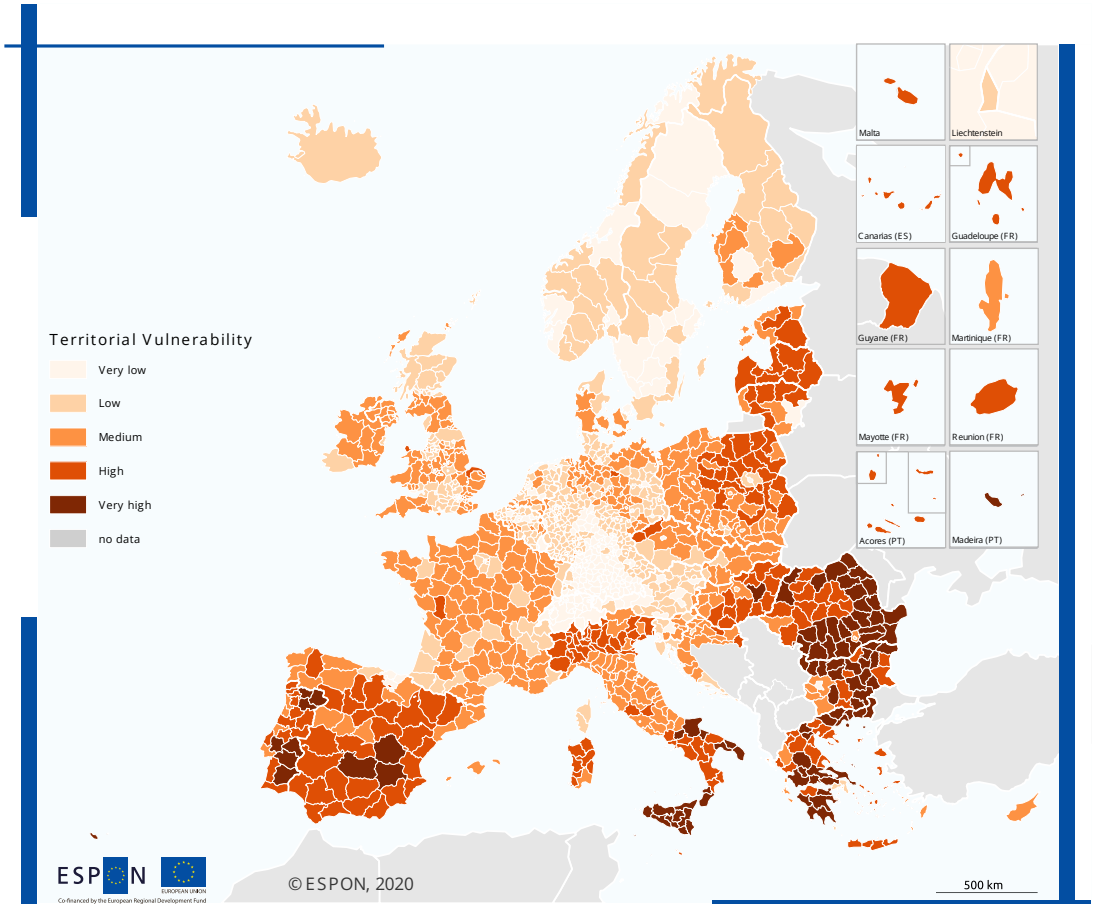
(17) Clement, V., Rigaud, K.K., de Sherbinin, A., Jones, B., Adamo, S., Schewe, J., Sadiq, N. and Shabahat, E. 2021. Groundswell Part 2: Acting on Internal Climate Migration, World Bank, Washington, DC, http://hdl.handle.net/10986/36248.

(18) ESPON TITAN, 2021, ibidem.

(19) OECD, 2023. A Territorial Approach to Climate Action and Resilience, https://www.oecd.org/en/about/programmes/a-territorial-approach-to-climate-action-and-resilience.html.

(20) See: https://www.mgsdp.org/

Figure 4
Territorial vulnerability to natural hazards



Source: ESPON TITAN (2021)

3.1.5
Cross-border migration ([21])

While immigration policy is set nationally, local authorities play a significant role in managing the integration of migrants. This requires effective coordination across municipalities, governance levels and sectors to ensure suitable settlement options, access to services and inclusive support measures.

