



Ministry
of Development Funds
and Regional Policy



NATIONAL URBAN POLICY

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1. Introduction

The National Urban Policy 2030 (NUP 2030) is a document targeted at sustainable development of cities and functional urban areas. It concentrates on measures and instruments oriented territorially, which correspond with current challenges faced by the cities and functional urban areas. Public policies implemented by numerous institutions, especially government ones, should allow the best use of the potential and competitive advantage of Polish cities in order to assure sustainable spatial and socio-economic development.

Various (economic, social, demographic, infrastructural, spatial, environmental, cultural and other) phenomena and issues intertwine and affect each other in urban areas creating not only a complex structure, but also diverse power of mutual correlations. NUP 2030 logics formulates the necessity to depart from the exclusively sectoral approach in conducting public policies in order to, on the one hand, convey the complexity and mutual correlations of conditions and issues occurring in the urban space and, on the other hand, propose an effective response to formulated challenges of national urban policy.

Key entities and crucial addressees of this document are governmental institutions responsible for programming directions of development at a national level. Whereas, key partners in the achievement of objectives of the national urban policy related to the urban development rules are primarily territorial self-government units and entities from the non-governmental, business, scientific and cultural spheres, organisations associating inhabitants, entrepreneurs and other stakeholders of urban development.

The National Urban Policy 2030 is concurrent to the time horizon of binding key strategic documents, especially the medium-term national development strategy – the Strategy for Responsible Development for the period until 2020 (including the perspective until 2030) adopted by the Council of Ministers on 14th February 2017 (SRD). New frameworks for the development policy were created therein, including the urban policy, specified in 2019 by the National Strategy of Regional Development 2030 (NSRD 2030). NUP 2030 also takes into consideration the challenges and objectives formulated at the international level, including European, reflected in numerous documents such as: Agenda for Sustainable Development (Agenda 2030), New Urban Agenda of the UN, Urban Agenda for the EU, Territorial Agenda – 2030 A future for all places or recently updated New Leipzig Charter – The transformative power of cities for the common good.

2. National urban policy in the country's development management system

2.1 The role of the National Urban Policy 2030

Taking into account existing deficits in the scope of conducting urban policy, it should be adopted that an important role of the National Urban Policy 2030 consists in the coordination of sectoral policies referring to cities and their functional areas. Therefore, the role of the document is to initiate and integrate measures taken by various entities – from national to local – for the implementation of the vision and achievement of objectives of cities' and their functional areas' development. In this understanding, the basic aspects of national urban policies are the following:

- **DIRECTIONS OF SUSTAINABLE DEVELOPMENT** – achievement of desirable directions and manners of cities development, defining the vision of their development and objectives which should be achieved in a broad-base dialogue with public partners at all management levels: national, regional and local together with non-public persons whose actions are important for the achievement of this policy's objectives.
- **INTEGRATION AND COORDINATION AT THE NATIONAL LEVEL** – integration and directing measures conducted both within the development policy and sectoral policies, as well as by other public sector entities, activity of which can be of importance for achieving objectives. It creates space for conducting measures for cities' development at the national level more effectively and better collaboration of dispersed sectoral initiatives implemented within various horizontal public policies, among others: climate, mobility, innovativeness, demography.
- **COOPERATION AND PARTNERSHIP WITH REGIONAL AND LOCAL SELF-GOVERNMENTS** – setting development objectives for urban areas does not mean replacing the role of self-governments. It consists in building a friendly environment and encouraging self-governments to apply solutions compliant with the objectives and directions of the general national development policy.
- **CREATING FAVOURABLE LEGAL AND ORGANISATIONAL ENVIRONMENT** – determining legal, systemic and institutional frameworks allowing the cities to achieve set objectives. The urban policy directs necessary legal changes e.g. concerning spatial planning, public finances or urban mobility organisations, if necessary.
- **SPECIFIC MEASURES AND PROJECTS** – planning and implementation of strategic projects directed at the achievement of specific objectives (project mechanisms on the basis of SRD experiences), which will engage cities and other entities, show desirable direction of solutions and test selected measures.

2.2.

Urban policy in national strategic documents

The basis for strategic documents and development policy measures is provided by the Act on development policy rules. Amendment of the Act on development policy rules adopted in 2020 and amendment of the Act on commune self-government introduced integrated strategies – local and supralocal. These are practical tools for cities and functional urban areas aimed at supporting management thereof. Integrated strategies include the issues of spatial planning in the process of managing a given territory e.g. a city or FUA. It is a crucial novelty with regard to current strategies and a turning point in thinking about development processes for which space is both the starting point and the effect of changes.

Urban subject matter is regulated fragmentarily in various acts (e.g. in the Act on development policy rules, the Act on spatial planning and development, the Act on revitalisation, the Act on metropolitan union in the Silesian Voivodeship). It does not give a complex view of provisions which entities managing cities or FUA should follow in planning and implementing measures in urban areas. The scope and diversity of these measures are very broad and require accurately formulated and coherent provisions. Urban policy, as the only policy so far mentioned in the Act on development policy rules by its name, will be included in this Act until 31 December 2025. Then, it will be included in the catalogue of public policies in the Act on development policy rules. Until then, a bill regulating urban policy subject matters as broadly as possible will be drawn up. It is a clear signal for reinforcement and enhancement in taking into account the process of managing a city or FUA.

In SRD it is underlined that one of the pillars of responsible development is the socially sensitive and territorially balanced development reinforcing the endogenic potential of a given territory and based on the social solidarity. All citizens should benefit from the effects of taken measures.

The necessity of introducing measures for complex use of the potential cities in horizontal and territorial terms at the national, regional and supraregional levels, comprising issues crucial from the point of view of a city of any size, was indicated in the document. Furthermore, horizontal measures undertaken for the benefit of all cities, concerning the regulatory, institutional and investment spheres are underlined in the SRD. They are undertaken in relation to the regional policy measures and territorially directed instruments of national and European policy.

Along with the adoption of the SRD, the urban policy gained additional meaning, becoming an integral part of the national development policy. Government of the Republic of Poland acquired actual implementation instruments in the form of strategic projects directed at cities (e.g. a package for medium cities, the City Partnership Initiative, systemic support for revitalisation) or of horizontal nature, not concerning issues especially crucial for urban areas (e.g. the Clean Air Programme). Thanks to these projects the urban policy gained a broader and more specific implementation aspect.

The National Strategy of Regional Development 2030 adopted in 2019 specifies SDR provisions especially in the context of Objective II – Socially sensitive and territorially sustainable development. The objective of the regional policy is to provide conditions for sustainable development of the country and decreasing disproportions in the level of socio-economic development of various territories, in particular, supporting the development of areas which cannot develop their full potential or lost their socio-economic functions.

In compliance with NSRD 2030, supporting municipal centres favours building the competitive power of regions. NSRD 2030 assumes support for the development of all cities i.e.: the largest agglomerations, medium and small cities functionally related to rural areas irrespective of their size, location or fulfilled social, economic and administrative functions. NSRD 2030 notices the growing significance and important role of various municipal centres in the context of their impact on the development of their environment and functionally related communes. Reinforcement of cities of various sizes and related rural areas will play an important role in the socio-economic and spatial development of regions in the nearest future. In compliance with provisions of NSRD 2030, medium cities losing socio-economic functions constitute an area of strategic intervention and will be complementarily supported at a national and regional level. Measures taken towards these areas should be adjusted to individual needs and potentials of a given territory. Restructuring is the economic base of medium cities losing their socio-economic functions and reinforcing their role as centres of social and economic activity is crucial. Apart from measures directed at problems and challenges faced by cities within administrative boundaries, a special attention is paid to the cooperation with their environment as well as neighbouring and functionally related communes. Developing stronger cooperative relations within functional areas of cities can bring them better results of socio-economic development and provide benefits to all stakeholders.

Distinction of the urban policy in the SRD and NSRD 2030 indicates the need for crucial inclusion of urban issues in documents specifying conducting development policy at a regional level. Documents drawn up at this level must be compliant with the aforementioned documents and contribute to the implementation of guidelines included therein.



3. International context for the national urban policy

Measures of the United Nations (UN) for sustainable development of cities

UN-Habitat¹ is the organiser of global debates and conferences devoted to the challenges concerning sustainable development of cities. The New Urban Agenda of the UN² presents the global vision, objectives and priorities of sustainable development of cities for the next 20 years. It constitutes a continuation of UN measures undertaken within Agenda 2030. Implementation of the New Urban Agenda constitutes a contribution to the implementation of the urban dimension of 17 Sustainable Development Goals, especially Goal 11 'make cities and human settlements inclusive, safe, resilient and sustainable'.

The New Urban Agenda of the UN indicates the need for cooperation between all levels of administration in order to allow achieving sustainable, integrated development of rural areas. A number of postulates have been presented in the document in social, economic and environmental dimensions, the implementation of which the UN members undertook to work on in their own countries. Poland did so starting on 2 April 2019 by particular Ministers of the Polish government and representatives of self-governments adopting the Declaration on cooperation for implementation of national urban policy and the New Urban Agenda of the UN³.

One of the tools used by UN-Habitat to hold a global discussion on directions of cities' development is the event, organised every two years, titled World Urban Forum, which allows systematic tracking of current trends and challenges, and taking them into account in local conditions of development. The hitherto measures taken by our country in the scope of the urban policy implementation were appreciated by UN-Habitat and therefore Poland organises the 11th session of the World Urban Forum in Katowice, in 2022.

Activity of the Organisation for Economic Cooperation and Development (OECD) towards urban areas

The OECD has been dealing for years with the subject matter of urban development within work of the Regional Development Policy Committee and, acting under its auspices, the Working Party on Urban Policy by creating its own databases, compiling a number of metropolitan and urban reviews, thematic analysis and a network for exchanging experiences. In 2011, the OECD prepared *the OECD National Urban Policy Review. Poland 2011*, which initiated a cycle of urban reviews for other countries.

¹ A specialised agenda operates within the UN i.e. the United Nations Human Settlements Programme - UN-Habitat dealing with the issues of urbanisation and human settlements, including promotion of sustainable development of urban centres.

² The UN appeals for changing the approach in the scope of planning, designing, financing and managing in cities in the document that the New Urban Agenda of the UN adopted during the last Habitat conference in 2016.

³ Ministers and representatives of self-governments undertook to reinforce the coordination and integration of public policies and measures targeted at urban areas, including measures of government administration and strategic projects implementation within the Strategy for Responsible Development, concerning urban areas or influencing them.

As a summary of over 20 years of work in this area, in 2019 the OECD Principles on Urban Policy were compiled, which were adopted by ministers of EU Member States in March 2019, in Athens. Currently, the OECD prepared, in cooperation with Poland, a report on urban-rural linkages.

The United Nations Climate Change Conference (COP) and measures for cities

The UN periodic conferences on climate change constitute the largest global events aimed at establishing common policy for counteracting climate change. Cities are territories especially sensitive to the consequences of climate change. A breakthrough event was the climate change conference in Paris, in 2015 (COP21). The adopted so-called Paris Agreement⁴ was the first in the history, universal and legally binding agreement on climate. The special role of cities was underlined therein, including self-governments and local communities, in building resilience of urban areas to unfavourable consequences of climate change and lowering susceptibility to threats related to climate change. The fundamental objective of a subsequent climate conference in Katowice (COP24), in 2018, consisted in adopting a decision assuring full implementation of the Paris Agreement. The so-called Implementation Package gives the Paris Agreement actual shape by setting a path that each state decides to follow in the scope of the intensification of measures for climate protection. As a result of the last climate change conference in Glasgow, in 2021, (COP26) all signatories signed an obligation to gradually decrease the use of coal. Cities have an important role to play in this process.

The growing importance of urban policy in the European Union

Despite the fact that the European Union (EU) does not have direct rights in the scope of urban policy, a series of Union initiatives have an undeniable impact on cities. Issues concerning the role of urban areas at the European level have occurred in the communications of the European Commission (EC) since the 90s. Also the last several years of meetings held by the European Union ministers responsible for urban policy resulted in a plethora of adopted documents⁵, stipulating the vision, priorities and frameworks for creating urban policies in the EU Member States for sustainable development.

The need for reinforcing the role of cities in developing future EU policies is stressed. Apart from metropolitan areas considered in Europe as main economic pillars and driving force for creating new workplaces, the important role and potential of small and medium cities in the EU's sustainable development implementation has been more and more visible. Furthermore, the urban dimension has been gradually reinforced by the EC within various initiatives, also by propositions concerning the package of measures and funds of the European Green Deal⁶, aimed at transferring to sustainable, green transformation and climate neutral Europe. One of the important events for the European urban policy was adopting the so-called Pact of Amsterdam by ministers of the EU Member States for urban development in 2016, which is the European Union's response to the UN Sustainable Development Goals.

⁴ The Paris Agreement was adopted by 195 countries at the climate change conference in Paris, in 2015.

⁵ Among documents adopted by ministers are the following, among others: the Leipzig Charter on Sustainable European Cities, Leipzig, 2007; Declaration from Toledo on Urban Development, Toledo 2010; Towards the EU Urban Agenda, Athens, 2014; Towards the EU Urban Agenda, Riga, 2015; the New Leipzig Charter – the transformative power of cities for the common good, Leipzig, 2021.

⁶ Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the European Green Deal, 11.12.2019, (COM(2019) 640 final).

Within the Pact of Amsterdam, the Urban Agenda for the EU was established, which apart from determining several priorities for urban policy, created a new, first of this type in Europe, platform for intergovernmental cooperation within thematic partnerships. They gather entities of various levels - from European institutions, through Member States' governments, to cities and urban organisations. Their mutual objective is to develop new solutions and recommendations for the improvement of a given area of urban development in the following aspects: legislation, funding and knowledge exchange mechanisms. Consideration of partnerships' results and recommendations is entrusted to the European Commission in developing and amending the EU legislation, instruments and initiatives, as well as to the Member States in developing national urban policies. In November 2021, the European Union ministers adopted the Ljubljana Declaration with a long-term programme of work that brought into effect the beginning of a new stage of implementation of the Urban Agenda for the EU. The document provides for specific steps to renew the Agenda and proposes new priorities of urban policy.

In the context of current measures implemented from the EU level to the benefit of urban areas development, the New Leipzig Charter should be indicated⁷. It underlines the need for improvement of urban policies' management and coordination at all levels of management and transformation in the direction of: just, green and productive cities. The aforementioned three dimensions are to contribute to building 'resilient cities' that can face forthcoming social, economic and ecological challenges at the same time guaranteeing high quality of life. The New Leipzig Charter provides an implementation framework for necessary transformation of cities and rules for urban policies. Adoption of the New Leipzig Charter is an impulse for Member States to review their own urban policies and adjust them to new challenges and conditions.

Initiatives supporting development of cities in the EU financial perspective for 2014-2020 (implementation until 2023)

In the EU financial perspective for 2014-2020 sustainable development of urban areas is supported within the cohesion policy by execution of integrated strategies for solving social, economic and environmental problems. In compliance with the Regulation on the European Regional Development Fund (ERDF) obligatorily at least 5% of financial support was allocated to measures in the scope of sustainable development of urban areas (Article 7 of the ERDF⁸). Support for integrated measures in urban areas was possible for states due to a new territorial instrument i.e. the integrated territorial investment. The EC also introduced support for innovative measures to the benefit of sustainable development of urban areas (Article 8 of the ERDF⁹) - Urban Innovative Actions (UIA). Moreover, another edition of the European Territorial Cooperation URBACT programme, which concentrates on the exchange of knowledge and good practices between cities, is executed within the European territorial cooperation.

⁷ The New Leipzig Charter was adopted by the European Union ministers for urban development in November 2020.

⁸ Regulation (EU) No. 1301/2013 of the European Parliament and of the Council of 17 December 2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs goal and repealing Regulation (EC) No. 1080/2006.

⁹ As above.

Support for cities in the financial perspective for 2021-2027

In the perspective for 2021-2027, within cohesion policy funds, the sustainable development of urban areas is still reinforced due to allocating to this end at least 8% of resources of the European Regional Development Fund on a national level (Article 11 of the ERDFEFR/CF¹⁰). Thus, the implementation of territorial instruments will be continued, especially those addressed at cities and functional urban areas such as: integrated territorial investment, local development directed at the community and other territorial instruments respectively established by Member States for specific needs. Cooperation between urban authorities will be continued within the 4th edition of the URBACT programme. Furthermore, the EC is also creating a new instrument titled *European Urban Initiative* - EUI, Article 12 of the Regulation ERDF/CF¹¹), ensuring cohesive support for cities in priority themes of *the Urban Agenda for the EU*. The aim of the EUI is to reinforce the integrated and participatory approach to the sustainable development of urban areas and assuring stronger relation with relevant EU policies, in particular investment in the cohesion policy. One of the conclusions of the Report from the European Commission¹² is the conviction that cities are important entities which have to be engaged in designing and implementing European policies, including the cohesion policy.



¹⁰ Regulation (EU) no. 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and Cohesion Fund, Article 11 par. 2.

¹¹ Regulation (EU) no. 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and Cohesion Fund, Article 12 on the European urban initiative.

¹² Report from the Commission to the Council on the Urban Agenda for the EU, November 2017 (COM(2017) 657 final).

4. Characteristics of urban settlement network and system of cities

In determining the challenges of the national urban policy it is necessary to take into consideration the characteristics of the urban settlement network. The characteristics of the current urban settlement network and the system of cities will allow a fuller picture of urbanisation processes in Poland and better understanding of development goals and directions of solutions in key challenges for cities and functional urban areas proposed in the NUP 2030. The functional and spatial structure of Polish cities has an impact on the power of correlations and effectiveness of flow (of goods, services, persons, technology, etc.) on a regional, national and international scale.

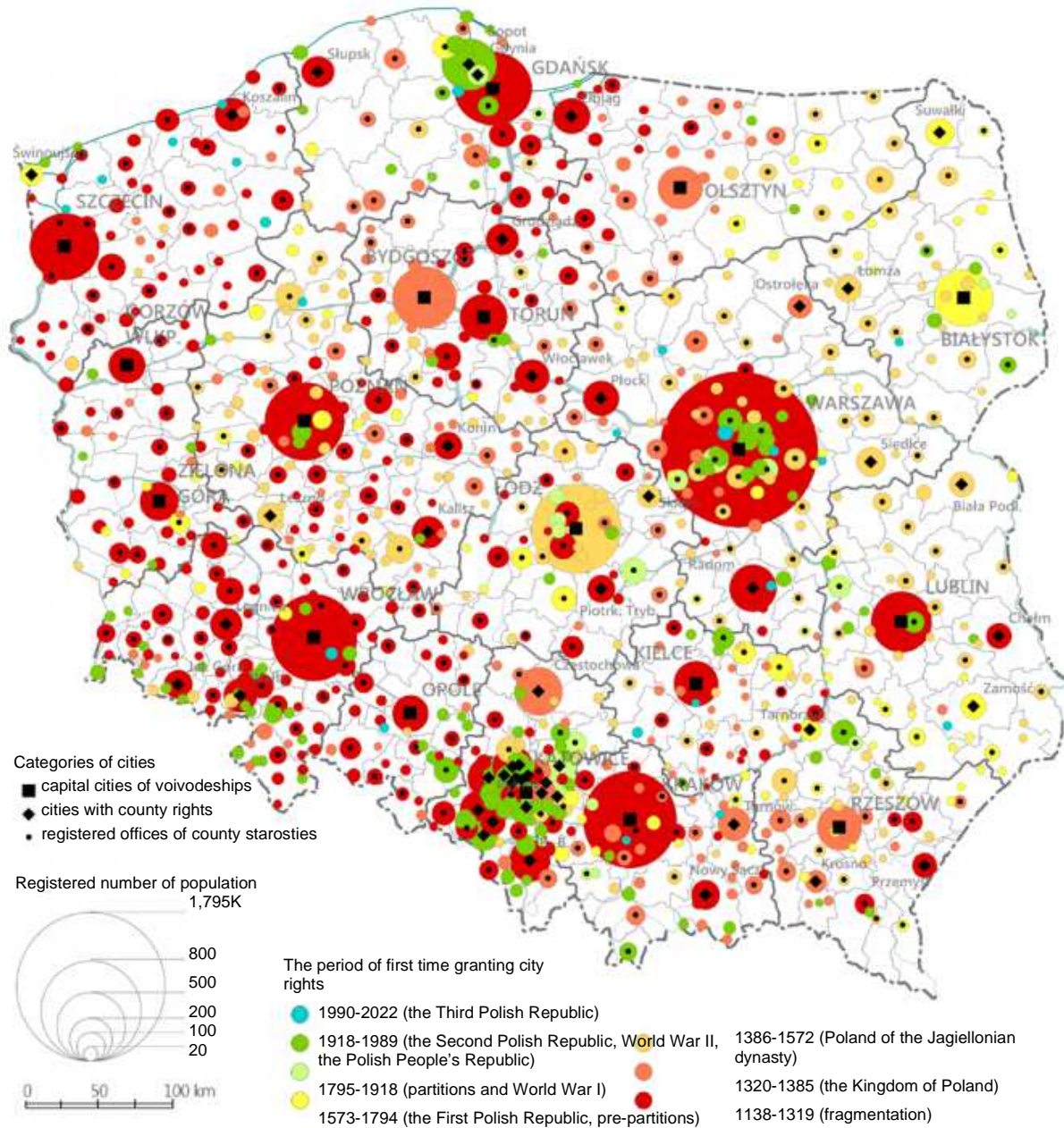
In 2021, a total number of 954 cities were noted in Poland. They take up the area of 22.4K km² (7.2% of Poland's area) and are inhabited by 22.8 million people (59.8%). The majority of cities are small centres: below 20K of inhabitants - 737 centres (21.8% of cities' population), including below 5K - 372 units (4.6%). Whereas, 37 cities with over 100K of inhabitants each concentrated 46.1% of urban population. The period after 1989 is characterised by a rapid increase in the number of cities, at that time their number grew by 134 (figure no. 1).