According to the OECD report ([22]), in OECD countries, nearly two thirds of international migrants settle in metropolitan, densely populated regions, while only 58 % of native-born residents live in such areas. In the OECD regions, capital-city areas hold the highest migrant shares, highlighting the role of these urban areas as critical hubs for integration. Within the EU, non-EU migrants are more likely to concentrate in urban areas compared to EU migrants, who experience fewer barriers in accessing work permits or having their qualifications recognised. Moreover, migrants face more pronounced housing issues and a disproportionately higher income gap compared to native-born residents in urban than non-urban areas.

Meanwhile, asylum seekers are more widely dispersed across urban and rural settings, a pattern shaped largely by national dispersal policies. In some countries, such as France, asylum seekers show a higher

(21) Chapter drafted by the European Urban Knowledge Network (EUKN).

(22) OECD, 2018. Working Together for Local Integration of Migrants and Refugees, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264085350-en.

concentration within FUAs, whereas in countries like Norway they are more prevalent outside these areas. This range of geographical distribution patterns underscores the need for integration policies that operate at the FUA level, where multi-level and cross-sectoral cooperation is critical to addressing migrants' diverse needs. Another OECD report ([23]) indicates that metropolitan areas with higher administrative fragmentation – characterised by numerous, uncoordinated governing bodies – experience greater income-based household segregation, calling for the need of neighbouring municipalities to cooperate at the FUA level in order to effectively provide public services and thereby potentially strengthen the most vulnerable areas.

The JRC policy report ([24]) points to the need to combine a place-based approach with people-centred measures, not to neglect the most vulnerable, and to acknowledge the complex patterns of migrants' daily lives and their reliance on urban centres for employment, housing and services. Implementing FUA-level strategies allows for the identification of smaller 'micro-pockets' of disadvantaged areas within wealthier regions, where migrant populations may face social and economic challenges. FUA-focused strategies can help municipalities to pool resources and coordinate services more effectively, ensuring that integration efforts are not limited to core cities but extend to the surrounding areas, encompassing employment, housing, education and health services. The report stresses that the potential benefits of territorial development policies specifically targeting areas where migrants live and work, as well as the benefits of involving them in the planning and implementation process, remain largely underexplored.

3.2 Tackling urban-rural linkages

FUAs represent 23 % of the territory of the EU 27 and the UK, but host 75 % of the population [25]. The World Bank analyses ([26,27]) cast a look at the significant role of FUAs in national and regional economic development, to the extent of being regarded as **economic engines of the EU**.

The 2018 report shows that the highest performing regions in the EU are those that have at least one dynamic metropolitan area or urban agglomeration within or close to their boundary. It further shares a reflection of the importance of FUAs for the national growth and competitiveness of a country by presenting the case of Romania, where 74 % of the population lives in an FUA, generating 98 % of the national GDP. This economic boost – as claimed – had its origin in the inward-bound flows of economic migrants, as between 2002 and 2011, 1.1 million Romanians moved to the FUAs of Bucharest and the 40 county capitals. This move implied for these people not only an increase in standard of living but also an increase in productivity.

The methodological toolkit produced by the World Bank ([28]) illustrates that the GDP produced by FUAs ranges from 78 % in Ireland (corresponding to a population share of only 57.5 %) to 40.4 % in Slovakia, corresponding to a 27 % share of the FUA population in the total population. Similarly, in Spain, 75.53 % of the population lives in FUAs, which are responsible for 77.91 % of the GDP. Even in countries where the

(23) OECD, 2016. "Together or separated? The geography of inequality in cities", in Making Cities Work for All: Data and Ac-tions for Inclusive Growth, http://dx.doi.org/10.1787/9789264263260-6-en.

(24) Fioretti, C., Proietti, P. and Tintori, G. (Eds), 2021. A place-based approach to migrant integration. Sustainable urban development strategies and the integration of migrants in functional urban areas, Publications Office of the European Union, https://publications.jrc.ec.europa.eu/repository/handle/JRC127151.

(25) European Environment Agency, 2021, ibidem.

(26) The World Bank, 2024. Functional Areas in the EU, Methodological Toolkit to improve governance, coordination, planning, and implementation processes across jurisdictional boundaries, https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099062424044035006/p177136146daa70821a9a91fedccf7634f8.

(27) The World Bank, 2018. Rethinking lagging regions. Using cohesion policy to deliver on the potential of Europe's regions, https://www.worldbank.org/en/region/eca/publication/rethinking-lagging-regions.

(28) The World Bank, 2024, ibidem.

population is more evenly distributed between FUAs and functional non-urban areas, such as Romania and Italy, FUAs still contribute significantly more to the GDP.

The aforementioned two World Bank reports reveal how centripetal and centrifugal forces contribute to the socio-economic development dynamics within and around the cities, resulting in spillover effects. As argued, dense places have higher productivity and salaries, but also a higher cost of living. Cities enable an easier access to culture, art, entertainment and diversity, but they also have a higher incidence of crime, pollution and congestion. The analysis of secondary city development in many European countries shows that much of the growth is coming from significantly increased commuting. In effect, a trend of suburbanisation determines that FUAs may grow rapidly even as core cities stagnate or shrink, due both to demographic changes and policy-induced congestion costs.

In the case of Poland ([29]), around two thirds (65 %) of total commuting flows are directed towards FUAs. Cities receive 46 % of commuting flows, but only generate 19 % of them. In addition, 24 % of Poland's population lives in the catchment area of an FUA (i.e. clusters of mainly rural municipalities issuing significant commuting towards an FUA) and can benefit from urban amenities and opportunities. Therefore, dedicated policies are needed to strengthen urban–rural linkages both within FUAs and at a broader spatial scale, for example in terms of infrastructure and connectivity in rural municipalities outside FUAs.

As argued by the European Commission ([30]), FUAs are instrumental for tackling urban–rural linkages. These linkages can take the shape of a city with an urbanised core and a peri-urban area or a functional area covering a central city and adjacent rural area, but they can also connect geographically distant places through functional links (e.g. linking agricultural production areas to urban markets). This is a field where integrated strategies may have a clear added value as they cross administrative boundaries.

3.2.1 Need for better planning and governance

Additional complexity emerges in cases where the routine governance and planning practices need to deal with phenomena that go beyond existing administrative jurisdictions. As many traditional institutional structures and planning practices remain geared towards the radial (core-centric) urban model, they may fail in tackling – in a coherent and coordinated way – such common challenges as: spatial fragmentation, uneven economic development and imbalance in the housing market, differences in the quality of life or social disparities. Thereby, they may become unsuccessful in delivering on inclusive and sustainable growth.

The ESPON SPIMA project ([31]) highlighted the complex relations between the city centres, suburbia and the larger peripheries resulting from the emergence of new urban forms and configurations because of the continuous transformations of European cities. In that context, spatial planning becomes a key policy mechanism for governing spatial development in the areas undergoing metropolisation, involving strategies and plans for sustainable distribution of land use functions and on cooperation between different governmental levels and policy sectors.

To tackle these issues, the key challenge is to find the right problem 'owner' or 'owners' that is/are able to address the dynamics at the right scale and with the relevant tool(s). This involves:

- making agreements on strategic locations (e.g. retail centres, transport hubs, hospitals, etc.);
- limiting and managing urban sprawl; promoting areas for jobs and housing within the metropolitan area, e.g. secondary centres, station towns, strong (well-connected) suburbs, etc.;
- prioritising regional infrastructures/amenities and mobility, in relation to land use and development;

(29) OECD, 2022. Urban-Rural Linkages in Poland, OECD Regional Development Studies, OECD Publishing, Paris, https://doi.org/10.1787/94b5c782-en.

(30) European Commission, 2023. Cohesion policy and Sustainable Urban Development, https://cohesiondata.ec.europa.eu/stories/s/Sustainable-Urban-development-2021-2027/iw5n-dss9.

(31) ESPON, 2018. SPIMA – Spatial Dynamics and Strategic Planning in Metropolitan Areas, https://archive.espon.eu/metropolitan-areas.

- conserving and protecting the environment and resources, including farmland (including short food supply chains) and valorising green spaces (landscape, leisure, biodiversity, etc.);
- addressing potential imbalances in local government finance that are linked to spatial development (indicating the potential for stimulating the desired development through economic incentives and facilitation).

Similarly, the ESPON IMAGINE project ([32]) claims that a traditional understanding of 'urban development' is not sufficient to deal with dynamic competitiveness patterns, new forms of marginalisation and peripheralisation. Therefore, new territorial narratives and scenarios for urban development are needed, to feed visions, strategies and governance frameworks.