The network of Polish cities is characterised in comparison to Europe with a high level of polycentricity i.e. there is no strongly dominating advantage of a central city over regional centres. As a result of the above, Warsaw's share in population is relatively small – 7.8% in the group of all cities and 4.7% of the entire country population (table no. 1). It is simultaneously one of the lowest results in the European continent. Moreover, large cities (over 200K of inhabitants) are quite evenly distributed in the country. Polycentricity of the urban region, which is beneficial for the regional development, results from historic past and development of regional and supraregional centres in various parts of partitioning states in the 19th century (e.g. Gdansk, Lodz, Poznan, Szczecin), state borders in the interwar period (1918-1939), and finally, intensive industrialisation and urbanisation after the 2nd World War (Bialystok, Lublin, Katowice conurbation¹³).

¹³ Terminology such as Katowice or Rybnik conurbation in pictures and in text are primarily of an informative and demonstrative character. It was necessary to base the analysis and illustration of particular subject matters on the unequivocal methodology and systematics of cities and urban areas, which, on one hand, would include conceptual-theoretical and methodical accuracy and, on the other hand, differences between regions and interregional. In the case of Katowice and surroundings, 14 cities with county rights were adopted as the core, in the case of Rybnik there are simultaneously additional 3 cities and in the case of Gdansk - Gdynia and Sopot as well.



Figure no. 1. Cities in Poland by the number of population (2021), current administrative-functional status and the date of granting urban rights



Source: on the basis of data of Statistics Poland (GUS) and M. Najgrakowski (2009), supplemented. Najgrakowski M., 2009, *Miasta Polski do początku XXI w., Dokumentacja Geograficzna (Polish Cities until the Beginning of the 21st Century, Geographical Documentation)*, 39, the Institute of Geography and Spatial Organisation PAS, Warsaw.

Table no. 1. Characteristics of cities in Poland by performed functions and size structure in 2020

Administrative-territorial category	Functions performed in the settlement system	Number of cities	Population median (2020, in thousand)	Total population (2020)	
				thousand	%
The capital city of the country (Warsaw)	metropolitan	1	1,794.2	1,794.2	7.8
Other capital cities of voivodeships	regional and supraregional, including metropolitan	17	296.6	5,916.6	25.8
Other cities with poviat rights	subregional and regional	48	88.9	4,799.9	21.0
Seats of counties	local and subregional	268	19.0	6,620.2	28.9
Other urban communes	local	86	9.9	1,094.6	4.8
Other urban-rural communes	local	524	3.7	2,679.6	11.7
	In total	944	7.4	22,905.1	100.0

Source: own study on the basis of GUS data (Local Data Bank)

The Polish system of cities also has a sustainable size structure and is characterised with multileveled hierarchy. The core is made of voivodeship cities that perform regional and supraregional, including metropolitan, functions. According to the majority of classification, a developed metropolitan centre means a city with at least approximately 400 thousand inhabitants (by the number of population it refers to: Katowice conurbation, Warsaw, Krakow, Gdańsk with Gdynia and Sopot, Łódź, Wrocław, Poznań, Szczecin), and sometimes also Bydgoszcz, Lublin, Białystok, Rzeszów and other, including as potential or developing metropolises.

Another type is a city with poviat rights, usually counting at least 100 thousand of inhabitants or, in majority being capital cities of voivodeships before 1999. In total, there are 48 cities of this type (without capital cities of voivodeships) and they usually play the subregional or regional role. In case of the latter, it especially applies to cities with at least 100 thousand inhabitants (e.g. Bielsko-Biała, Częstochowa, Radom, Tarnów, Wałbrzych). Some of the cities with poviat rights (in the number of 19) constitute a part of polycentric groups (Katowicke and Rybnik conurbations as well as Tri-City).

The cities performing local and sometimes subregional functions are 269 capital cities of the so-called land counties (this name was officially used in the administrative-territorial division before 1975 and in the interwar period). Among discussed groups of cities they constitute the largest part of urban population (28.9%). They are usually located within 20-30 km from one another and to a large extent reflect the urban network from the Middle Ages.

The last category is made of other cities that belong to the group of urban communes (86) and not previously categorised urban parts of urban-rural communes (544). Therefore, it is over half of the number of all cities, however, they gather only 16.5% of urban population. Density of the network of the smallest cities is beneficial and there are no large disproportions in distribution in the whole country, which is of significance for local development. In general, the network of cities decreases from South to North and from West to East, which results from the general distribution of population.

The unfavourable feature of Polish cities is decentralisation of hitherto inhabiting population outside the urban administrative borders. It is done in a chaotic, poorly controlled or uncontrolled manner manifesting in the phenomenon of 'irrepressible' suburbanisation and urban sprawl. It results from the willingness to improve residential conditions as well as from relatively lower prices of purchasing real estate. However, it happens with large resources of land in the cities (according to the most recent, available, specific geodetic data from 2014, agricultural areas constituted 921.9K ha in cities, and idle land – another 33.7K ha, which constituted 42.7% of urban area in total, e.g. in Warsaw it was 23.6%, and in Krakow – as many as 47.3%). Nevertheless, the migrating population usually maintains a strong relation to the previous commune of residence in the form of commute and services (so-called daily urban systems). The characteristic feature of Poland is that the classic suburbanisation consisting in population's relocation especially from city centres to the suburbs, has been growing with strong, additional streams of population coming from other places in the country, as well as, increasingly, from abroad.

The above deliberation entitles to pay attention to the cities not only within their administrative borders, but also to the cities with their closest, most functionally related surroundings, that is, suburban zones (functional urban areas). In the case of Poland, distinctly developed zones of this type apply not only to larger but also to smaller cities, sometimes even poviats cities (so-called pretzel communes, rural areas in urban-rural communes). Whereas, there are a lot of various delimitations of the impact range, most often varying in results due to adopting different methodical approaches. For the purposes of NUP 2030 it was adopted that diagnostic-cartographic analyses were conducted at least for cities with poviat rights (66 cities), while, due to the polycentric nature, this number was reduced to 48 (data for urban cores was aggregated in three cases: Katowice and Rybnik conurbations as well as the Tri-City).



Table no. 2. Characteristics of functional urban areas' categories (2020)

Category	The number of communes		Area (km2)		Population (thousand)	
	core	suburban zone	core	suburban zone	core	suburban zone
Warsaw	1	49	51.7	330.2	1,794.2	1,185.5
Voivodeship centres	32	232	448.7	2,493.1	7,729.1	4,002.2
Cities with poviats rights	33	138	246.7	1,435.9	2,987.4	1,692.7
Share in Poland (%)	2.7	16.9	2.4	13.6	32.7	18.0

Note: delimitation of functional urban areas was adopted on the grounds of the following studies:

(1) Śleszyński P., 2013, Delimitacja Miejskich Obszarów Funkcjonalnych stolic województw (*Delimitation of Functional Urban Areas of Capital Cities of Voivodeships*), Przegląd Geograficzny (*Polish Geographical Review*), 85, 2, pp. 173-197.

(2) Korcelli P., Degórski M., Drzazga D., Komornicki T., Markowski T., Szlachta J., Węclawowicz G., Zaleski J., Zaucha J., 2010, Ekspertyza Projektu Koncepcji Przestrzennego Zagospodarowania Kraju do roku 2033 (*Expert Project of the National Spatial Development until 2033 Conception*), Studia KPZK PAN (*Studies of the Committee for Spatial Economy and Regional Planning, Polish Academy of Sciences*), 128, Warsaw (a map of Functional Urban Areas).

(3) Śleszyński P., Nowak M., Legutko-Kobus P., Hołuj A., Lityński P., Jadach-Sepioto A., Błaszke M., 2021, Suburbanizacja w Polsce jako wyzwanie dla polityki rozwoju (*Suburbanisation in Poland as a Challenge for Development Policy*), Studia. Cykl Monografii (*Studies. A Cycle of Monographs*), 11/203, PAN Komitet Przestrzennego Zagospodarowania Kraju (*Committee for Spatial Economy and Regional Planning, Polish Academy of Sciences*), Warsaw, 148 p.

Note to maps, on which external zones were marked out for cities with over 35K of inhabitants: adopting a caesura of 35K is of an organising nature and resulted from taking into consideration cities basically larger in terms of the number of population than the city with poviats rights which is the smallest in this regard (Sopot; 35.2K of inhabitants).

Source (area, population): own study on the basis of GUS data (Local Data Bank)

Source: own study on the basis of GUS data (Local Data Bank)

It was also adopted that the borders of suburban zones will be marked out on the basis of a division into communes. For voivodeship cities the Delimitation of Functional Urban Areas of 2012¹⁴ was used, and for cities with poviats rights – the study conducted for the purposes of the project ESPON 1.4.3 Study on urban function¹⁵. With thus specified assumptions 50.7% of the national population lived in the marked out suburban zones of poviats cities, or at least cities with poviats rights, and they occupied 16.0% of the Polish territory (table no. 2).

¹⁴ Results thereof are described in detail in: Przemysław Śleszyński, Delimitacja Miejskich Obszarów Funkcjonalnych stolic województw (*Delimitation of Functional Urban Areas of Voivodeship Capital Cities*), Przegląd Geograficzny (*Geographical Review*), 2013, volume 85, journal 2, pp. 173-197.

¹⁵ See: Piotr Korcelli, Marek Degórski, Dominik Drzazga et al., Ekspertyza Projektu Koncepcji Przestrzennego Zagospodarowania Kraju do roku 2033 (*Expert Project of the Conception of the National Spatial Development until 2033*), Studia KPZK PAN (*Studies of the Committee for Spatial Economy and Regional Planning, Polish Academy of Sciences*), no. 128, Warsaw 2010, p. 127. In order to present main features in a synthetic and comparable manner, including development standards of urban settlement network and system of Polish cities, it was necessary to base on the unequivocal methodology, which, on the one hand, would take into account the conceptual-theoretical and methodical accuracy and, on the other hand, differences between regions and internal differences. Since there is no one and only universally recognised typology and delimitation of cities' and their surroundings' subsystems, the basis was provided by classifications which occurred in previous strategic documents and are recognised in the scientific and expert environment as a type of a benchmark.

The Polish settlement system was still quite recently (80s and 90s of the previous century) considered mature i.e. stable in terms of the status of population of groups of large cities. After 2000 a growing differentiation thereof can be observed. The number of population is dropping in the increasing number of centres (diagram no. 1).

It to the largest extent concerns cities with powiat rights, that is, among others, cities which after 1998 ceased to be capital cities of voivodeships (e.g. Krosno, Radom, Stupsk). In comparison to 2004, that is Poland's accession to the European Union, until 2020, population decreased by 219.6K of inhabitants, that is, 6.8% in this category (cities with powiat rights). A slightly less severe drop concerned cities that were the seats of powiat starost offices (-4.9%), and then currently voivodeship cities (-2.5%) and other cities i.e. not being seats of the powiat starost offices (-1.8%). At the same time suburban zones soared both around voivodeship cities (on average by 17.9%), as well as cities with powiat rights (7.9%). During this time typical rural areas shrank only by 0.7%.

The category of voivodeship cities-cores is very heterogeneous in terms of changes in the number of population.

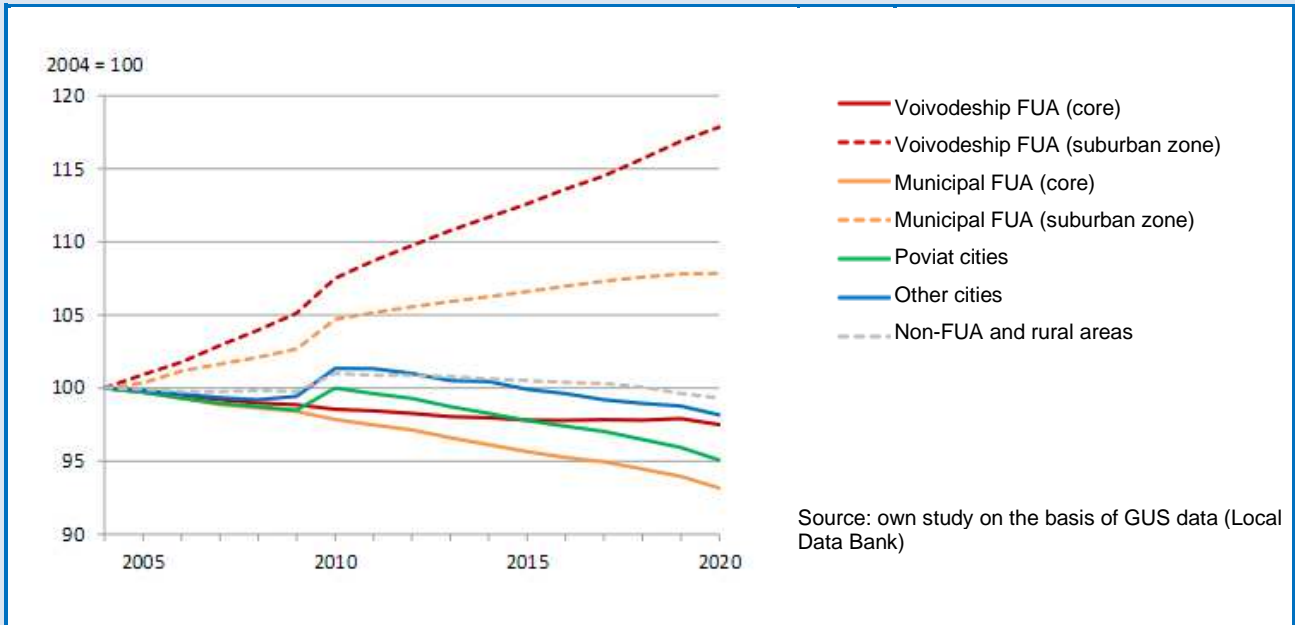
In the years 2004-2020 the number of population in Warsaw increased (by 6%), Krakow (by 3%) and Białystok (by 1.6%). However, the highest increase occurred in Rzeszów (by 23.7%), mainly as a result of territorial expansion by neighbouring communes. However, due to similar reasons, no increase was noted in Opole. Whereas, the number of population in the core of Katowice conurbation dropped most significantly (by -9.6%), as well as in Kielce (by -7.7%), Poznań (by -6.8%) and Bydgoszcz (by -6.6%). While among other 31 cities with powiat rights (apart from voivodeship cores) only two centres noted an increase (Siedlce and Suwałki – within 1%). In other cities there was a decrease, a record one in Wałbrzych (by -13.8%), and Częstochowa (by -12.3%), as well as over 10% - in Chełm, Jelenia Góra, Konin and Przemyśl.

The situation is different in case of comparing changes by permanent FUA. An increase was especially noted in Warsaw (11.9%), Rzeszów (10.8%), Poznań (10.5%), Tri-City (9.9%), Wrocław (9.5%) and Krakow (8.4%) agglomerations, and a decrease – in Łódź agglomeration (-7.9%) and Katowice conurbation (-7.1%). In FUA of independent cities an increase was noted only in 10 cases (the most in Leszno – 7.1%), in other cities a decrease was noted in the number of population (the most acute in the case of Wałbrzych (-10.1%). It generally means a clear distinction in the group of the largest cities.

In reality, changes are even deeper, since a large part of actual migrations is not registered. It concerns both relocations abroad and within the country. Cities in peripheral areas experience depopulation to a greater extent than indicated by the so-called current statistics and, on the other hand, suburban zones and several most attractive metropolises have a surplus of population in comparison with the official data (e.g. Warsaw, according to telemetric data, over 200K more).

The aforementioned information concerning demographic transformations that were noted before 2022 in Polish cities and surrounding areas, are subject to significant changes as a result of Russia's military operations in Ukraine, in February 2022. In a month following these operations, over 2 million of refugees came to Poland and this process has continued ever since. For many reasons the majority of these persons are directed to municipal centres. Shortly after starting military operations in Ukraine, it is assessed that approx. 300K of refugees have stayed in Warsaw and over 100K - in Krakow. Currently, it is difficult to estimate the scale, period and directions of Ukraine citizens' migration caused by the military operations.

Diagram no. 1. Changes in the registered number of population in categories of functional urban areas and cities in the years 2004-2020 (in 2009 the trend was statistically disturbed as a result of a general census conducted in 2011 and updating balance sheet data two years prior)



The inflow of refugees to Poland (not only Ukrainian) should be considered in the long-term perspective. Assuming that the Ukrainian population will increase in Poland, i.e. apart from the economic (pre-war) migration of various statuses of periodicity of staying in Poland assessed at 1-1.5 million people, a part of the current refugee stream will arrive (probably calculated in at least hundreds of thousands, and perhaps even in millions). It means a fundamental change in the population structure of Poland from an ethnically homogeneous country (in the groups of countries of this size – the most ethnically homogeneous in Europe and one of few in the world) into a country with a significant Ukrainian minority (5% - and in time, probably higher share in the country's population). This situation will be especially observed in the cities and will cause various types of problems. Some of them have been announced here, and others exceed the scope of urban policy, yet, they have a crucial impact on the character of cities, the lifestyle of inhabitants, development attractiveness etc.

5. Urban development vision and rules

5.1. Polish cities' development vision

The National Urban Policy 2030 is an instrument of running policy of the Republic of Poland's government towards cities and functional urban areas, whereas the development of cities is consistent with the country's development policy, including the regional policy. Cities of varying size and related functional areas (including urban and rural) play and will play an increasingly important role in the socio-economic and spatial development of regions in the nearest future.

The cities' development policy, apart from measures focused on the challenges and problems faced by cities within administrative borders, should notice benefits of cooperation with the environment, that is, neighbouring and functionally related communes, more clearly. These mutual relations, the ability to solve supralocal problems and drawing bilateral benefits will determine the competitive advantage of urban areas.

The essence of running national urban policy consists in facing development challenges and building conditions for reinforcing the capacity of cities and functional urban areas for sustainable development, improvement of the quality of life of inhabitants and building resilience to the observed climate change.

Apart from outlining the main objective, the National Urban Policy 2030 adopts six goals which are a part of cities' and their functional areas' long-term development vision:

- **Compact city** – means the pursuit of urban development (spatially continuous) in a sustainable and responsible manner and the rational use of space and available resources.
- **Green city** – means combating the deepening of a climate crisis, counteracting the effects of climate change, reducing air pollution emissions and restoring ecosystems in urban areas (increasing green areas and continuity of ecosystems intertwining with urban areas).
- **Productive city** – means fostering urban development through economic diversification that provides jobs for residents and creates solid investment basis for sustainable urban development.

- **Digital city** – means using digital transformation processes to strengthen the interaction among urban stakeholders: city leaders, inhabitants, NGOs and entrepreneurs to effectively manage urban development.
- **Accessible city** – not only does it involve eliminating barriers through sound organisational and functional improvements, but also ensures equal opportunities for all inhabitants to fully engage in what a city has to offer and allows access to public services, regardless of size or location of the city in the settlement structure.
- **Efficient city** – means the ability for effective management, effective use of own resources, but also for all actors of urban development processes to be able to cooperate (partnership cooperation between institutions, social and economic organisations, inhabitants and others – not only within cities, but also their functional areas).

All goals of the NUP 2030 are correlated and one cannot be implemented fully with the omission of others. The vision of Polish cities' development presented above shows the direction of development of cities and functional urban areas. At the same time it constitutes an important point of reference to create (legal, financial, organisational and other) conditions, to facilitate achievement of set goals.

*Polish cities are **friendly and accessible** for all inhabitants and offer high quality of life. The spatial impact on the inhabitants' wellbeing and health is taken into consideration in Polish cities, among others: due to greenery and taking care of the **quality of urban ecosystems**. Polish cities treat the low-carbon and carbon-free collective transport and non-motorised traffic as their priorities, limit the use of resources, adapt to the effects of **climate change** better and are more resilient to their negative impact by ensuring economic growth without respectively increasing the pressure on the environment. They are **productive and modern**. They attract entrepreneurs as places that are attractive for locating and running business. They plan their development in a **smart** manner using for this end the potential of their own resources and digital technologies. Large and medium cities are drivers of development primarily on the European, national and regional scale. Whereas, small cities benefit in terms of development from the **partnership cooperation** with larger cities and surrounding rural areas. Polish cities are **compact** and in their spatial cohesion and harmony they seek development opportunities and rationalisation of operating costs. They are **open** and are developing in a sustainable manner towards spatially coherent territories, they are full of well organised, **functional and aesthetic public spaces** while respecting the value of monuments and cultural heritage. They are also **capably managed** - in an efficient, effective and partner manner. They use integrated measures addressed at their functional areas and initiate partnership cooperation with neighbouring communes, inhabitants, socio-economic organisations and other urban stakeholders.*

The effectiveness of implementation of the cities' development vision and goals consists in effective measures and implementation mechanisms. However, they have to predominantly refer to overcoming challenges and solving problems preventing urban areas from harmonious and sustainable development.