(32) ESPON, 2021. IMAGINE - Developing a metropolitan-regional imaginary in the Milano-Bologna urban region, https://archive.espon.eu/imagine.

4
Development perspectives for functional urban areas

4.1
Using the functional area approach and instruments

As the development dynamics rarely follow administrative borders, an integrated planning at the functional area level is seen as a proper way to coordinate resources, and minimise duplication of efforts and fragmentation, as it is capable of identifying the appropriate scale for governance, coordination, planning and implementation processes for policies encouraging economies of scale and organising public services more efficiently.

To this end, the EU 2021-2027 **cohesion policy** promotes integrated planning at the functional area level and offers territorial instruments to implement place-based, joint strategies. These include Integrated Territorial Investments (ITI), Community-Led Local Development (CLLD), or other territorial tools, aimed to align interventions and resources with the suitable spatial scale and territorial context (development needs, challenges and opportunities) and to promote partnerships. Also, such cohesion policy instruments as ESPON, Urban Innovative Actions, URBACT, Urban Agenda for the EU and Interreg programmes are supportive to the FUA concept.

Moreover, the **European Regional Development Fund (ERDF)** requires EU Member States to allocate at least 8 % of their ERDF resources to sustainable urban development (urban earmarking), with special attention to tackling environmental and climate challenges, digital innovation and supporting the development of FUAs ([33]).

Several policy documents and frameworks at EU level are supportive to the functional area approach.

The **New Leipzig Charter** on the transformative power of cities for the common good advocates for fostering the cooperation beyond administrative and national borders and coordination of spatial planning in FUAs, taking into account urban–rural linkages, in order to prevent as well as contain urban sprawl. It lists 'wider functional areas' among spatial levels to be covered by appropriate formal and informal instruments, including urban strategies and funding tools.

In the framework of the **Urban Agenda for the EU**, the Partnership for Sustainable Use of Land & Nature-Based Solutions ([34]) in its Action 5 promotes FUAs cooperation as a tool to mitigate climate change and urban sprawl. In the formulation of a vision of the FUAs in Europe, the partnership puts emphasis on recognising FUAs as an important governance level, fully integrated in national and European policies and research.

While not explicit on FUAs, the **Territorial Agenda 2030** highlights the importance of 'functional regions' and functional approaches to cooperation in creating development perspectives for all places, taking also into account the need to promote urban–rural linkages.

All above-mentioned policy documents advocate for a better-integrated territorial, urban and rural development which might benefit from a more coordinated approach to policy design and implementation through more consolidated efforts within FUAs.

(33) The World Bank, 2024, ibidem.

(34) See: https://www.urbanagenda.urban-initiative.eu/partnerships/sustainable-land-use

4.2
Multi-level governance response

In the JRC view ([35]), population shrinkage is very likely to increase in the future, affecting 45 % of FUAs (hosting 24 % of the total FUA population) in most EU Member States by 2050. Eight per cent of FUAs are expected to lose more than 20 % of their 2020 population by 2050, particularly in Germany, Bulgaria, Latvia and Lithuania. Declining cities were almost always concentrated in declining regions, with economic factors being a key driver. However, the self-reinforcing population ageing and low fertility rates will probably drive further city shrinkage in the future for all European countries.

One of the main consequences is that even currently stable or growing cities should anticipate and **plan for possible shrinkage** in the future by adopting either expansion strategies (focusing on economic growth), maintenance strategies (increasing attractiveness via redevelopment of inner cities or development of substitute industries), or decline strategies.

The ESPON ESCAPE project, and the subsequent policy paper prepared for the Portuguese EU Council Presidency ([36]) articulate the need to understand the reason for shrinking, to acknowledge the shrinking phenomenon and to adapt to its consequences (the so-called smart adaptation). Having investigated the tendencies and spatial patterns of population dynamics over a 50-year period, the project report postulates to shift away from purely economic development visions and enhance the **emphasis on well-being**. This implies a need to follow these three principles:

- place the well-being of residents at the heart of any policy, strategy or measure;
- provide the infrastructure and/or equal or comparable access to services that are necessary to support a good quality of life;
- capitalise on local opportunities and on the local community's intelligence and resilience.

As demonstrated in the ESPON SUPER study ([37]), the urbanisation pressure can be mediated by **local development practices**, however, there is no 'one-size-fits-all solution'. A factor that might have a positive effect in one region or city might lead to negative consequences in another. Once planning measures are put in place to curb externalities of urbanisation and pursue sustainable land use trajectories, the right **urbanisation scenarios** need to be analysed and applied:

- The compact scenario has an affinity with the ambition to achieve 'zero net land take', including sustainability of large metropolises.
- The polycentric scenario seeks an optimal balance between urban and rural areas by clustering development into mid-size liveable communities.
- The diffuse scenario is associated with individual choice, affordable spacious surroundings and right to privacy.

The two ESPON projects on metropolitan cooperation ([38]) argue that the **functional approach** is key to capturing agglomeration economies. It is able to grasp complex socio-economic interactions in a wider territory, and also to well react to changes in time. Further, the functional approach can guide national and local governments when they plan infrastructure, transportation, housing, schools, and spaces for culture and recreation, in so doing – to support virtuous changes in the way policies are planned and implemented by providing the right scale to address issues that affect both the city and its surrounding commuting zone. Therefore, it demonstrates a clear advantage over the administrative approach as the latter is applicable rather to static urban forms.

(35) JRC, 2022, ibidem.

(36) ESPON, 2020. European Shrinking Rural Areas - Challenges, Actions and Perspectives for Territorial Governance (ESCAPE), https://www.espon.eu/escape; ESPON, 2021. Territorial evidence and policy advice for the prosperous future of rural areas, https://archive.espon.eu/rural.

(37) ESPON SUPER, 2020, ibidem.

(38) ESPON SPIMA, 2018, ibidem; ESPON, 2021. ESPON METRO | The role and future perspectives of Cohesion Policy in the planning of Metropolitan Areas and Cities, https://archive.espon.eu/metro.

For that reason, the two projects postulate a stronger role of **joint spatial and strategic planning** to address the common challenges and incorporate development needs of all territories in an FUA. This would better cater for:

- combining top-down policy incentives with bottom-up collaboration and implementation;
- collaboration between the relevant planning authorities at national, regional and local levels;
- involvement of a wider range of economic and social stakeholders (e.g. business);
- ensuring the transparency and openness in communication and awareness building on 'common good' in such subtle areas as: land use change, major infrastructure development, environment protection and social services;
- working towards a 'minimum gain for all' when negotiation and compromise are needed.

The ESPON IMAGINE project ([39]) adds to that stock the necessity to embrace the trans-scalar character of development dynamics, with interdependences between metropolitan areas, small cities and marginal areas. The instrument of **Integrated Territorial Investments** could be a vehicle in creating a common identity and vision in an FUA, and could serve as a possible framework for governance, offering a chance to achieve a more efficient and fair spatial organisation of social and economic functions. The project report further argues that EU cohesion policy could offer FUAs a space to construct new imaginaries – grasping the interplay between the urban and regionalised urban scale, and building regional urban commons.

One of the latest ESPON projects (ESPON URDICO) picks up on stronger prominence of the urban dimension of cohesion policy in the 2021-2027 period, with substantial funding available to cities and metropolitan and urban areas across the EU. However, merely EUR 20 billion has been earmarked for the local authorities to directly manage the investments, while a much higher amount (EUR 115 billion) is spent on urban development through national governance schemes which largely differ between the Member States.

The URDICO project, to be launched by the end of 2024, is going to compare the different governance models that deliver the urban dimension of cohesion policy, such as ITIs, dedicated operational programmes, sustainable urban development through regional and national operational programmes, etc., and also possibly the Recovery and Resilience Facility mechanism. It will also analyse how the urban dimension of cohesion policy contributes to institutional innovations, stronger administrative capacity, and better alignment on urban issues at city level and between government levels.

The aforementioned ESPON studies inform that in order to accomplish the **multi-level governance in FUAs**, several success factors shall be ensured, including:

- Political leadership, i.e. continuous political commitment and systematic actions to establish collaboration for the development of policies and plans.
- Recognition – by mutual actors – of the common benefits to be achieved in joining forces for the purpose of planning. The common understanding between actors is believed to be more important than establishing specific legal and financial frameworks at the FUA level.
- The existence of a general policy framework and/or legislation to guide a coordinated planning approach.
- Availability of institutional support, funding, administrative capacity and competences to carry our joint actions, but also in building awareness among relevant actors, including local communities, of the need to address emergent developments in a comprehensive way.