5.2. Rules for pursuing cities' development policy

In the implementation of the visions and goals of the NUP 2030, horizontal rules are binding. They influence the effectiveness and quality of developmental measures in urban areas. Urban policy is implemented with a consideration of all rules of regional policy included in the National Strategy of Regional Development 2030. Nevertheless, the following standards in action should be taken into consideration in a special manner:

● **Comprehensiveness and integration** in implementation of urban activities and functional planning. The integrated territorial approach in the urban development policy refers to functional areas, not only administrative ones. It means the necessity of implementing projects in a coordinated and complementary manner which allows for synergy. Such an approach allows better use of hidden and hitherto improperly used, broadly understood resources and specific potentials. Thus, the urban policy has an impact both, on cities with poviat rights, urban communes as well as urban-rural and rural communes interacting with them. The complexity in territorial approach means planning measures so that they result in the structural improvement in the urban area and related functional area with reasonable expenditures and reduction of social and environmental costs.

Look at the city in terms of territory and problems, as well as in a comprehensive manner with regard to the area or problem, and if you cannot afford a wide scope of measures right away, adjust your plans to the execution scale and capabilities.

● **Inviting urban greenery** is one of the priorities which has a very beneficial impact on the quality of life of inhabitants. This rule concerns not only proper management of blue-green infrastructure, but is also related to the promotion of pro-ecological social attitudes. Each investment or package of projects on a given urban area should be analysed in terms of natural environment protection and increasing the biologically active area with greenery providing shade and high greenery, which has a positive influence on the wind-chill of extreme heat. Furthermore, nature-based solutions that are possible to be used from the technological side, such as green roofs or facades as well as various forms of water retention should be taken into account.

Do not seal the space up, if you do not really have to, opt for the greenery.

● The rule of assuring **access** is addressed at new and modernised investment carried out on the grounds of the principles of universal design. It is aimed at facilitating life for everyone, especially persons with disabilities and seniors.

Accessibility also means removing existing barriers by introducing reasonable organisational and functional improvements. It should be underlined that many technological or architectonic solutions, which are today commonly used, had originally been created having persons with special needs in mind, for example low-floor busses, vehicles, driveways, a lack of thresholds, regulated furniture, anti-slip surfaces, voice information. It indicates the need for universality of facilities for all inhabitants.

If you are building/restoring or organising something anew – do it with a view to assure accessibility.

● Promoting civic **engagement**, understood as participation of residents of the city and the functional area in defining and solving local problems and making crucial decisions regarding local community. In this context participation should be presented as a platform of establishing relations and relationships at the level of local communities.

Inspiring the process of increasing the significance of engagement in the decision-making process lies within the responsibility of the authorities. It is crucial to give engagement proper importance and formal obligation of municipal authorities to apply engagement as the element of managing a city. Focus on the participation in decision making should also, in a broader scope, lead to a greater civic engagement in measures undertaken in urban areas.

Do not only inform and consult, but also include in measures supplementary to the executed investment, as well as engage in citizens' measures and initiatives.

● The rule of **cooperation and partnership** means optimisation of using cooperation to the benefit of effective and efficient activity. Acting in a partnership gives more opportunities for success in achievement of development goals. Partnerships can be created in various configurations both in the scope of cooperation of multilevel public administration with non-governmental organisations, as well as private, social and economic, national and foreign partners. The cooperation between territorial self-government units becomes the key dimension of cooperation in the context of creating areas of functional relations and directing thereto solutions established systematically.

Verify, whether performance of any task is more effective or cheaper if done in cooperation with other entity.

● The rule of a **circular economy** consists in reasonable use of available resources in a manner allowing cities to satisfy not only current needs of inhabitants but also to strive for assuring a safe environment for life and development of future generations. Instead of throwing out or disposing, it is worth first trying to repair. A simple public procurement changed into green public procurement – such investment, although more difficult to prepare, will bring benefits in the longer perspective. Terrains and infrastructure that have lost their hitherto functions, especially in city centres, should be reused. Simultaneously, inhabitants should be provided with conditions allowing them to take care of and share held resources – by supporting the sharing economy, innovative enterprises or craftsmen who give second life to everyday use objects.

Close the circuit: do not waste held resources, think, how you can use them again and in a better way.



6. Scope of challenges of the national urban policy

NUP 2030 is aimed at providing tools and solutions across Poland which will make it easier for self-governments of cities and functional urban areas to implement local and supralocal sustainable development policies. Postulated changes in legal provisions, modifications of financial mechanisms and support for the transport of knowledge are aimed at extending the range of solutions applied by self-governments.

In order for NUP 2030 to be able to refer in a structured manner to the complex nature of the urban subject matter, it turned out necessary to select the most up-to-date and key challenges of urban areas. Challenges that are especially important for current development issues faced by Polish cities were selected, while being simultaneously aware that they do not fully exhaust all aspects of functioning thereof. The analysis of data in various territorial sections, including urban dimension, which was presented in the study *Poland's Regional Development – 2020 Report* drawn up by Statistics Poland for the purposes of monitoring *the National Strategy of Regional Development until 2030*, was helpful in the diagnosis of cities' problems. In compliance with the assumptions, one of the report's objectives was to present the diagnosis of the socio-economic situation of cities in terms of formulating challenges in the NUP 2030.

An important premise, which was also taken into account in selecting particular challenges, is the possibility of a significant impact on solving problems faced by cities and functional urban areas by measures and instruments of a territorial nature.



While working on challenges and solutions, effects of work of expert groups conducted by the Institute of Urban and Regional Development were also used. The work performed by the Institute was aimed at preparing recommendations for national urban policy and public presentation thereof at the Urban Policy Congress in Katowice, in June 2021. Furthermore, it should be underlined that the selection of challenges was also based on the hierarchisation of these subject matters that were most often reported in numerous discussions and conferences preceding work on preparing NUP 2030, among others within National Urban Forums.

NUP 2030 distinguishes key challenges concerning cities and their functional areas and proposes priority directions of solutions around the following issues:

- problems regarding suburbanisation and spatial order,
- cooperation in functional urban areas and reinforcement of development capabilities (also by digital transformation),
- quality of natural environment in cities and adaptation measures towards climate change,
- urban mobility and security systems especially with regard to unprotected traffic participants,
- promotion of measures to the benefit of increasing the social capital with particular consideration of housing needs.

Each of the adopted national urban policy challenges includes elements of diagnosis and characteristics of the problem. Moreover, description of each of them provides propositions of solutions limiting the scale of the challenge. NUP 2030 operates with various levels of specificity of solutions. In some cases specific Articles of Acts or paragraphs of regulations are indicated. In other cases, solutions concern in-depth analyses and directions of legislative works in order to develop optimal provisions, which, in turn, require a broad cooperation with self-governments and experts during the whole legislative process.

In each of the challenges, with regard to the solutions and directions of solutions, their significance (level of impact) towards the category of cities: large, medium and small, were determined. Distinction of qualitative categories is based by the city on findings included in the documents already adopted by the Government of the Republic of Poland: *the Strategy for Responsible Development* and *the National Strategy for Regional Development 2030*. Implementation of particular solution conditions implementation of the NUP 2030, thus a special emphasis was put primarily on national institutions and fulfilment of specific obligations. Government institutions in their measures will be striving for achievement of goals and challenges defined in the NUP 2030 as well as directions of solutions indicated therein with preservation of macroeconomic stability. The scope of cooperation between government administration and a territorial self-government in the scope related to urban and functional areas development must be defined in a way that government institutions do not financially or organisationally support, or otherwise participate in measures, which are clearly non-compliant with the rules and directions of *the National Urban Policy 2030*.

Matrix of national urban policy's challenges – areas of implementation of the NUP 2030 goals

National Urban Policy Challenge:	Compact city	Green city	Productive city	Digital city	Accessible city	Efficient city
Challenge I: Fostering urban and spatial order	●	●	●	●	●	●
Challenge II: Counteracting chaotic suburbanisation processes	●	●	●	●	●	●
Challenge III: Strengthening cooperation of self-governments within functional urban areas	●	●	●	●	●	●
Challenge IV: Mitigating the negative effects of climate change in cities	●	●	●	●	●	●
Challenge V: Improving the quality of natural environment in cities	●	●	●	●	●	●
Challenge VI: Ensuring a sustainable and integrated urban mobility system in functional urban areas	●	●	●	●	●	●
Challenge VII: Improving road safety	●	●	●	●	●	●
Challenge VIII: Increasing housing availability	●		●	●	●	●
Challenge IX: Improving investment capacity of cities	●	●	●	●	●	●
Challenge X: Unlocking the social potential	●	●	●	●	●	●
Challenge XI: Accelerating the pace of digital transformation of cities	●	●	●	●	●	●

Key: ● strong impact ● very strong impact

The background features a stylized city map in white lines, overlaid on a series of horizontal color bands. The bands transition through a spectrum: orange at the top, followed by yellow, pink, light green, green, red, dark red, light blue, purple, and dark blue at the bottom. A large, dark blue trapezoidal shape is positioned in the upper left, containing the title text.

7. Challenges of the National Urban Policy 2030

Challenges of the National Urban Policy 2030

7.1. Challenge I

Fostering urban and spatial order



7.1.

Challenge I: Fostering urban and spatial order

7.1.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. **New Leipzig Charter** – ‘The Green City’
2. **Urban Agenda for the EU**
3. **UN New Urban Agenda** – ‘Sustainable Environment and Dynamic Development of Urban Areas’
4. **Agenda for Sustainable Development 2030** – Goal 11. Sustainable Cities and Communities; Goal 13. Climate Action
5. **European Landscape Convention**
6. **Davos Declaration** titled Towards a high-quality Baukultur for Europe



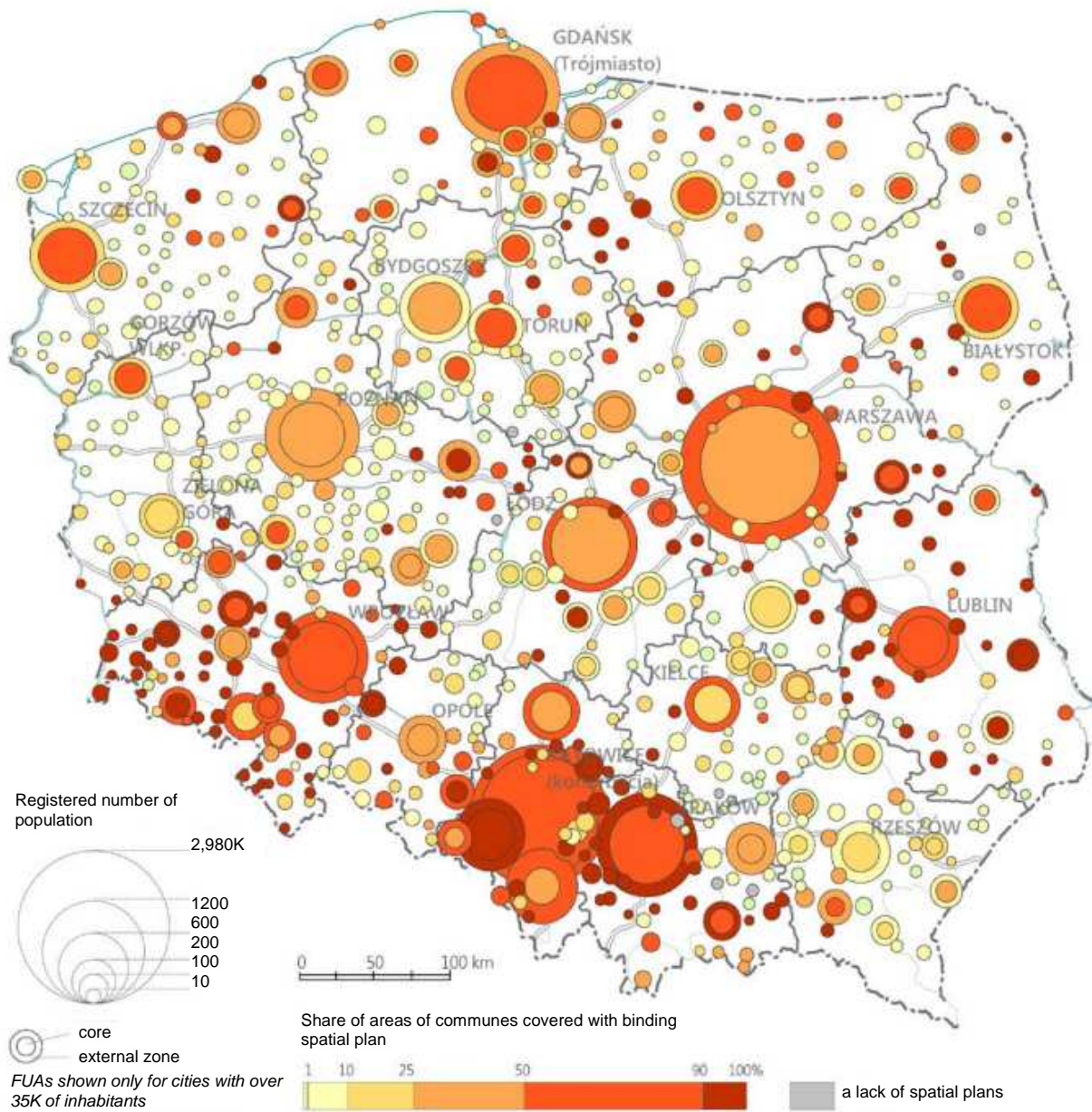
Cities are developing throughout decades and are subject to various economic, political, social or cultural transformations. Each development period inspired by development trends and needs leaves an imprint on the spatial structure of a city, its urban system, local spatial aesthetics or manners of using the land.

Spatial development is a process, the effects of which are permanent and often difficult to reverse. Improper decisions in the scope of spatial development in urban areas lead to the dysfunction of spatial structures often causing degradation of city centres, which is especially visible in smaller cities. Lack of the appreciation of the issue of reasonable spatial policy in the urban areas favours construction of new buildings in suburban areas, often chaotic, localised in areas hitherto used for other purposes. It has an impact on limiting fulfilment of hitherto functions and needs, which translates into creating new problems in the efficient and effective management of these terrains. It should be noticed that within administrative borders of cities as much as 42% of the geodetic area is used for agricultural manufacture, while this level in voivodeship cities amounts to 32%.

Adopted assumptions regarding drawing up plans are missing references to actual needs and do not have a reasonable justification or recommendations for covering only small areas with these plans, which results in limiting effectiveness of these documents and impact thereof on the spatial order.

Possibilities of granting planning permissions for implementation of investment in areas without local zoning plans also has a negative impact on the spatial order. In effect, a great part of the area of Polish cities became conflict-triggering, ineffective, with lower functionality and coherence and thus losing its city-forming values. This situation results in generating unjustified costs and wasting terrains which cease to fulfil their hitherto functions.

Figure no. 2. Share of the area covered with local zoning plans in urban and urban-rural communes, as well as suburban zones of cities with over 35K inhabitants in 2020



Source: own study on the grounds of data of the Ministry of Economic Development and Technology and GUS (study PZP-1 'Local spatial planning and development')

Currently approximately 1/3 of the country's area has local zoning plans, including cities with poviata rights with regard to which it constitutes 50.9% of area thereof, with regard to urban communes – 57.2%, with regard to urban-rural communes – 27.8% (figure no. 2)¹⁶, but they are often characterised with excessive fragmentation or space limitation inadequate with regard to the fulfilled function. Furthermore, it is characteristic that the binding local zoning plans indicate a significant oversupply of land allocated to housing development. In effect, it allows in total approx. 60 million people (with current number of approx. 38.2 million of Polish citizens) to settle in these areas¹⁷. According to the provisions of studies on the conditions and directions of spatial development (documents covering the area of a whole commune, drawing up of which by communes is obligatory in compliance with the binding provisions), land carrying capacity, which can be used for housing development oscillates between 130 and 200 million people. This situation favours disadvantageous trends by causing a chaotic and inconsistent development in urban areas and excessive expansion of investment (especially housing) outside borders thereof.

According to data of the Ministry of Economic Development and Technology and Statistics Poland, financial results of passing local zoning plans drawn up on the grounds of *the Act on spatial planning and development of 2003*, where as follows: in urban and urban-rural communes income generated until the end of 2020 amounted to PLN 21.9 milliard and expenditure - PLN 37.6 milliard, thus, the financial balance is negative, at the level of – PLN 15.7 milliard.

Spatial planning should shape changes in using and developing areas by making decisions in a transparent manner with a consideration of future needs of inhabitants as well as visions of communes' development. However, the authorities often do not make efforts to the benefit of establishing local zoning plans and decide to localise investment on the grounds of planning permissions. In the years 2003-2020, in Poland, 2.6 million of such decisions were issued, especially in suburban zones (figure no. 3). According to the concordant opinion of industry experts, they contribute to the largest extent to the increase of spatial chaos.

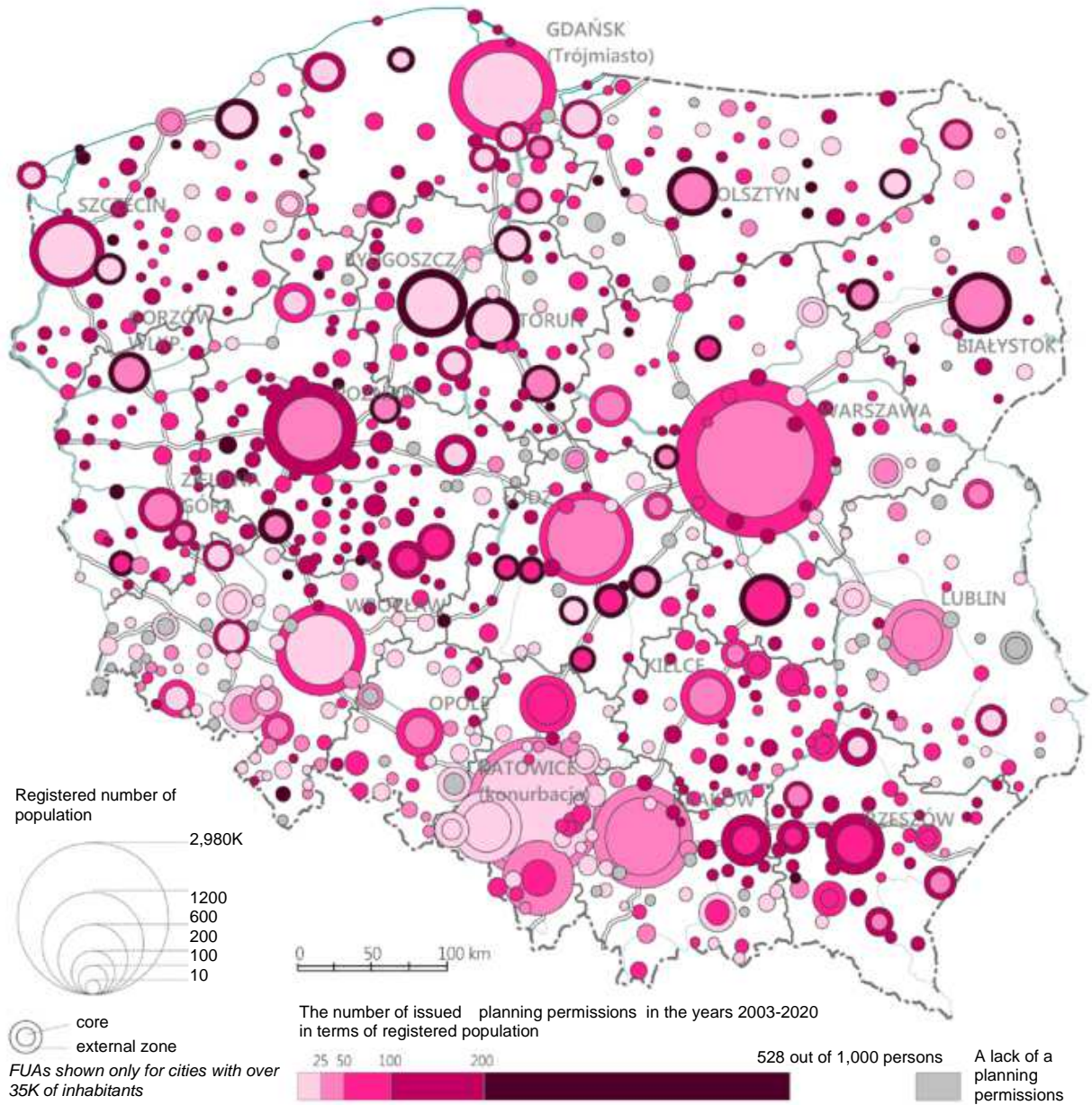
Disadvantageous effects of abusing planning permissions are often multiplied with improper interpretation of the concept of 'good neighbourhood'. Furthermore, the doctrine of the 'right to develop a real estate' applied in judicial decisions treats the construction right as a natural element of the ownership rights, which significantly hinders an effective spatial development process. The concept of the 'freedom of construction' is interpreted in isolation from understanding the concept of the 'public interest'. Due to the underspecification of the ownership right in legislation regulating spatial economy, in a situation of disputes settled by administrative courts, this concept is interpreted in a manner disadvantageous with regard to the needs of shaping the spatial order.

Current rules of specifying the amount of the land tax by communes i.e. on the manner of marking them in the land and property registration, and not on the purpose thereof in the local spatial development plan, favour decreasing the quality, cohesion and effectiveness of spatial development. They contribute to speculative behaviours of land owners, increase public, and indirectly also social and financial encumbrances.

¹⁶ More detailed information on the urban plans' validity by area, on the grounds of the binding legislative solutions, is presented in Challenge II Counteracting chaotic suburbanisation processes.

¹⁷ Adam Kowalewski, Tadeusz Markowski, Przemysław Śleszyński (eds.), *Studia nad chaosem przestrzennym (Studies on Spatial Chaos)*, Studia KPZK PAN (*Studies of the Committee for Spatial Economy and Regional Planning, Polish Academy of Sciences*), no. 182, v. 1-3, Warsaw 2018.

Figure no. 3. The number of issued planning permissions in urban and urban-rural communes, as well as suburban zones in the years 2003-2020 in terms of registered population



Source: Own study on the grounds of data of the Ministry of Economic Development and Technology and GUS (study PZP-1 'Local spatial planning and development')

In countries, in which special attention is paid to sustainable development policy and reasonable spatial economy, the phenomenon of urban sprawl outside borders of cities occurs less frequently and mainly concerns areas around large city centres. However, even then this phenomenon takes the form of coherent and organised areas.

The negative image of many Polish cities' space is caused not only by spatial, but also aesthetic and visual chaos. The insufficient care and disregard for the quality of public space allows, among others, advertisers to abuse urban objects and space, which leads to aggressive interference with the urban landscape. Polish cities also struggle with a number of challenges related to maintaining high quality and accessibility of public spaces. One of the dimensions of this problem constitutes the widespread growth of gated communities as a result of which, others (and often inhabitants of these housing estates) are deprived of a convenient and swift access to public spaces, greenery or public transport. It causes spatial segmentation, social disintegration, as well as affects communication behaviours (using cars) and security of inhabitants (e.g. often hinders arrival of rescue services).

While the concept of aesthetics can be associated with individual impression and perception of a given phenomenon or object, in the context of urban policy it refers to respecting the space as a common good. Care for aesthetics should be manifested in limiting the interference in urban space disrupting its coherence, consistency, accessibility, functionality, harmony or even introducing chaos disturbing the cultural character or local specifics.

Low quality of Polish cities' space, especially in comparison with European standards, forces the necessity to intensify measures and change provisions to the benefit of the substantial improvement in this scope, with a respect for the value of urban heritage, taking into consideration objects of contemporary cultural goods.

7.1.2. Proposed solutions

Apart from reinforcement of the awareness of the need for keeping a consistent and coherent urban structure, it is necessary to equip urban authorities with relevant tools and solutions favouring implementation of such policy. They should allow reacting to the occurring trends and take into consideration current challenges. The outbreak of the COVID-19 pandemic showed how new challenges concerning the organisation and functioning of a city can contribute to the occurrence of phenomena, which has not been taken into account in the hitherto thinking of needs that must be satisfied by a city. The period of pandemic allowed observing changes on the real estate market (office, service and housing), as well as increased interest in having a house 'outside the city', which is not irrelevant for suburbanisation processes¹⁸. Challenges in this scope overlap with demographic changes occurring in the cities, migration processes, the scale of which is difficult to foresee and which suddenly occurred after 24 February 2022, as well as increasingly faster changes in the organisation of work and assistive technology. Taking all of these phenomena into account, self-governments should not allow gentrification of urban spaces in the implemented spatial policy and the manner of spatial development.

¹⁸ Urban sprawl process can also have economic grounds, which is indicated in the chapter on Challenge VIII Increasing housing availability.

A. The need for changes in spatial planning

The matter of issuing planning permissions requires organisation, as currently it is broadly applied and contributes to the deterioration of the spatial order. It is important that investment in areas not covered with the binding local spatial development plan does not contribute to the destruction of spatial order and does not create a barrier for the effective process of managing these terrains. Binding provisions on spatial planning significantly limit the possibilities of repairing past, misguided planning decisions. It is related to the necessity of paying indemnity by the commune in the case of a plan change that may cause a drop in the real estate value. A lack of funds hinders commune authorities to update plans on the grounds of changing external conditions. Simultaneously, the existence of plans in the hitherto scope imposes on communes the obligation to increase costs related to the need of building necessary infrastructure, whose effectiveness of functioning may be very low. Therefore, it is advisable to develop solutions that will be advantageous to self-governments making decisions on reasonable land development, adequate for current needs and conditions or taking into account current challenges.

B. The need for better integration of socio-economic planning with spatial planning

Amendment of the Act on development policy rules of July 2020 taking into account preparation of the functional-spatial structure model is a step towards better integration of socio-economic and spatial planning. However, it is necessary to perfect and formally regulate the manner of presentation and the contents of the functional-spatial structure model so that provisions of this document allow urbanists, by using knowledge of their techniques, to specify in planning documents how to optimally settle in the urban space elements contributing to the socio-economic development. For implementation of a reasonable spatial economy and making better planning decisions it is necessary to allocate more significance to the balance of terrains intended for development, at the same time guaranteeing high quality of performance. Taking into account occurring population and settlement as well as spatial processes should constitute the basis for indicating new terrains for development with a consideration of other conditions of great importance for the urbanisation process. It is necessary to regulate such issues with the stipulation of relevant statutory solutions. Moreover, it is crucial to adjust public statistics to the communes' needs in the scope of spatial policy implementation. Holding data with a possibility of its proper and accurate attribution to specific urban spaces is one of the key issues allowing making relevant management decisions effectively.

It is necessary that solutions contribute to stronger connection of the urban spatial policy with their sustainable development process, as well as:

- they have a causative influence on reasonable land development;
- prevent making decisions inconsistent with the sustainable development rules;
- are compliant with public interest.

It is important that the planning power of self-governments is based on the reliable assessment of the existing status of development and foreseen needs that may occur in the area of a given administrative unit. At the same time, conditions that a given unit is subject to together with neighbouring units should be taken into account¹⁹.

A solution which would contribute to increasing the power of properly shaping the space by planning documents and their relation with the occurrence of current and future needs would consist in introducing a substantial control of adopted planning documents. To this end, it would be legitimate to appoint relevant administrative bodies that would conduct an effective control of these documents in a substantive manner and not only a formal assessment, as it is currently.

C. Reinforcement of the priority for high quality of public spaces

The definition of public space requires specification (by indicating its features and a catalogue of this type of spaces), which constitutes an element of urban space and is used by all inhabitants.

To this end, it is necessary to develop rules of indicating public spaces in planning documents as well as the possibility of shaping them by standards and guidelines concerning planning and designing (including in the scope of accessibility, integration, safety, microclimate, aesthetics, with a consideration of the idea of New European Bauhaus²⁰, as well as adapting to the needs of sensitive social groups). The so-called 'universal design' of these spaces should be the basic indication for designing public spaces and at the same time taking into account needs resulting from conservation protection.

Due to the significance and value of space as common good, urban and architecture competitions should be indicated as the basic formula of selecting a project or undertakings concerning public spaces, financed with European or national funds. Adopting this manner of decision-making should counteract unjustified unification of public spaces in isolation from regional or local natural and cultural specifics, as well as meet the expectations of the local community, respecting the participation requirements as an element in the process of shaping the project requirements and assessment. Improvement of aesthetics and quality of public spaces should be also contributed by the changes introduced in the public procurement law. The basis for the introduction of possible, other changes should be the assessment of the effectiveness of already introduced solutions performed in the future.

D. Support for effective and functional inclusion of existing development areas in urban structures

It is necessary to more broadly use housing policy tools aimed at using and managing uninhabited flats or buildings in housing stock (among others programmes such as a flat for renovations). It is advisable to intensify investment in housing infrastructure by public institutions funded at a central level (e.g. company flats for uniformed services, flats for young academics, etc.), so as to treat as priority the opportunities of using existing development (*brownfield*) – through remediation of land or renovation, adaptation and modernisation of buildings etc. Next, the opportunities of supplementing existing urban structures with new development should be taken into consideration and, finally, as a last resort, the construction of new facilities in undeveloped land such as forests and farmland (*greenfield*). Apart from the above measures, actions in the scope of revitalisation (broader use of planning instruments in the revitalisation process) should be undertaken.

Revitalisation programmes' implementation should contribute to organising urban structures, preserving multifunctional areas allowing various forms of use depending on varying needs of local communities. The remedial programme should organise the existing areas by restoring and giving new functions to already existing buildings, as well as supplementing them with new facilities.

To improve the quality and coherence of spatial development, self-governments should to a greater extent

¹⁹ The issues of shaping space in the territory of a commune in conjunction with the conditions occurring in neighbouring terrains are discussed in more detail in Challenge II Counteracting chaotic suburbanisation processes.

²⁰ Council conclusions on culture, high-quality architecture and built environment as key elements of the New European Bauhaus initiative (2021 /C 501 I/03).

use reliefs in the amount of the land tax on entities that are owners of developed and post-industrial land (*brownfield*), where investment changing the manner of development and use thereof is implemented e.g. new housing, services, etc., facilities are created and put into operation. Revitalisation processes can also contribute to the implementation of the 15 minute city idea assuring in the already developed land managing all basic needs in the proximity of the place of residence, not further than at a fifteen minute distance on foot, thus improving the quality of life in the city. The idea of a 15 minute city should also be taken into account in development of new land. Accessibility to basic services is one of the factors taken into consideration in selection of a place of residence and this factor can become more and more dominant in the light of various types of transformations and challenges.

A solution contributing to the improvement of the development structure and its justified density, especially in areas of central cities, is regulated in relevant legal provisions of the so-called air, surface and subsurface ownership right. The work on the introduction of such a solution to the Polish legal system is conducted in the Ministry of Justice²¹. The air, surface and subsurface will allow including e.g. space over or under transport infrastructure in the urban tissue.

²¹ Currently, within the Polish Deal analytical and conceptual works are pending, covering, among others, market research on the need for the introduction of a regulation concerning the air, surface and subsurface ownership right and determining the scope of this new legal institution in the context of influencing the legal system.

E. Support for reasonable land development with the use of fiscal solutions

Apart from the aforementioned legal solutions related to land planning and organisation established at a national level, it is advisable to improve planning processes with effective fiscal instruments which belong to local self-governments' competences. This proposition is based on a solution used in the Act on revitalisation²². In order to use these tools, it is provided for analysing the opportunity to introduce a change to the local plan that would be beneficial for self-governments, without paying indemnity to land owners when e.g. provisions of the plan are not implemented at a specific time.






















Simultaneously, the need for considering the possibility of territorial self-government units shaping local taxes and developing a solution that would allow determining the amount of land taxation depending on their purpose in the local spatial development plan as well as the use thereof and not depending on their marking in the land and buildings registration, as it is currently, is indicated. The possibility of increasing the tax rate as a result of changing the purpose of land in the local spatial development plan e.g. in case of intending the land for residential development, it would contribute to lowering the pressure on land owners to mark out such land in the plan. It would limit the permanently undeveloped land speculation in compliance with the purpose specified in the local plan. At the same time, it would also contribute to rationalisation of investment measures undertaken by the commune, which would translate into a more effective manner of using commune's funds and, indirectly, would translate into benefits generated by inhabitants.

F. Strengthening of landscape, cultural and aesthetic values protection

Care for urban landscape requires both using horizontal (based on the initiation and improvement of legal solutions) tools and tools adjusted to local conditions. These tools often need to be developed in the process including various stakeholders and should cover support for the protection of integrity and authenticity of urban heritage attributes such as scenic values (silhouette of the city, viewing axis), urban layouts, urban greenery, valuable architectonic premises (contemporary and historic). These measures also include developing grounds (also in the scope of public policy) for systemic protection of contemporary cultural goods, which, apart from monuments, shape local identity.

It is necessary to review the effectiveness of functioning of already existing legal solutions constituting urban landscape protection tools, especially public space. Given that transferring the supervision over the implementation of the landscape resolution directly to the commune proved to be effective, preparation and execution processes should be evaluated.

²² The Act of 9 October 2015 on revitalisation (Journal of Laws of 2021, item 485).

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. The need for changes in spatial planning			
B. The need for better integration of socio-economic planning with spatial planning			
C. Reinforcement of the priority for high quality of public spaces			
D. Support for effective and functional inclusion of existing development areas in urban structures			
E. Support for reasonable land development with the use of fiscal solutions			
F. Strengthening of landscape, cultural and aesthetic values protection			
Key: significance for the size category of the city:	 medium	 major	 great

Challenges of the National Urban Policy 2030

7.2. Challenge II

Counteracting chaotic suburbanisation processes



7.2.

Challenge II: Counteracting chaotic suburbanisation processes

7.2.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. New Leipzig Charter – ‘The Green City’

2. Urban Agenda for the EU

3. UN New Urban Agenda – ‘Sustainable Environment and Dynamic Development of Urban Areas’

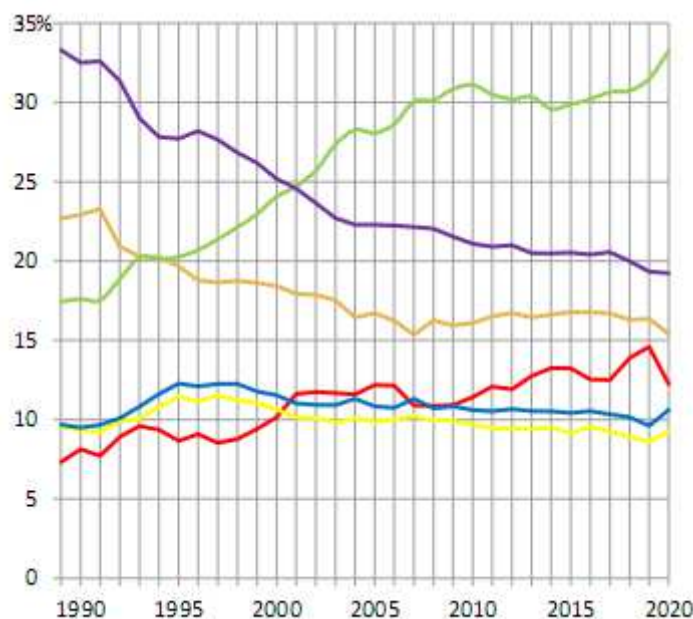
4. Agenda for Sustainable Development 2030 - Goal 11. Sustainable Cities and Communities; Goal 13. Climate Action.

5. Davos Declaration titled Towards a high-quality Baukultur for Europe



In the last decades there have been significant changes in demographic processes in Poland, especially in the intensity and directions of migration of our citizens. In urban agglomerations, since approximately 1995, there has been an increase in the inflow of population to suburban zones as a result of which, at the similar level of the amount of registered migration, the share of migration to these zones rose from approximately 15% to 30% (diagram no. 2).

Diagram no. 2. Changes in the structure of registered inflow of population in the years 1989-2020 by category of communes



— 'Big Five'
— 2 – other large cities
— 3 – suburban zones
— 4 – medium and small cities

Source: own study on the grounds of:

Śleszyński P., 2022, Migracje wewnętrzne (*Internal Migrations*), [in:] A. Potrykowska, D. Bojarska-Lis, M. Budziński (eds.), Sytuacja demograficzna Polski. Raport 2020-2021 (*Demographic Situation in Poland. 2020-2021 Report*), the Government Population Council, Warsaw (explanation of the classification of zones and communes therein)

In terms of migration processes, the phenomenon of migration to five largest city centres (Warsaw, Krakow, Poznań, Tri-City, Wrocław) also deserves attention. It proceeded at the cost of a decrease in migration to medium and small cities. In the case of Poland it is characteristic that not only persons from urban cores, but also from peripheral areas, come to suburban zones. It is of significance especially in suburban zones of larger cities (figure no. 4). Functions fulfilled by the city in development, economic and social processes favour the phenomenon of spreading land development into adjacent areas (*urban sprawl*). Thus triggered, chaotic suburbanisation causes growing (structural, managerial, related to natural environment quality, etc.) problems and significantly decreases citizens' quality of life. Spatial development in communes often results from local ambitions and interests, without consideration of the needs and processes occurring in neighbouring communes and the more so, on the scale of functional urban areas. In the long term, such an approach can favour the arising of problems not only on a scale of a given commune, but also the whole functional area. The lack of coordination and cooperation simultaneously contributes to problems growing in managing territorial self-government units, constituting financial challenges that are difficult to meet, and thus limiting possibilities of development in the long-term of both cities and functional urban areas. The problem is that suburbanisation processes usually proceed in a random and uncoordinated manner.

Uncontrolled urban sprawl can have negative consequences both for the area and for its users. The demand for new construction in suburban zones is conditioned by buyers – inhabitants (living closer to nature, higher privacy of life, cheaper costs of purchased housing, especially for young families with children) and entrepreneurs (lower costs of purchased land and greater availability). In suburban areas, this situation causes degradation of natural and agricultural areas, decreases biodiversity, destroys spatial order, local cultural heritage and landscape aesthetics. Development of natural ventilation wedges deteriorates the natural aeration corridors on the edge of cities, worsens the process of circulation and air exchange inside cities. It favours higher nuisance of urban heat islands²³, which causes deterioration of the quality of life of people in the cities. Simultaneously, urban sprawl affects an increase in the costs of implementation and maintenance of technical and transport infrastructure, smaller accessibility to public services, a change in the lifestyle and the manner of using time, higher use of the energy, fuel, etc. This situation does not improve the quality of life of inhabitants in suburban areas and, to a large extent, contributes to the transformation of cities, disappearance of traditional urban structures and functions, which favours degradation of inter-urban areas.

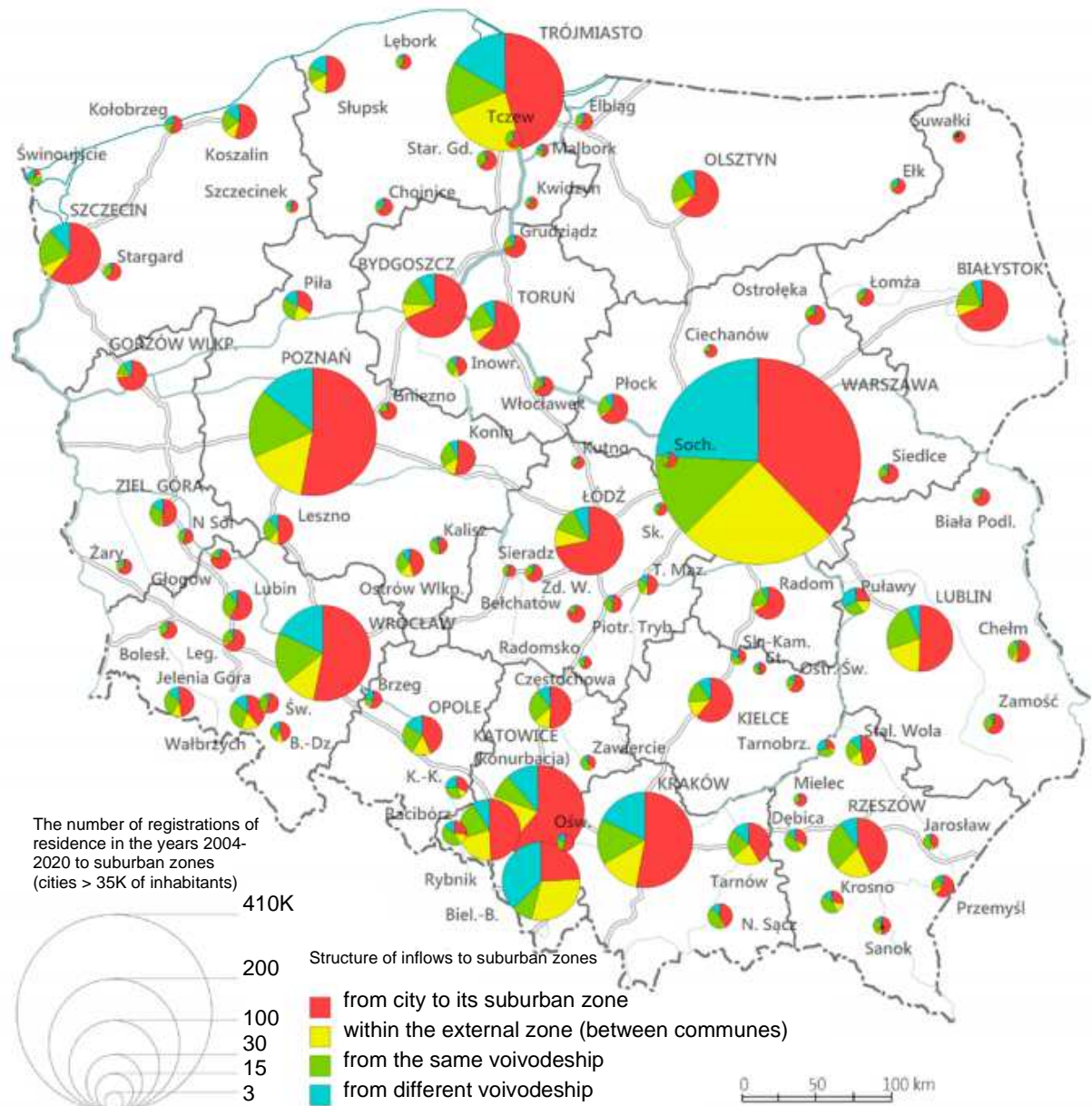
In the quoted context, the especially important problem consists in locating the new development in suburban zones far from one another. In many suburban zones, the index of the shortest dendrite²⁴ between address points per one inhabitant exceeds fivefold the values observed within administrative borders of the cities (figure no. 5). It significantly increases costs of infrastructure's construction and maintenance (roads, sewage system, energy networks, etc.).