The inventory above corresponds well with the FUA collaboration benefits identified in the dedicated study of the Urban Agenda partnership ([40]).

(39) ESPON, 2021. IMAGINE - Developing a metropolitan-regional imaginary in Milan-Bologna urban region, https://archive.espon.eu/imagine.

(40) See: The Urban Agenda for the EU Partnership on Sustainable Use of Land & Nature-Based Solutions, 2019, ibidem.

The ESPON METRO project, in particular, lists a number of recommendations to strengthen the role of metropolitan areas in the design, management and implementation of EU cohesion policy, which remains applicable also to the FUAs. This is argued that institutionalised metropolitan authorities aim to be more directly and extensively acknowledged in the definition of the EU cohesion policy priorities, as well as in the management of selected thematic priorities.

Departing from Swiss efforts to promote thinking and planning in so-called Action Areas, the ESPON ACTAREA project ([41]) analysed examples of 'soft territorial cooperation areas' across Europe. **Soft territorial cooperation areas** are new forms of territorial governance spaces with fuzzy, flexible boundaries that span national and regional administrative boundaries and link urban and rural development policies. They may be regarded as 'communities of intent', being in fact the output of a cooperation process – as they bring together actors concerned by a set of territorial challenges and opportunities and who are prepared to elaborate and implement strategies to address them jointly.

Soft territorial cooperation areas are not alternatives, but complements to 'hard' statutory planning instruments, and may be instrumental in facilitating actors' interactions in FUAs. They bring together stakeholders and experts, and help establish a platform of shared knowledge and opinions on territorial development preconditions and perspectives using shared 'mental maps' of the cooperation area (see the ESPON ACTAREA app: https://actarea.espon.eu/).

A significant but insufficiently explored aspect is the governance and policy harmonisation for FUAs around minor urban centres. The ESPON policy paper delivered on request of the Spanish EU Council Presidency ([42]) highlights the potential of **small and medium-sized towns and cities** across Europe to foster territorial social justice. Such urban centres have been found to demonstrate an **unexplored potential** to shape up tenable urban–rural relations. This requires policy intervention in the form of integrated and place-based territorial support measures to enable all types of territory to make the most of their development assets (e.g. fostering the diversification of economic activities and smart specialisation; finding solutions for the provision of high-quality, accessible and cost-efficient public services; and promoting territorial cooperation within functional areas).

The success stories collated in the policy paper led to identifying four innovative **policy pathways** for the functional organisation of territories, in which the town or city is located, namely:

- strategic urban transformation for achieving sustainable development models;
- supporting territorial cooperation between small and medium-sized towns and cities;
- attracting funds and providing engineering support to foster project implementation;
- developing economic models based on local assets.

The paper further claims that – if re-routed to a positive development trajectory – small and medium-sized towns and cities are capable of increasing the quality of life of their residents, while at the same time reducing the cost of living in the functional areas of their respective territories by generating endogenous economies of scale.

(41) ESPON, 2017. ACTAREA - Thinking and Planning in Areas of Territorial Cooperation, https://archive.espon.eu/actarea.

(42) ESPON, 2024. Small and medium-sized towns and cities: policies strengthening their role in achieving active, inclusive, and functional territories, https://www.espon.eu/publications/new-working-paper-empowering-small-and-medium-sized-cities-balanced-territorial.

5
Debate questions

To substantiate discussion on the effective role of FUAs in the future cohesion policy, the following questions, based on the observations presented in this ESPON stocktaking paper, are proposed to feed the debate during the Polish Presidency of the Council of the EU:

- How should FUAs be positioned in the territorial organisation that more and more relies on networks and flows than on static places?
- How should customised territorial governance patterns be shaped for FUAs to curb negative externalities of urban growth (e.g. urban sprawl, land take, urban heat islands and storm surges) and, in some other cases, to adapt to effects of population shrinkage, peripherality and infrastructural deficiencies?
- How, in that sense, could the use of ITIs and other territorial instruments be reinforced in the future cohesion policy to stimulate resilience of FUAs?
- How can new territorial narratives and scenarios be created and implemented for FUAs to link up urban and rural development in a coherent way?
- How is it possible to strengthen the integrated territorial development through FUAs unfolding around small and medium-sized towns and cities?

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