On the one hand, the phenomenon of chaotic suburbanisation results from the imperfections of the spatial planning system binding in Poland. On the other hand, solutions stipulated by the commune's planning governance did not create formalised forms of cooperation in functional urban areas.

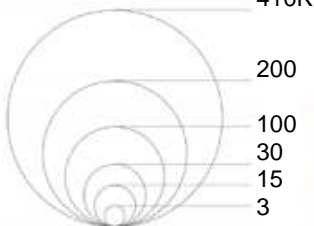
²³ More on the problem of urban heat island in Challenge IV Mitigating the negative effects of climate change in cities.

²⁴ The shortest dendrite (minimum spanning tree) is a graph between points in space, where the shortest (and thus usually the most effective one) path runs through each of these points only once. The lower the values of the index, the less linear infrastructure is needed to provide services to a particular place (e.g. building).

Figure no. 4. The number and structure of registered inflow to suburban zones (for cities with over 35K inhabitants, including all cities with poviats rights) in the years 2004-2020



The number of registrations of residence in the years 2004-2020 to suburban zones (cities > 35K of inhabitants)



Structure of inflows to suburban zones

- from city to its suburban zone
- within the external zone (between communes)
- from the same voivodeship
- from different voivodeship

Source: own study on the grounds of inter-communal base of re-registrations of Statistics Poland.

Urban sprawl is promoted by decisions made by local authorities calculated only for ad hoc needs, without consideration of long-term social consequences. A kind of competition between suburban communes can be even observed for inhabitants. In the case of such a conflict of interests it would be difficult to expect that the issue of a reasonable, coherent spatial economy on a scale of a functional area will find a solution without support from law guaranteeing harmonious and sustainable management of supralocal spatial structures' development. It is crucial to design solutions in this scope to assure complex and coherent spatial processes' management. It should be underlined that suburbanisation that proceeds according to a plan referring to the rules of urban planning, i.e. conducted in areas equipped with social and technical infrastructure (e.g. around railway stations), causes decidedly smaller problems than a chaotic and inconsistent development.

Furthermore, uncontrolled suburbanization generates great costs²⁵, which in the majority of cases should be treated as economic, social and spatial-environmental losses. They refer to, among others, costs of transport, technical infrastructure and broadly understood municipal services, which are funded by territorial self-government units²⁶. The burden of costs resulting from the need to manage functional urban areas is often distributed to particular communes not proportionally. Costs are sometimes taken over by the core city without proportional participation of adjacent areas (such a situation especially occurs in areas of large urban agglomerations). These costs are transferred indirectly onto inhabitants. Moreover, the costs of wasting time that the inhabitants have to spend on commuting should be taken into account, which, in turn, often causes e.g. disorganisation of a family life or limiting free time, etc.

A negative effect of the suburbanisation process is transferring business activity, often set up in isolation from the existing infrastructure, to suburban communes. An example can be a large logistics centre created not only in separation from relevant road infrastructure (roads of a relevant technical class) without assuring handling by railway siding or simply at a distance from the already existing railway lines. Office facilities or large manufacturing plants are often built in places inaccessible with means of public transport. To a great extent it determines inhabitants' reliance on individual motorisation thus creating additional, new problems and impediments. An important challenge related to urban sprawl in suburban areas is the lack of legal framework assisting and regulating comprehensive and coherent management of functional urban areas. Definition of a functional area is included in Article 5 point 6a of the Act of 6 December 2006 on development policy rules (Journal of Laws of 2021, item 1057).

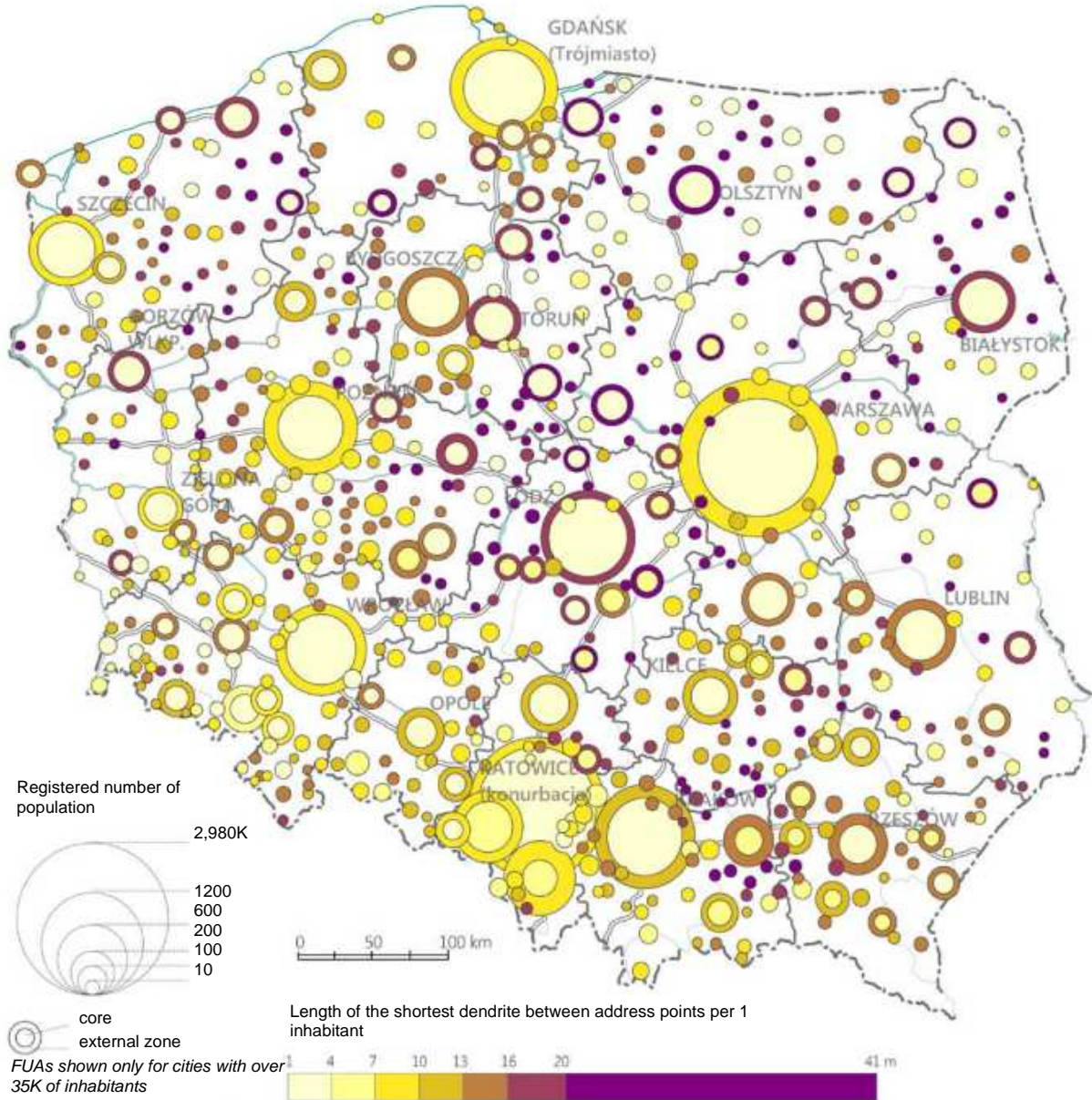
However, in the binding legal system there are no sufficient solutions that would treat functional areas in a comprehensive manner and that would formalise planning and managing such areas²⁷.

²⁵ In compliance with the Report of the Committee for Spatial Economy and Regional Planning, Polish Academy of Sciences, of 2018, each year the spatial chaos in Poland, including, to a large extent, the uncontrolled suburbanization, causes costs estimated at PLN 84.3 milliard a year (Adam Kowalewski, Tadeusz Markowski, Przemysław Śleszyński (eds.), *Studia nad chaosem przestrzennym (Studies on Spatial Chaos)*, Studia KPZK PAN (*Studies of the Committee for Spatial Economy and Regional Planning, Polish Academy of Sciences*), no. 182, v. 1-3, Warsaw 2018).

²⁶ The issues of excessive costs resulting from conducting spatial policy deprived of reasonable, current and perspective justification, refer to the situation of particular territorial self-government units as a result of, among others, imperfections of used tools, referred to in Challenge I Fostering urban and spatial order, and the lack of perspective thinking of spatial development processes.

²⁷ More on functional urban areas in Challenge III Strengthening cooperation of self-governments within functional urban areas.

Figure no. 5. The length of the shortest dendrite per 1 inhabitant in urban and urban-rural communes, as well as suburban zones in 2018



Source: own study on the grounds of data of the Head Office of Geodesy and Cartography (calculations by Katarzyna Goch, the Institute of Geodesy and Cartography and Paweł Sudra, PhD, the Institute of Urban and Regional Development)

The possibility of communes voluntarily preparing the functionally correlated supralocal development strategy, being a joint development strategy of those communes in the scope of their territories and faced challenges, is given by the aforementioned Act on development policy rules in conjunction with the Act of 8 March 1990 on commune self-government (Journal of Laws of 2022, item 559, as amended). There is, however, no participation requirement of all communes or counties of the functional area in the process of creating such a strategy. Introduction of the possibility to prepare this type of development strategy resulted, in the first place, from allowing a territorial self-government unit to implement ITI in the current financial perspective. Given the above, obligatoriness of preparing supranational development strategy by ITI FUA Unions of voivodeship centres was introduced in the Partnership Agreement for 2021-2027, since they have the most extensive experience in the implementation of territorial strategies at the supralocal level.

On the grounds of binding provisions, territorial self-government units can conclude agreements, form unions and associations. Forms of cooperation were popularised in functional areas of voivodeship cities with regard to the EU introduction of an instrument – Integrated Territorial Investments (ITI) in 2014, implemented on the grounds of territorial strategies. Nonetheless, the ITI instrument did not refer to the subject matter of spatial policy. Therefore, measures undertaken within ITI, understood as implementation of integrated projects, do not lead to a permanent spatial integration. Tools directly allowing implementation of common spatial policy are missing.

7.2.2. Proposed solutions

Introduction of systemic solutions treating spatial policy in a functional area in a comprehensive manner will not immediately influence solving problems that occurred as a result of inconsistent and chaotic decisions made in the previous periods. The process of mitigating shortages and impediments experienced by inhabitants of areas covered with suburbanisation and introducing organisational solutions optimising costs incurred by self-governments will take many years.

The condition of spatial order in functional areas will be influenced not only by solutions directly referring to strengthening mutual coordination of spatial policy between neighbouring self-governments, but also those aimed at preserving coherence between the current condition and future needs. It is important that the environmental dimension, the significance of which is more and more noticeable, is also included in the development policy planning process concerning these areas. It is of great importance especially in the context of the New European Bauhaus initiative that connects culture and technology, innovation and design, engineering, craft, arts and science with sustainable development rules to the benefit of achieving climate neutrality. Self-governments must actively use legal solutions that contribute to keeping spatial order in their area. To this end, solutions in the scope of changes in spatial planning provisions, referred to in Challenge I Fostering urban and spatial order, may be helpful.

A. Solutions at a central and local level for sustainable territorial development

The presented diagnosis and terms and conditions for conducting common spatial policy in functional areas indicate that currently it is impossible to more formally influence shaping of spatial order therein. The issues of coordination of spatial policy in functional areas should be taken into account in the work on changes in spatial planning processes.

In the course of these works, it should be determined whether these issues can be solved with planning tools or whether solutions from other scope are necessary to this end. An optimal solution of a horizontal nature is the legal empowerment of functional urban areas and equipping them with instruments allowing actually influencing the shape and the manner of conducting spatial policy. Apart from the necessity to establish a position on directing a more causative reaction to spatial processes occurring in functional urban areas, especially within cooperation coordination, at the same time, effective measures that improve these processes are needed.

Implementation of the integrated approach is manifested by the introduction of a functional and spatial structure model, i.e. a spatial component of the socio-economic development strategy, to the (commune and supranational) development strategy. Legal solutions introduced in 2020 provide the neighbouring, functionally related communes and counties, within which these communes are located, with the possibility of developing a common supralocal development strategy. It is important to create incentives for cooperation, as a result of which one document would cover the whole territorially correlated area. The Ministry of Development Funds and Regional Policy prepared a manual supporting drawing up a supralocal development strategy, however, too short a period of time when a given solution has been binding does not yet allow drawing conclusions on the use and effectiveness of impact thereof.

Self-governments should more actively engage in reasonable land management (among others to protect farmland, green areas, wildlife corridors) and effectively use already available tools. Spatial order improvement and spatial development optimization can be contributed by self-governments conducting an active policy of land re-parcelling in areas allocated for development.

B. Solutions supporting mitigation of negative suburbanisation effects

It is necessary to work out a relation between documents currently being prepared at a local level and a document mutual for the whole functional area. Support in conducting a coherent and rational spatial policy in a functional area could consist in the appointment of a planning office or employment of a team that would continuously conduct work shaping spatial order in this area. It will also be advisable to reinforce the function and development potential of existing planning and urban-architectonic structures in the Marshal Offices in order to coordinate development on a scale of the whole functional area.

An alternative manner comprises introducing in Poland a solution consisting in the appointment of a 'planning union' in German fashion²⁸, which includes a functional urban area. The union would formalise cooperation of self-governments located in a given functional area in order to conduct a coherent and coordinated spatial planning and development.










²⁸ Planning units, and more specifically, spatial planning regions (Raumordnungsregionen, ROR) are used for functional division of the area of the Federal Republic of Germany for the purposes of spatial planning. There are 96 spatial planning regions, whereas, the delimitation is specific for the country and similar to delimitation of regions NUTS 3. Regions are used for coordination of spatial planning at the supralocal level and for monitoring of spatial development and socio-economic phenomena, <https://www.bbsr.bund.de/BBSR/DE/forschung/raumbeobachtung/Raumabgrenzungen/deutschland/regionen/Raumordnungsregionen/raumordnungsregionen.html>.

With regard to the potential of a given functional area and its development background, it would determine optimal development directions of particular territorial self-government units and at the same time define possible forms of support. Such a formalised structure could have a stronger formula of impact than e.g. appointment of a metropolitan urban committee. In the current legal state, its causative impact on decisions made in the field would not differ from current impact of the Central Urban-Architectonic Committee (*Główna Komisja Urbanistyczno-Architektoniczna - GKUA*). It would have to have authority in management structures of the metropolitan area and be reinforced by solutions referred to in the chapter devoted to Challenge I Fostering urban and spatial order.

Despite the number of measures that have been conducted for some time in order to promote and inspire various forms of cooperation between territorial self-government units, it is advisable to further and more intensively promote measures and solutions favouring better cooperation between self-governments, among others, by implementation of a pilot project, promotion of good practices or publication of textbooks.

Due to the significance of spatial planning and development for effective functioning and development, guaranteeing high attractiveness of living and investing, it is necessary to establish system programme for improving skills, competences and certification of the broadly understood spatial planning system staff (urbanists and architects, entities preparing planning documents commissioned by communes, experts and advisers, self-government employees). It will be advisable to support this programme with an education system in the scope of spatial value and the need for its protection that would strengthen the awareness of the horizontal impact of decisions made within current management.

Benefiting from funding programmes should be to a larger extent connected with the implementation of rules for effective spatial planning and cooperation in this scope between neighbouring territorial self-government units. It means a need for creating a coherent catalogue of rules for spatial development and space management, which should be followed by beneficiaries of the European funds and other subsidy programmes, in the implementation of supported projects (primarily investment projects).

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Solutions at a central and local level for sustainable territorial development			
B. Solutions supporting mitigation of negative suburbanisation effects			
Key: significance for the size category of the city:	 medium	 major	 great

Challenges of the National Urban Policy 2030

7.3. Challenge III

Strengthening cooperation of self-governments within functional urban areas



7.3.

Challenge III: Strengthening cooperation of self-governments within functional urban areas

7.3.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. **UN New Urban Agenda** – ‘Sustainable Environment and Dynamic Development of Urban Areas’

2. **Urban Agenda for the EU**

3. **Agenda for Sustainable Development 2030** - Goal 11. Sustainable Cities and Communities; Goal 13. Climate Action

4. **EU Territorial Agenda 2030**

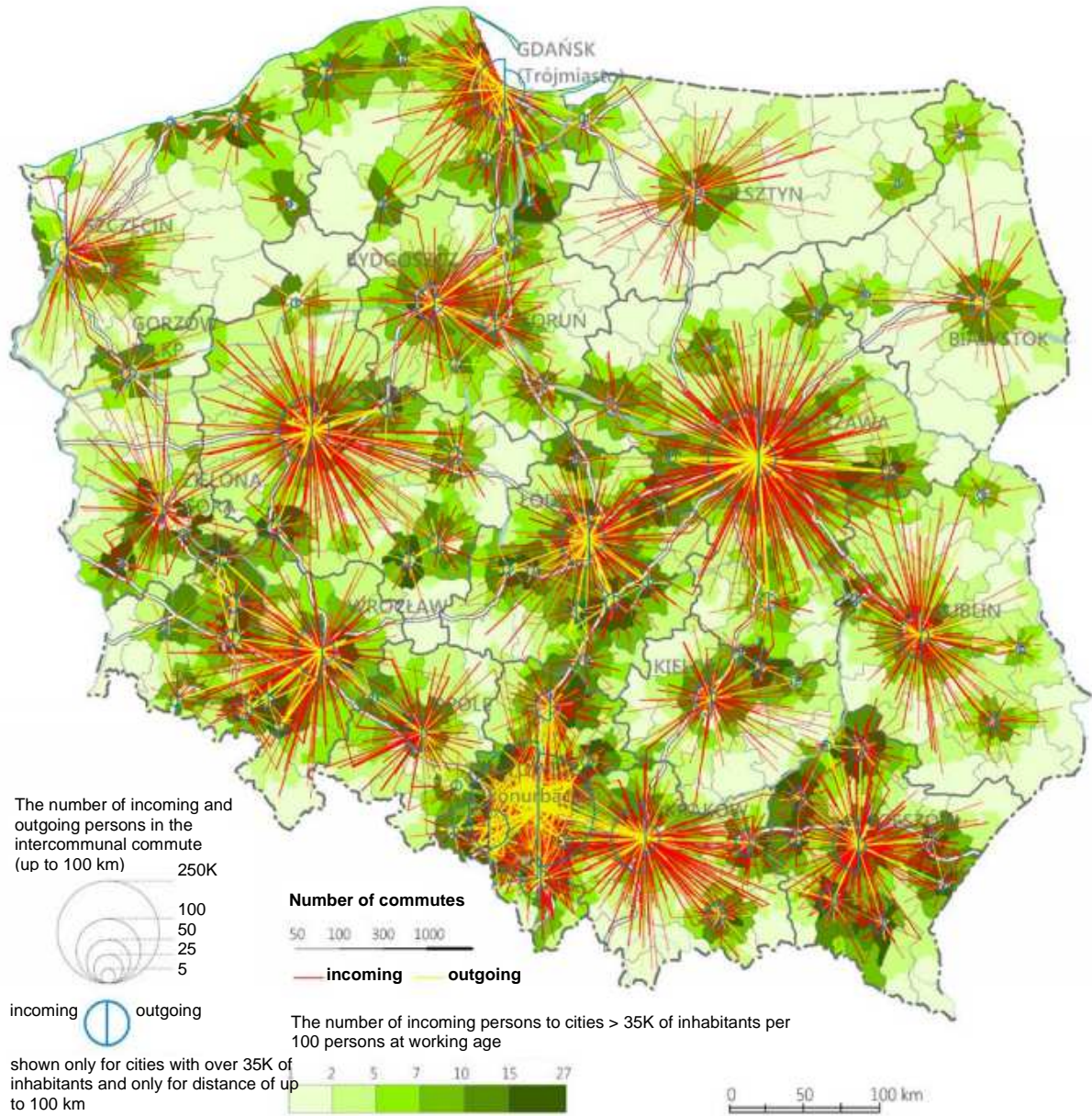


The level that allows effective planning and implementation of development measures as a result of optimal recognition of resources and development of a local capital, is the local level. Endogenic local resources are often located independently of administrative borders and the scope of their impact covers the entire functional area. This functional area is usually the so-called daily urban system covering shuttle commute to work and services (figure no. 6).

In Polish conditions measures undertaken in functional areas usually refer to three levels of territorial self-government (voivodeship, powiat and commune). However, administrative boundaries of commune self-government competences are of crucial importance. In the Polish development model, commune self-governments have decidedly the most tools. They also have the biggest responsibility in this scope. These are also the smallest units, which, especially in suburban zones, are inseparably related to the neighbouring area. The second crucial level is the powiat self-government, which has competences in the scope of maintaining technical and social infrastructure, as well as in the scope of shaping economic policy and labour market functioning. Many times the range and scale of socio-economic or natural correlations causes the necessity of the powiat self-government's engagement in various initiatives that require cooperation within functional areas. Furthermore, in the case of the largest functional urban areas (metropolitan areas), the range of which exceeds the borders of two or even three counties, it is also necessary to include the third level in these initiatives - the voivodeship self-government. The latter's competences, pursuant to the Act of 5 June 1998 on voivodeship self-government (Journal of Laws of 2022, item 547, as amended), include performing tasks of a voivodeship nature specified under acts, in particular, in the scope of collective transport and public roads. This territorial complexity can generate barriers preventing effective management of problems exceeding borders of a given administrative unit.

The scale of problems is often directly proportional to the size of the core centre and the strength of its impact on the environment. The dynamic development of large cities and the occurrence of phenomena that are typical for centres developing in free market conditions, including the suburbanisation phenomenon that often takes the most unfavourable spatial form - urban sprawl.

Figure no. 6. Density, directions and ranges of commute to city centres with over 35K inhabitants in Poland, in 2016



Source: own study on the grounds of data of the Centre for Urban Statistics of the Statistical Office in Poznań (intercommunal commute matrix)

This phenomenon emphasises difficulties related to the administrative fragmentation and a lack of integrated management in areas strongly related in terms of functions around city centres. Polish self-governments still need support that will make effective cooperation easier. Furthermore, it is necessary to improve legal tools for such cooperation. Moreover, socio-cultural conditions can be considered a disadvantage, as their derivatives include: a low level of social capital and a low level of identification with local historic-cultural heritage, a lack of understanding of the broader public interest and a low level of trust both in social relations, as well as between inhabitants and public institutions.

Cooperation, in this case cooperation among self-governments established in order to implement common undertakings and projects, is very desirable. It allows building competitive advantage, minimising costs due to the economies of scale, using available resources more effectively, increasing the development potential, integrating the public services system, etc.

Moreover, the unclear systemic grounds regulating cooperation in functional urban areas are problematic. Coordination of management and establishment of a permanent cooperation in FUAs requires appropriate funds that allow development of necessary tools. It is usually an effect of previous measures undertaken within bottom-up initiatives and not an agreement with regard to the implementation of e.g. a common strategy. Benefits from the cooperation are often postponed and thus, they are usually an insufficient trigger for developing permanent connections. Evaluation research²⁹ proves that in more or less half of FUAs of ITI voivodeship centres a permanent character of a partnership understood as a capacity to survive in the case of a lack of continuation of the European Union financial support cannot be stated. In some cases, it was directly indicated that the EU funds trigger motivation for cooperation. Therefore, effective incentives for territorial self-government units' cooperation and collaboration should be still searched for.

A poviát, despite many own tasks important from the perspective of conducting a development policy, does not play a crucial role in its creation and coordination. It is necessary to increase the role of a poviát as an entity initiating the process of establishing supralocal development strategy or, in the case of indolence in this scope, at the level of functionally related communes.

Both the issue of managing metropolitan areas and functional areas of smaller city centres still requires organisation. Formalisation of cooperation in the metropolitan area creates development opportunities for the entire area as well as its units (e.g. by a transport system integration, costs rationalisation of joint undertakings). Nevertheless, such a cooperation is related to a series of managerial and cooperative challenges. Extending the catalogue of cooperation with additional functions will differentiate demand-supply relations in spatial terms. If entities running local activities cannot meet given requirements, they are forced out of the city or their activity is limited. This becomes a course of tension between metropolitan and local nature of a city. Even today, it is especially visible in the trade and services sphere as well as on the housing market.

²⁹ *Evaluation of the instrument implementation system ITI in the financial perspective for 2014-2020*, Wolański i Ego Lider Ewaluacji 2014, June, 2018.

A lack of a proper systemic basis for metropolitan areas became a crucial development barrier hindering achievement of a sufficient level of cooperation. It concerns both the financial and social dimensions. Growing challenges require the existence of stable metropolitan structures capable of coordinating measures and levelling off opportunities, as well as favouring spatial coherence, competitive in the international arena and intensifying internationalisation processes. The existence of a metropolitan community itself is a natural phenomenon independent of legislation. Nonetheless, a lack of systemic grounds for organised functioning of such communes decreases their ability to act. The OECD reports³⁰ that maintaining obsolete legal solutions in the environment of large cities automatically weakens the economic and political potential of states in which such metropolises function. Within its recommendations for Poland, the OECD indicates the need for introduction of a flexible model of managing metropolitan areas (among others by experimentation and relevant financial stimuli). Statutory regulations of metropolitan areas' functioning can undoubtedly contribute to swift liquidation of many development barriers.

On the basis of the analysis of correlations between cities and rural areas, the OECD indicates main factors that facilitate or hinder such relations for Poland. The OECD's report indicates such elements as suburbanisation and uncontrolled development of cities, environmental consequences, fiscal conditions and currently available institutional mechanisms supporting effective urban-rural correlations. Despite the existence and availability of intercommunal cooperation mechanisms, this process proceeds in an unsatisfactory manner in Poland, in such areas as education and housing. However, it proceeds better in the scope of e.g. water and waste management, broadband networks and road infrastructure.

7.3.2. Proposed solutions

A. Promotion and popularisation of existing instruments of supralocal cooperation and reinforcing structures thereof

Directions of measures in this scope mainly concern the use of already existing legal norms to reinforce cooperation within FUAs.

Increasing awareness of self-government authorities requires not only using the already available legal solutions, but also conducting an accurate analysis regarding higher empowerment of FUAs. It is also proposed to initiate projects aimed at deepening the cooperation and promotion of the already available tools and instruments and their development in functional urban areas.

It is also postulated to strengthen the role of a regional self-government in cooperation with FUAs. Simultaneous strengthening of competences of voivodeship assemblies (*Polish: sejmiki*) and executive boards will translate into increasing the coordinating role of the voivodeship self-government. Coordination is understood as indicating directions of socio-economic and spatial development and giving opinion in the scope of compliance of documents received at the level of local self-governments with voivodeship development policy. Thus, the energy of local measures and communal planning authority would gain coordination frameworks and objectives of the local development policy would be coordinated in the entire functional area and in regional correlations.

³⁰ Preliminary propositions resulting from the report drawn up (2022) in cooperation with the OECD *Urban-rural Relations in Poland*. Recommendations from the report are, in principle, aimed at contributing to the reinforcement of urban-rural relations.

It requires defining a hierarchical system of service centres in FUAs by specifying the target functional and spatial structure based on diagnosed specialisations of particular centres, as well as mutual complementarity of functions.

Due to various conditions and territorially diverse settlement network in regional systems, the approach to the development of cities and urban areas should gain its separate regional dimension not only compliant with the directions of national urban policy, but also with a consideration of regional urban policies or voivodeship development strategy with a separate part devoted to the regional perspective of conducting urban policy³¹. An important aspect which should be taken into consideration in territorial analyses is also the cross-border dimension of functional urban areas. The outlined approach requires adjustment of relevant legal regulations.

In this scope, it will be possible to use the planned work on drawing up a bill on sustainable urban development.

B. Developing solutions for metropolitan areas

It is necessary to introduce systemic solutions to the territorial self-government system for areas that require close cooperation, in particular metropolitan areas, so as to respond to the needs of cities and functional urban areas as best as possible.

Currently, in Poland, a metropolitan union has been introduced to the law and order only for one area – Metropolis GZM established in 2017. First experiences of this union and the need to popularise systemic solutions at the level of the entire country, incline to establish coherent and universal systemic solutions for other metropolitan areas. Detailed recommendations in this scope should be provided for by the evaluation of the Metropolis GZM's functioning, planned in 2022 by the Ministry of Development Funds and Regional Policy.

Integration measures undertaken by self-governments in metropolitan areas, as e.g. implementation of the ITI instrument and statutory initiatives with regard to consecutive metropolitan areas (Warsaw, Poznań, Krakow, Łódź, Pomeranian, Wrocław) indicate the need to introduce solutions creating more causative and acceptable methods of cooperation in these areas. Systemic regulation of metropolitan areas will be the subject of the bill on sustainable urban development. Regulation of the following issues is provided for therein, in particular:

- the rules and mode of developing a metropolitan area;
- the scope of public tasks executed by the metropolis obligatorily, the manner of supplementing them with selected facultative tasks;
- defining the management authority (control);
- the rules of funding undertaken measures.

³¹ The legal grounds for conducting regional urban policy will be provided by the Act on sustainable urban development on which work is pending at the Ministry of Development Funds and Regional Policy.

The necessity of a statutory regulation of a metropolitan area (metropolitan union) is supported by the need to regulate tasks necessary to be executed in the area of overlapping influences and concentration of challenges. Important attributes of a metropolitan union should also include a statutory premise of a financial and legal character, determining the right of communes and counties to participate in a metropolitan union. In the process of establishing and appointing a metropolitan union, an important rule should be the cooperation of central and regional bodies with self-government units as well as the efficient functioning of social consultations' mechanism. Thus understood reform of metropolitan areas management has features of interactive relations. A metropolitan integration, as results from European experiences, is created both by top down and bottom up measures. It constitutes a result, and often also a compromise, of various visions of a metropolitan reform, both at a national level as well as initiatives or expectations from local communities and self-government authorities.

A metropolitan union pursues the principle of cooperation of public authorities (central and self-government at various levels), the principle of subsidiarity and the principle of capacity to perform public tasks. Statutory solutions concerning a metropolitan union should refer to the following issues:

- approach to determining borders and the procedure of a metropolitan union establishment;
- the scope of action of a metropolitan union and its tasks (in particular, in the area of shaping spatial order, strategic management, integration of collective public transport, economic development, promotion and other, e.g. joint provision of selected social services);
- competences, the mode and rules of selecting authorities of a metropolitan union;
- actions of a plenipotentiary for establishment of a union;
- acquisition and management of a metropolitan union's property;
- conducting the financial economy of a metropolitan union.

Regular monitoring of metropolis functioning's effects should be conducted in cooperation with public and scientific institutions.

C. Legislative solutions for non-metropolitan functional urban areas

Barriers in intercommunal cooperation are faced not only by metropolises but also medium cities. The scale of problems is adequate to the size of core cities and also requires systemic facilities built on the legislative grounds. Developed legal solutions must be of a systemic nature and adjusted to the characteristics of smaller centres. The area of legal regulation in this scope will also be the bill on sustainable urban development and the project titled Centre of Advisory Support Plus implemented by the Ministry of Development Funds and Regional Policy, aimed at improving competences of territorial self-government units and initiating supralocal cooperation, as well as supporting functional urban areas of medium cities.

D. Specification of a poviat’s role in the process of establishing a supralocal development strategy

Poviats, despite their own tasks, which are crucial from the perspective of pursuing the development policy, play too small of a role in creating and coordinating the local development policy. It is necessary to create legal frameworks guaranteeing poviat self-governments a proper place in the development management system by assuring them with participation in establishing a supralocal development strategy. Primarily there is a lack of a legal basis for initiating by the poviat self-government a process of establishing a supralocal development strategy in the case of a lack of activity in this scope at the level of communes related in terms of functions. In the case of a low institutional potential of communes and upon their request, the poviat can accept the role of a coordinator for the entire establishment process.

The current procedure for establishment of a supralocal development strategy is described, among others, in Article 10g par. 2 of the Act on communal self-government. These provisions assume a dominant role of communal self-governments in strategy establishment. A poviat self-government participates in the strategy establishment, if the establishment process engages all communes from the territory of this poviat, and it can be included in the establishment optionally, if at least one commune participating in the strategy establishment is located in its territory. No direct indication that the county self-government has to initiate the establishment of a supralocal development strategy has been provided for. In the case of cities with county rights the problem does not exist, since the president of the city performs tasks statutorily assigned to the function of a starost. In other cases, despite many key issues remaining within the frameworks of the poviat’s own tasks, he or she can only be invited to participate in the establishment of a supralocal development strategy. A change should empower the poviat self-government in this process and allow it to initiate, in close cooperation with a communal self-government, establishment of a supralocal development strategy, if justified with improvement of the effectiveness of performing poviat’s own tasks stipulated in Article 4 par. 1 of the Act of 5 June 1998 on poviat self-government (Journal of Laws of 2022, item 528, as amended) and in separate acts.

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Promotion and popularisation of existing instruments of supralocal cooperation and reinforcing its structures			
B. Developing solutions for metropolitan areas			
C. Legislative solutions for non-metropolitan functional urban areas			
D. Specification of a poviat's role in the process of establishing a supralocal development strategy			
Key: significance for the size category of the city:	medium	major	great

Challenges of the National Urban Policy 2030

7.4. Challenge IV

Mitigating the negative effects of climate
change in cities



7.4.

Challenge IV: Mitigating the negative effects of climate change in cities

7.4.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. New Leipzig Charter – ‘The Green City’

2. Urban Agenda for the EU

3. EU Biodiversity Strategy for 2030. Bringing nature back into our lives – 2nd Pillar, Key commitments: Putting in place ambitious urban greening plans by cities with more than 20,000 inhabitants

4. UN New Urban Agenda – ‘Sustainable Environment and Dynamic Development of Urban Areas’

5. Agenda for Sustainable Development 2030 - Goal 11. Sustainable Cities and Communities;

Goal 13. Climate Action

6. *Building a climate-resilient future - EU Strategy*



For years we have observed shifting seasons, shorter spring and autumns, more and more snowless winters, intensifying heatwaves and droughts intertwined with pouring rains. These negative phenomena result from climate change caused by human activity. The climate crisis brings a fundamental threat to the basis of functioning and the life of societies. Crossing the line of a climate balance disturbs the chains of relations and processes occurring in nature thus worsening the conditions for socio-economic development. An especially sensitive area that must face the consequences of climate change are cities and their closest surroundings. The number of population inhabiting Polish cities with their suburban zones can be estimated at approximately 25-30 million people (depending on the manner of delimitation). It makes up 65-75% of the country's population therefore, the scale of the problem is huge.

The unsustainable urban development increases pressure on the environment and causes inhabitants' health deterioration. The biggest problems include, among others: emission of pollutants into the air, loss of green areas and biodiversity, droughts or urban heat islands. Each city faces environmental and climate threats specific for its location, structure and conditions. Poland is very diverse in this respect. There are a number of indicators that illustrate the above.

Extreme weather phenomena that more and more often affect cities and inhabitants include, among others: high temperatures of the air (a regular increase in the annual air temperature average is noted; in the period between 1951 and 2020 by 2.8°C) as well as cloudburst (annual precipitation increased by 10-15%) (table no. 3).

The 20th century and first decades of the 21st century are characterised by a growing air temperature, high volatility of precipitation and occurrence of extreme meteorological phenomena. It is confirmed by data concerning thermal and precipitation characteristics for 14 cities (referential meteorological stations).

Table no. 3. Change in the average annual air temperature in Poland in the years 1951-2020

Decade	Average annual air temperature in Poland (°C)
1951-1960	7.25
1961-1970	7.08
1971-1980	7.25
1981-1990	7.61
1991-2000	7.91
2001-2010	8.22
2011-2020	9.33

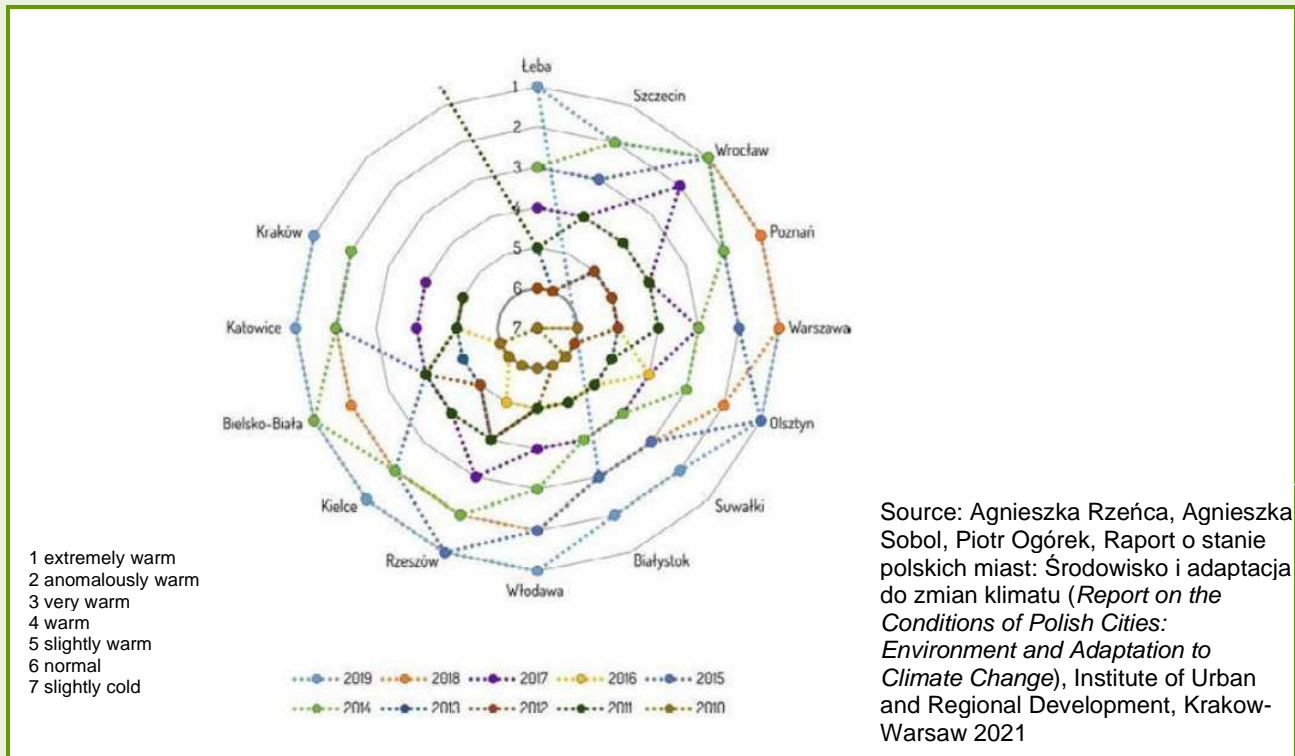
Source: own study on the grounds of data of the Institute of Meteorology and Water Management

According to thermal classification, the year 2000 was anomalously warm in four cities (Wrocław, Bielsko-Biała, Katowice and Krakow) (see figure no. 3). Such a situation happened for the first time in the history. In 2008 a similar situation took place in three cities (Poznań, Rzeszów and Bielsko-Biała). This phenomenon intensified in 2014, when apart from six cities, in which this year was classified as anomalously warm, extremely warm summers occurred for the first time in two cities (Wrocław and Bielsko-Biała). Last time thermally normal summers were noted in 2016 (in four cities). In the consecutive periods, in all analysed cities, all summers were classified (on the grounds of an average annual temperature) at least as warm³².

Moreover, the current hydrological situation in Poland is very difficult. The height of the water surface in the majority of main rivers in the country and the groundwater level is systematically dropping with every passing year. This problem is intensified in the cities, areas of which are characterised with high percentage of impermeable surfaces, including the occurrence of concrete river banks (figure no. 7). With increasingly rare precipitation, cities face the threat of desertification. Whereas, infrastructure in the form of storm water drainage in cities is not adjusted to heavy rainfall, which causes frequent undercutting and the necessity to pump water from flooded drains with a simultaneous water pollution with, among others, organic compounds, metals and toxic substances. At the same time, cities are missing small retention facilities which could store excessive heavy rainfall water and use them in drier periods.

³² Agnieszka Rzeńca, Agnieszka Sobol, Piotr Ogórek, *Raport o stanie polskich miast: Środowisko i adaptacja do zmian klimatu (Report on the Conditions of Polish Cities: Environment and Adaptation to Climate Change)*, Institute of Urban and Regional Development, Krakow-Warsaw 2021.

Diagram no. 3. Thermal classification for selected cities in the years 2010 - 2019



The unfavourable situation is intensified by long-lasting absences of rainfall and increasingly warmer and snowless winters. Therefore, Polish cities are at a risk of both hydrological and hydrogeological drought³³. Another problem is that resources of drinking water in Poland are one of the lowest in Europe³⁴.

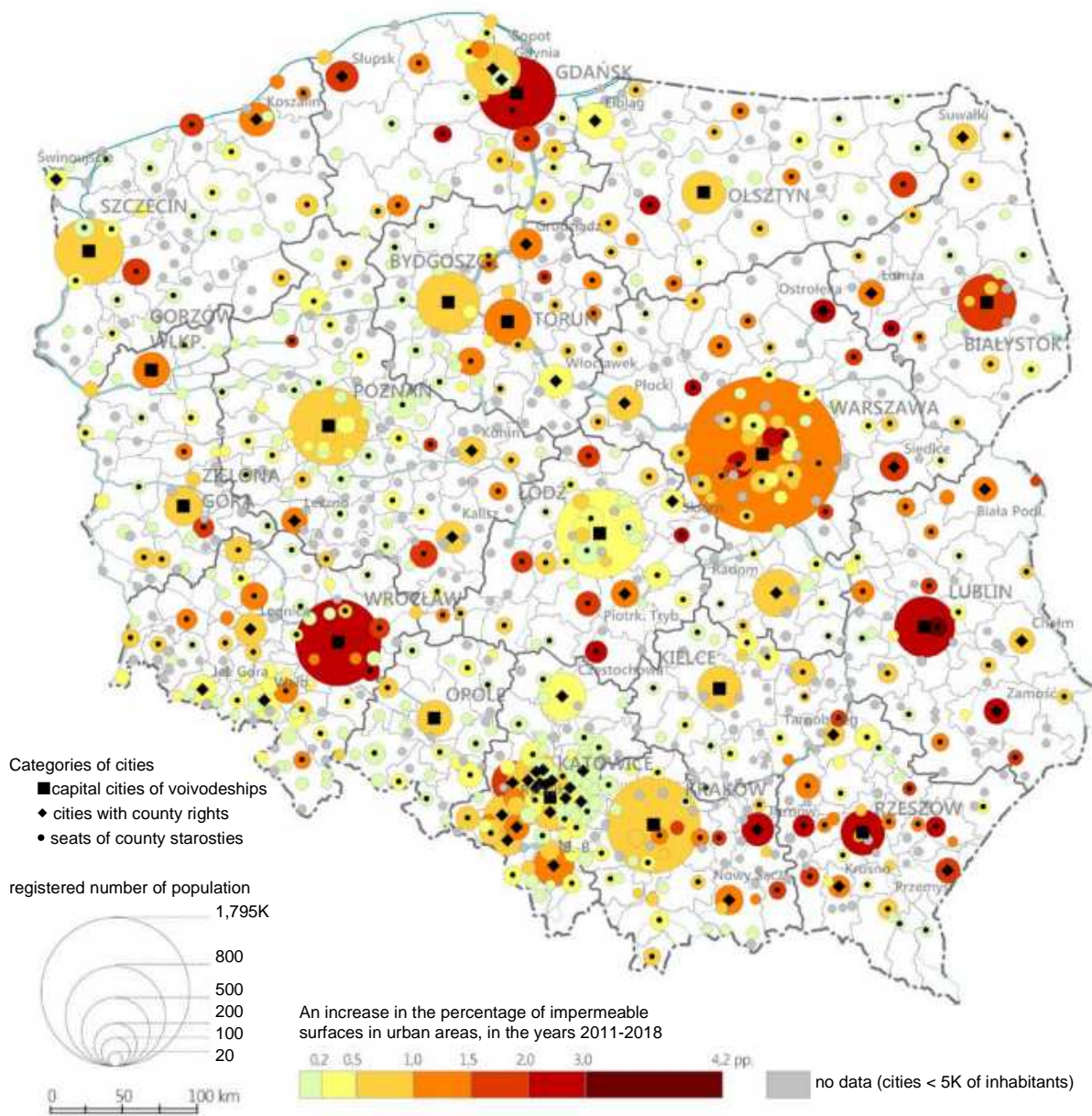
A synthetic measure of water supply, being one of the key natural conditions of a fundamental significance for the state of vegetation and human wellbeing (bioclimate, topoclimate), is the Climatic Water Balance (CWB). This measure was established in the Institute of Soil Science and Plant Cultivation in Puławy (figure no. 8). The area of especially unfavourable climatic-hydrological conditions is Western Poland (including Greater Poland and Kuyavia), and to a slightly smaller extent other areas of Polish Lowlands and Highlands.

³³ Hydrological drought manifests itself with a long-lasting decrease in water quantity in rivers and lakes. It is also referred to as 'hydrological low'; it concerns surface waters. It occurs when the flow in rivers drops below the flow of an average multiannual value. It is a period of decreased surface waters' resources with regard to the average multiannual value. Hydrological drought is another step in the deepening atmospheric and agricultural drought. In Poland, this type of drought is monitored by the Institute of Meteorology and Water Management – National Research Institute (IMGW-PIB).

Hydrogeological drought is defined as a long-lasting decrease in groundwater resources. Phenomenon of this type of drought is usually preceded by the aforementioned types of droughts. The preliminary phase manifests itself with, among others: drying out of wells. In Poland, this type of drought is monitored by the Polish Geological Institute – National Research Institute (*Polish: Państwowy Instytut Geologiczny – Państwowy Instytut Badawczy, PIG-PIB*).

³⁴ According to the Ministry of Climate and Environment, on the basis of the Statistics Poland Report for 2020 'Poland on the path to sustainable development, the quantity of renewable resources of fresh water per one Polish citizen amounts to almost 1.6 m³. The European average is significantly higher, since it amounts to approx. 3K m³. Research conducted by the Institute of Urban and Regional Development shows that a significant part of cities in Poland i.e. 46.2% struggle with water scarcity.

Figure no. 7. An increase in the percentage of impermeable surfaces in urban areas in the years 2011-2018



Source: own study on the grounds of: Rzeńca A., Sobol A., Ogórek P., Projekt Raportu o stanie polskich miast: Środowisko i adaptacja do zmian klimatu (*Draft of the Report on the Conditions of Polish Cities: Environment and Adaptation to Climate Change*), Institute of Urban and Regional Development, Krakow-Warsaw 2021

A relatively better situation occurs at the foothills and Subcarpathia (e.g. Krakow agglomeration, Tarnów), as well as at a part of Silesian Highland (among others Katowice conurbation). However, CWB values are negative there. Only in the mountains (the Carpathian Mountains, the Sudetes), where precipitation is high, the Climatic Water Balance is positive. Furthermore, the analysis shows that differences between city cores and their suburban zones are small in terms of this index, and the general physio-geographical location, that is, geological and hydrogeological, geomorphological, climatic, hydrographical and soil conditions are of much greater importance.

In 2019, in over 250 of Polish cities, limitations in using water were introduced. At the end of June 2021, 254 communes appealed to inhabitants with regard to the limitation of tap water consumption. Greenery deficiency in many cases resulting from unjustified surface sealing with concrete, asphalt and cobblestone causes the air temperature in the city to significantly increase. Moreover, urban areas cannot cool down due to the lack of sufficient green areas, which could be used to manage rainwater.

One of the key challenges, therefore, is the increased water retention. In cities and their functional areas it is necessary to gradually increase the share of impermeable areas including, in particular, biologically active areas. Development of the blue-green infrastructure (BGI)³⁵ is necessary for safe and economic management of rainwater as well as an increase in the retention.

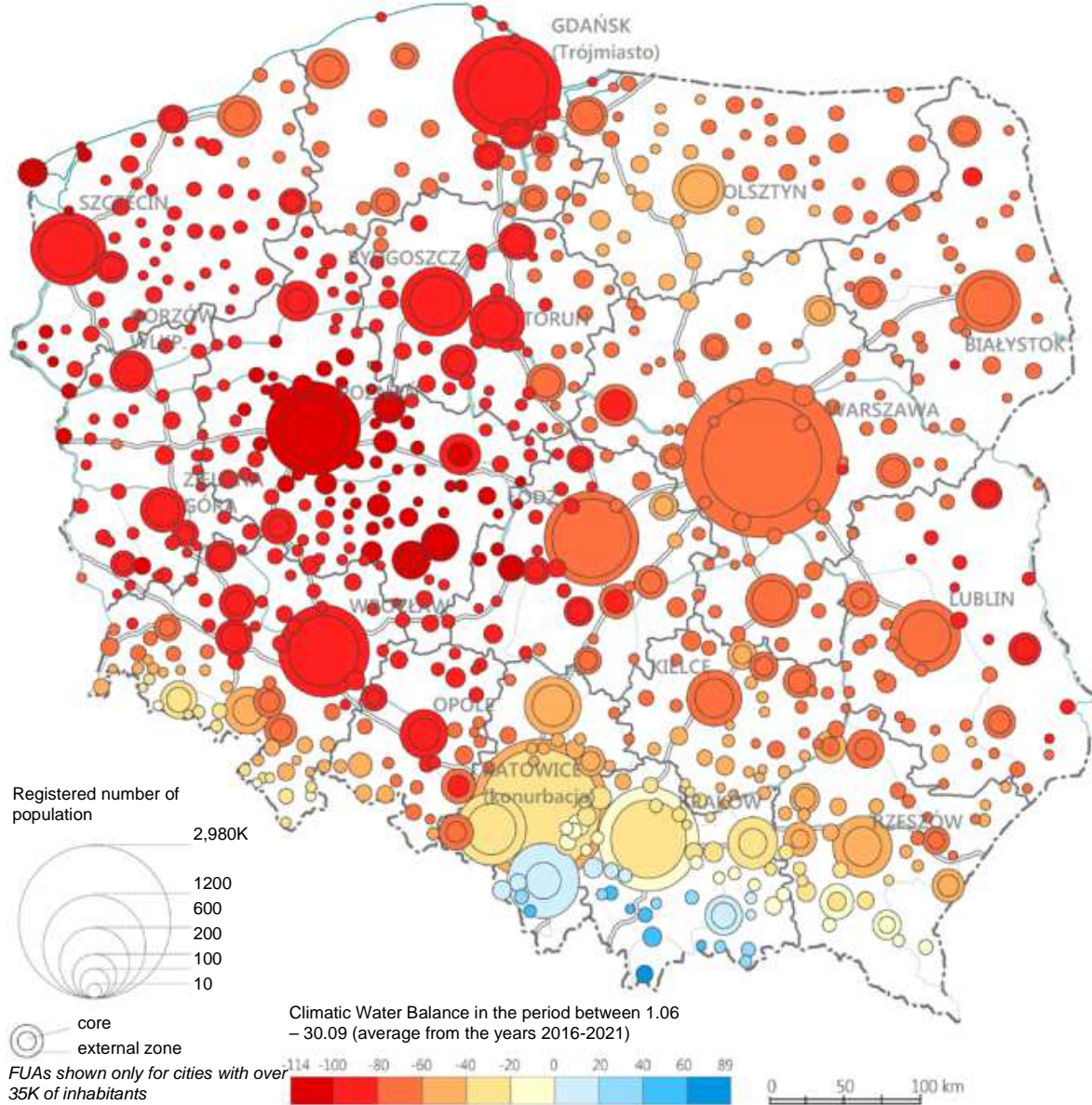
In spatial management, however, a complex approach to the achievement of water management goals is rarely used: both in the scope of diminishing the flood risk and the threat of drought. Moreover, spatial planning documents determining, among others, directions of managing water resources in a commune, insufficiently include the need of undertaking comprehensive measures in the territory of the whole catchment, which would contribute to the regulation of conditions of run-off in urban areas. Counteracting negative consequences of climate change for cities and inhabitants such as droughts or undercutting requires implementation of nature-based solutions³⁶.

Nature based solutions are the most effective in shaping urban climate. Urban greenery, including single trees and bushes, is of great importance, since they significantly improve water management and microclimate on a microscale. In Polish cities, the share of the surface covered by treetops usually varies between 10% and 30%, although it sometimes exceeds 50% (figure no. 9). Surface coverage with treetops is usually higher in external zones than in the cities. Presence of trees in urban space, apart from purely aesthetic issues, is of great importance for proper functioning of ecosystems and people. The greatest benefit include: heat reduction, filtering air pollution and carbon sequestration, saving energy of nearby buildings, water filtering, rainwater retention, UV protection, maintaining biodiversity and beneficial impact on human health.

³⁵ A step in a good direction is made by the Ministry of Infrastructure that prepared legal and planning instruments that influence increasing the natural ground retention. They include, among others: the Drought Effects Counteracting Plan on the grounds of the Regulation of the Minister of Infrastructure of 15 July 2021 on the adoption of the Drought Effects Counteracting Plan (<https://stopsuszy.pl/informacje-o-projeckcie/o-projeckcie/>) and the programme for counteracting water deficit drawn up in the Ministry of Infrastructure on the basis of the Assumptions to the Programme for counteracting water deficit for the years 2021-2027 with a perspective until 2030 adopted by the Council of Ministers on 10 September 2019 - M.P. 2019 item 941 (<https://www.gov.pl/web/infrastruktura/opracowanie-programu-przeciwdzialania-niedoborowi-wody>).

³⁶ *EU Urban Agenda, Action Plan: Sustainable Use of Land and Nature-based Solutions*, October 2018, <https://ec.europa.eu/futurium/en/sustainable-land-use/sustainable-use-land-and-nature-based-solutions-partnership-presents-final.html>.

Figure no. 8. Climatic Water Balance in urban and urban-rural communes, as well as suburban zones, average for the years 2016-2021



Source: own study on the grounds of data of the Institute of Soil Science and Plant Cultivation – State Research Institute in Puławy.

Despite many advantages, protection of greenery and especially trees in urban areas is still insufficient. Trees are cut out to an increasing extent and the removed ones are often replaced with small seedlings which do not compensate for the incurred losses. Furthermore, newly planted trees relatively often wither as a result of improper location, a lack of the possibility of using rainfall from the surface, improper development of green areas located over sealed surfaces or a lack of monitoring or care.

All of the aforementioned functions of trees are performed by big, robust trees and such trees are needed by the cities. Comparisons made by naturalists imply that e.g. one big beech tree produces as much oxygen as more or less 1.7K small beech trees³⁷. Despite the above, there are no effective tools for limiting tree felling or protecting old growth of trees, especially before starting investment processes. In effect, in a significant part of the cities (among voivodeship centres, in particular in Szczecin, Zielona Góra and Kielce) the condition of greenery, identified by the so-called standardised balance of surface percentage covered with greening and browning processes, is worsening (diagram no. 4).

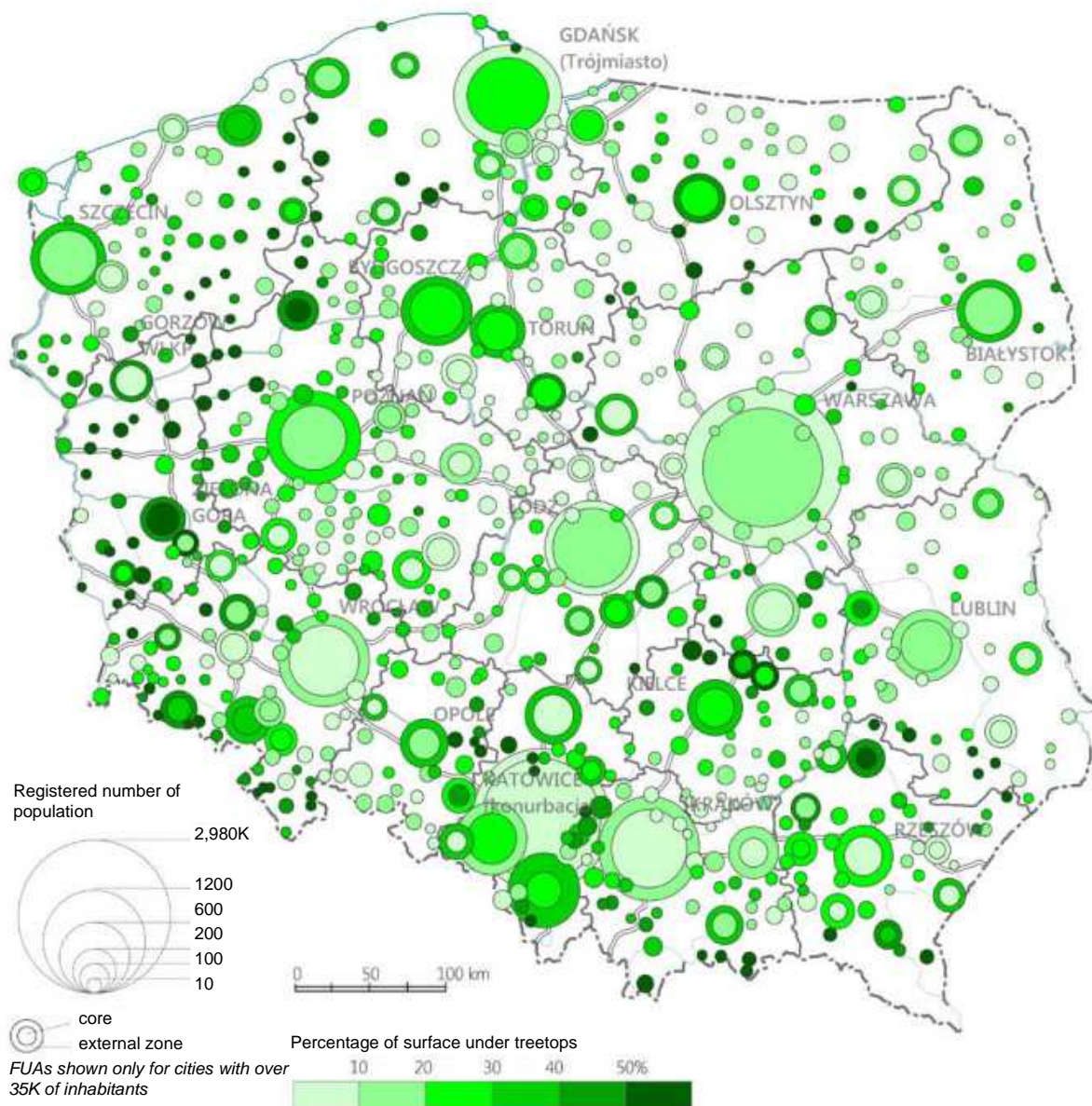
The insufficient protection of green areas is also caused by the lack of legal empowerment of the blue-green infrastructure. In order to include an object in a broad set of 'infrastructure', it has to have the following features: longevity and durability, complementarity, non-substitutability and generating external benefits. Trees, especially mature, have all of these features. Since the 'infrastructure' has no specific colour, substance or shape, there is no reason not to consider green areas, for example trees, as green infrastructure, which by performing the function of rainfall management should be also protected due to the ecosystem function.

An increase in the air temperature in the cities has also a direct impact on the growing problem of sudden convective rainfall. Warming up of air in urbanised areas (even by several degrees more than in suburban areas) causes higher frequency of lightning, which is, in turn, related to heavy rainfall (cloudburst), which at the moment of falling on tightly concreted areas does not have the possibility to sink into the soil. Simultaneously, the sewage system is not able to accept large quantities of water in such a short time. In effect, local undercutting occurs and streets transform into torrents. Foreign experiences from summer 2021 show that the so-called flash floods caused by intensive convective rainfall are a threat to the lives of inhabitants, also in areas hitherto not affected by floods.

Urban communities are slowly getting used to extreme weather phenomena such as long-lasting droughts, tornados or heavy rainfall. Nevertheless, cities' adaptation to climate change will last much longer, and these phenomena will intensify. Considering other type of challenges and the goal of *the National Urban Policy 2030* consisting in the conviction that cities are the answer to contemporary challenges, urban development and transformation should be planned smartly, negative consequences of climate change should be limited and factors causing climate change should be eliminated, as well as social awareness and pro-ecological attitudes should be actively shaped.

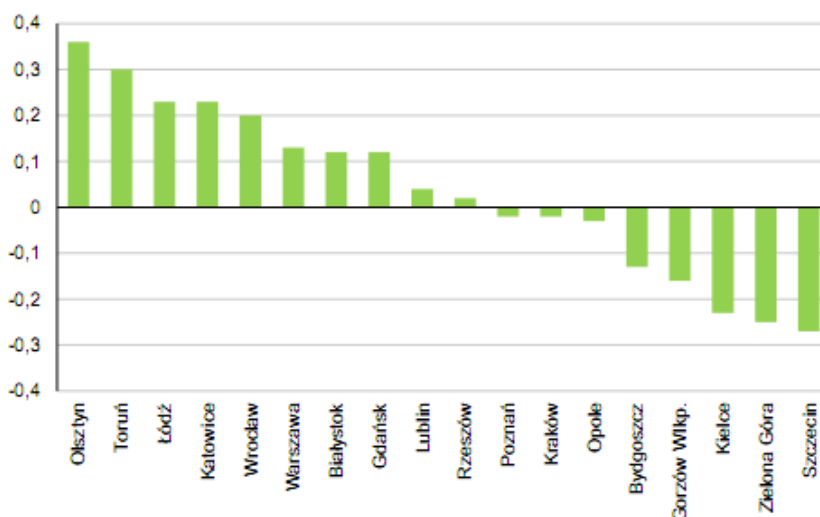
³⁷ Dominik Drzazga, *Drzewa w mieście, czy naprawdę ich potrzebujemy?* (*Trees in the City, Do We Really Need Them*), University of Łódź, http://www.eksperci.wz.uni.lodz.pl/wp-content/uploads/2017/04/Drzewa-w-mie%C5%9Bcie-%E2%80%93-czy-naprawd%C4%99-ich-potrzebujemy_Komentarz.-Informacja-prasowa.pdf.

Figure no. 9. Percentage of surface under treetops in urban and urban-rural communes, as well as suburban zones in compliance with the status in the years 2010-2018



Own study on the grounds of data from National Tree Crown Map™ (MGGP Aero)

Diagram no. 4. Standardised balance of surface percentage covered with greening and browning processes, created on the basis of the Vegetation Trend Index calculated for the period between 2013 and 2021 within anthropogenic areas of voivodeship cities



Source: Vegetation Trend Index developed by MGGP Aero on the basis of satellite data Landsat 8 in compliance with the methodology based on the JRC report (JRC Science for policy report - Mapping and Assessment of Ecosystems and their Services: An EU ecosystem assessment)*.

*Mapping and Assessment of Ecosystems and their Services: An EU ecosystem assessment - supplement, EUR 30161 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-22954-4, DOI: 10.2760/519233, JRC120383

7.4.2. Proposed solutions

A. Introduction of the standard of protection and shaping greenery in investment processes

The solution consists in creating legal grounds providing public authorities with the possibility to introduce limitations in running investment due to the environment protection. It includes legislative changes assuring the necessity of quantification of the level of losses in the scope of ecosystem services in the executed undertaking. Losses will be compensated by newly created elements of the blue-green infrastructure, with the value of ecosystem services not smaller than the value loss resulting from removing greenery for the purposes of investment implementation. These solutions will assure proper treatment of greenery in construction documentation including existing trees as the infrastructure element that requires protection on the construction site and leaving it permanently unaltered after investment completion.

It seems necessary to also extend the application for issuance of planning permissions on the existing high vegetation in the area of planned investment supported with inventory of tree stands. This solution will help officials to take into account, in an organised and aware manner, the need to protect and shape greenery in administrative decisions and cover it with legal protection in case of a negative opinion on the application for tree felling.

Moreover, it is postulated to significantly limit removal of trees and bushes in urban areas. In investment processes felling should be possible only in case it is impossible to execute investment otherwise. In such a case, felling will be compensated with new plantings, with at least the same oxygen supply as before felling³⁸. Investment plans should not deteriorate the current manner of greenery supply.

The proposed solution refers to Article 5 par. 1 of the Act of 7 July 1994 – Construction Law (Journal of Laws of 2021, item 2351, as amended) indicating that ‘The building object as a whole and particular parts thereof, together with the building facilities connected thereto, (...) shall be designed and built in a manner specified in the relevant provisions, including technical and building regulations and principles of technical knowledge, in order to secure, among others, environment protection’. Therefore, environment protection rules should be inscribed in the investment process and not treated conditionally. The greenery project and the arborist report³⁹, similarly as other professional elements of project documentation, should be obligatory and made by persons with relevant qualifications.

B. Legal empowerment of ‘blue-green infrastructure’

The aim of the solution is to provide the possibility of including ‘blue-green infrastructure’ as critical infrastructure, which is a legal term in the Act of 26 April 2007 on crisis management (Journal of Laws of 2022, item 261, as amended). Pursuant to the Act, critical infrastructure means systems and its functionally correlated components, that is, facilities such as: buildings, devices, installations, services crucial for the security of the state and its citizens, as well as facilities aimed at ensuring efficient functioning of public administration, institutions and entrepreneurs.

Therefore, it is postulated to extend this provision with blue-green infrastructure’s areas and objects due to the critical role that they play in people’s lives in the context of growing negative and dangerous consequences of climate change.

C. Managing water resources in the catchment system

Local authorities are in more and more need of support in the scope of competitive authority to introduce local regulations including, in particular, to introduce restrictions aimed at protection against drought, as well as to enforce them, with a consideration of the catchment-based approach in water management.

³⁸ With an exclusion of port areas including port infrastructure. The solution is compliant with the National Recovery Plan (B3.4 Green Transformation of Cities and Investment Strategy of the Green Transformation of Cities Instrument).

³⁹ The main objective of the arborist report is to preserve existing trees, afforestation and bushes in the best condition with a consideration of the land development conditions.

It is postulated to change storm water drainage standards to the so-called sustainable drainage system, including development of a diffused retention system. It means, for example, that regulations concerning designing roadsides should include the directions of natural precipitation run-off and take into account spilling them outside the lane.

Streets, roads and greenery should be designed so that the surface run-off could be slowed down and stopped by green retention and not only engineering and technical solutions. It requires integration of networks' technical conditions (precipitation reception by sewer mains) with a simultaneous consideration of land development with regard to the natural run-off, taking into account the need for treatment thereof. Kerbstones, similarly as green areas next to the road, should be lowered to a level allowing water to run off under the road and, at the same time, to be naturally treated.

Currently, running water off the road to the green area also including bio-retention (e.g. infiltration boxes) requires the so-called water permit of the State Water Holding – Polish Waters, since, in compliance with the binding provisions, such a solution influences water condition. On the other hand, surface sealing, which also has an influence on changing water conditions, does not require relevant permits.

In order to accelerate obtaining water permits and improve the investment process, it is considered advisable, with regard to the emerging concerns, to consider the need to specify the valid catalogue of measures causing the necessity to obtain a water permit and measures that do not shape water resources and as such do not require such a permit e.g. by submitting a water application so as to unequivocally indicate on the grounds of provisions the undertakings included in this catalogue. Such actions could include (depending on specific parameters of planned investment): irrigation of greenery with precipitation by shaping the surface in a manner that allows gravitational inflow of water, creating retention greenery without additional filtration layers, shaping greenery in a hollow form⁴⁰. Simultaneously, it is proposed to activate a simple procedure, compliant with the EU provisions, of obtaining a water permit in case such a permit is required.

D. Financial, legislative and organisational mechanisms to the benefit of increasing natural retention

It is necessary to introduce legislative solutions and financial mechanisms which will cause all entities, both public and private, that contribute to the loss of natural retention to compensate for such a loss. Pursuant to Article 269 par. 1 point 1 of the Act of 20 July 2017 - the Water Law (Journal of Laws of 2021, item, 2233, as amended) the fee for water services is paid for decreasing the natural area retention as a result of performing work or constructing building facilities, on the real estate with area exceeding 3,500 m², permanently connected to the ground and influencing a decrease in retention by excluding more than 70% of the real estate area from biologically active surface in areas not included in open or closed sewage systems. Income from these fees should be used to improve security of precipitation management in the commune.

⁴⁰ It will also be legitimate to specify in provisions what a water facility is e.g. a rain garden (from what capacity), an underground retention reservoir for rainwater at a detached house without drainage outlet, infiltration boxes (from what capacity).

Furthermore, provisions should be specific and a financial mechanism should be introduced with regard to the precipitation run-off to (open or closed) storm water drainage and combined sewer system. In this case it is proposed to allow using a tax relief by entities that before running precipitation off to drainage will have improved solutions increasing retention.

It is also necessary to change the regulation concerning participation in inflows due to fees for decreasing natural area retention referred to in Article 269 par. 1 point 1 of the Act of 20 July 2017 – the Water Law, specified on the grounds of the analysis of costs and facilitating undertaking by self-governments broader measures in this scope. Current proportions are as follows: 90% of Polish Waters' revenues and 10% of a relevant commune's budget income. Simultaneously, it is necessary to secure these inflows for purposes related to the water management rationalisation e.g. small retention development or nature-based solutions' introduction. At the same time, it is crucial to create a specific-purpose fund in communes that would collect resources from paid fees and constitute the basis of executed investment in the scope of small retention. The proposed fund made of water fees should be of a specific-purpose character, in which self-governments participate in proportion to incurred costs.

The implemented legislative process concerning the Act on investment in the scope of counteracting drought effects should also be underlined, as it assumes a number of changes in the hitherto binding regulations in this scope. Nonetheless, legal and financial measures concerning counteracting decreasing retention in the cities should continue to be intensified. Moreover, the possibility of supplementing My Water programmes or communal programmes for supporting micro-retention with subsidies should also be submitted to analysis.

E. Counteracting urban floods and droughts and effects thereof by legislative changes

Amendment of the provisions is aimed at eliminating or avoiding an increase of development in areas at special risk of food, as a phenomenon perceived in a comprehensive manner. At the same time, drawing up provisions which allow law enforcement with regard to self-governments for actions non-compliant with national provisions, should be considered. It is also important to supplement the catalogue of obligatory measures regulated by national provisions that guarantee water safety to inhabitants of all cities.

One of the key tools of counteracting drought's and flood's effects comprises spatial planning and management taking into account water management. It is very important to ensure a coherent legal system regulating the issue of development of areas that are at a risk of flood, aimed at preventing an increase in this risk, which is guaranteed in documents concerning spatial planning.

Furthermore, conducting information policy in the scope of limiting the flood risk, including measures in the scope of water retention and keeping impermeable and biologically active surfaces, constitutes an important element of the flood protection system.

In the Ministry of Infrastructure responsible for issues related to water management, a number of legislative solutions concerning counteracting undercutting related to heavy rainfall and other precipitates have been developed, which will be considered within works on the comprehensive conception performed by the Ministry of Climate and Environment. The propositions in question, concern the following: 1) identification of phenomena occurring in this scope that have a negative impact on cities and on the society; 2) providing self-governments with relevant legal instruments to counteract such phenomena; 3) introduction of a relevant system for monitoring elimination or limitation of identified issues.

F. Introduction of the urban blue-green infrastructure management plan (hereinafter the BGI management plan) as the implementation of the recommendation to draw up a 'greening plan'⁴¹, included in the EU Strategy for Biodiversity 2030

The proposed solution should allow cities to manage blue-green infrastructure resources, understood as all important areas covered with vegetation and waters which provide ecosystem services crucial for shaping living conditions of a given city's inhabitants, in an organised and conscious manner. The plan is aimed as a tool for coordinating and monitoring recommended ventures undertaken on the grounds of binding strategic and planning documents (commune development strategy, case study of conditions and directions of commune's spatial development, local spatial development plans, environment protection programme, adaptation plan, commune revitalisation programme). It is advisable for the plan to be of an operating nature with legible provisions for designers and to be included in planning documents.

Due to the particular significance of trees in urban areas (natural, landscape, social), an urban tree stand management plan should constitute an integral component of the plan. Apart from inventory and assessment of resources, this plan should include managing risk related to the susceptibility of trees to breaking. Identification of a threat coming from trees with weakened statics will allow determining measures that should be undertaken so that the risk related to keeping them at a level acceptable for people and property safety. Moreover, the plan should also take into consideration the long-term plan of plantings.

Entering into force of the BGI management plan requires preparing specific guidelines concerning drawing it up. It also requires determining the location of rules for implementation and coordination thereof in the organisational structure of a city hall. These works should be performed by a team of experts, on the basis of cities' experiences - in many of them, especially in large cities, they have already been binding for a long time - if not complete plans, then important elements thereof (e.g. spatial databases concerning BGI resources) or vegetation management standards.






















The conception of a BGI management plan should include:

- inventory and assessment of BGI resources, as well as the assessment of valid policy concerning the BGI development, assessment of the rules and manner (including organisational terms) of managing BGI resources and inflow of information between stakeholders;

⁴¹ In Polish conditions, the term 'greening' is rather associated with planting, especially trees, which does not correspond to the more complex approach included in the Strategy. It is worth indicating that the urban greening plan is to be included in the structure of the Climate Change Adaptation Plan as implementation of the recommendation of drawing up a 'greening plan' included in the EU Strategy for Biodiversity 2030. The draft of the regulation is currently being prepared within work of the Ministry of Climate and Environment.

- determining directions of actions and assessment of the rules for funding ventures related to development, modernisation, revalorisation or protection of BGI resources;
- identification of problems/barriers resulting from a lack of and/or shortages of data translating into insufficient consideration of the BGI subject matter in urban development policy;
- identification of necessary measures, institutions responsible for undertaking them, as well as financing sources, the possibility of conducting a costs-benefits analysis and determining the basis for monitoring and evaluation of the BGI management plan's implementation.

The management plan, in principle, does not have to be devised as an extensive document. It can constitute an element of already existing documents or plans e.g. the climate change adaptation plan. Pursuant to the provision of the EU *Strategy for Biodiversity 2030* plans are to be drawn up for all cities with at least 20K inhabitants. However, diverse staff, as well as organisational and financial capacities should be taken into consideration in implementation of this task, especially in the case of smaller cities. It should be, as much as possible, a flexibly constructed tool taking into account the current, very diverse manner of considering by the cities the BGI subject matter in the process of urban development management.

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Introduction of the standard of protection and shaping greenery in investment processes			
B. Legal empowerment of 'blue-green infrastructure'			
C. Managing water resources in the catchment system			
D. Financial, legislative and organisational mechanisms to the benefit of increasing natural retention			
E. Counteracting urban floods and droughts and effects thereof by legislative changes			
F. Introduction of the urban blue-green infrastructure management plan (hereinafter the BGI management plan) as the implementation of the recommendation to draw up a 'greening plan', included in the EU Strategy for Biodiversity 2030			
Key: significance for the size category of the city:	 medium	 major	 great

Challenges of the National Urban Policy 2030

7.5. Challenge V

Improving the quality of natural environment
in cities



7.5.

Challenge V: Improving the quality of natural environment in cities

7.5.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. **New Leipzig Charter** – ‘The Green City’

2. **Urban Agenda for the EU**

3. **EU Strategy for Biodiversity 2030.**

Bringing nature back into our lives – 2nd Pillar: Bring nature back to urban areas

4. **UN New Urban Agenda** – Quito Declaration on Sustainable Cities and Human Settlements for All

5. **Agenda for Sustainable Development 2030** - Goal 11. Sustainable Cities and Communities; Goal 13. Climate Action. Goal 15. Life on Land



The condition for proper, sustainable urban development constitutes improving the quality of inhabitants' lives and improving the quality of the urban environment. The condition of the urban environment is of great importance for the wellbeing and health of citizens. The motto of the World Cities Day⁴² - Better City, Better Life – captures the essence and main objective of the contemporary paradigm of urban development well. Development must be concurrently accompanied by the improvement of the quality of life in the cities.

Consequences of the COVID-19 pandemic and related restrictions have shown the importance and significance of the nearest neighbourhood for the quality of inhabitants' lives. Proximity of green areas, recreational facilities, local service points and quality thereof proved to be of a greater significance than so far. All of the above demands searching for alternative paths of urban development. Currently, measures improving environment quality in cities remain, however, insufficient with regard to the needs⁴³. Consequences of the increasing accumulation of pollution such as air pollution (particulate matter PM10 and PM2.5, nitrogen dioxide and benzo(a)pyrene), noise, overproduction of waste and soil pollution, are directly felt.

Each year, air pollution in Poland contributes to over 46K premature deaths⁴⁴. In urban areas, increased concentrations of air pollution of anthropogenic origin are often noted⁴⁵ (figure no. 10). The main source of urban pollution is the low emission (i.e. up to 40m AGL) originating from, among others, household boilers and road transport.

⁴² Created by the UN General Assembly in 2014, falls on the 31st of October each year.

⁴³ In the National Programme of Combating Air Pollution, adopted under Resolution no. 34 of the Council of Ministers of 29 April 2019, directions of measures were set, which can be helpful in improving the quality of environment in cities.

⁴⁴ <https://www.eea.europa.eu/publications/air-quality-in-europe-2021>.

⁴⁵ In compliance with data of the Chief Inspectorate of Environmental Protection (*Polish: Główny Inspektorat Ochrony Środowiska, GIOŚ*), in 2018, in total 1,824,133 Mg of hazardous substances were emitted into the atmosphere in Poland, out of which approximately 64.2% constitute gaseous pollutants (SOX, NOX), and approximately 35.8% particulate (PM10 and PM2.5).

Irrespective of the type of source, pollution emitted to the atmosphere has a disadvantageous impact on all natural environment components. It also affects the health and wellbeing of cities' inhabitants.

In order to diagnose problems e.g. related to the bad quality of air, cities have to be at the disposal of reliable data and verified information. It constitutes a starting point for undertaking a number of comprehensive mitigation or adaptation measures minimising disadvantageous conditions of living in cities. A lack of general inventory of numbers and locations of low emission sources in cities (local boilers, the condition of residential resources, including communal, density of individual transport) hinders determination of the scale of actual needs and inhibits undertaking measures in the scope of effective air protection.

In recent years the air quality monitoring conducted within the State Environmental Monitoring has been developed. Nevertheless, due to the insufficient number of measuring stations used in the state air quality monitoring, cities use data from private air quality sensors, which are used only for information purposes and are not taken into consideration in the air quality assessment conducted by GIOŚ. Furthermore, the majority of analyses concerning air quality condition conducted in the cities, are based on interpolated data from the nearest station (it is supplemented with results of mathematical modelling of air pollution distribution).

It is necessary to further develop the urban monitoring network allowing dissemination of knowledge, among others, on air quality, among a broader audience, as well as making it possible to diagnose areas characterised by exceeding air quality standards. This information provides grounds for relevant public administration authorities to stipulate and undertake proper reparative measures conducted within air protection programmes.

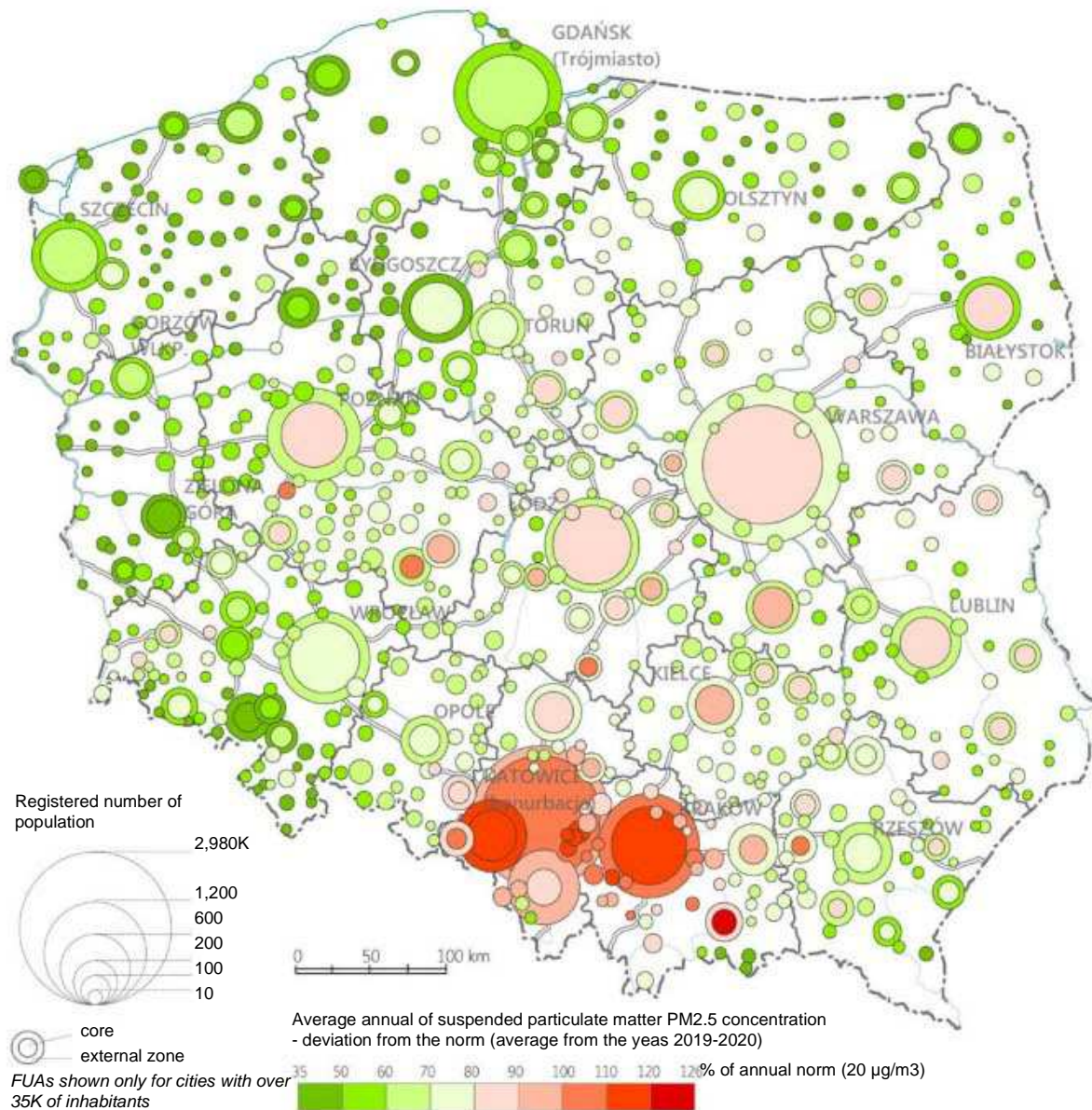
In terms of monitoring emissions in detached houses, the Central Registration of Building Emissions (*Polish: Centralna Ewidencja Emisyjności Budynków, CEEB*) will be helpful, as it allows inventory of heat sources, fuel combustion sources up to 1MW (5-6 million of real estates), as well as electricity sources in buildings. Moreover, the Registration is aimed at collecting data from programmes such as Stop Smog or Clean Air. New system development has been entrusted to the Central Office of Construction Supervision, and entities obliged to submit relevant declarations are premises' or buildings' owners and managers.

Air quality improvement is one of three main pillars on which the Polish Energy Policy until 2040 (PEP2040)⁴⁶ is based, and which is a strategic document concerning directions for the fuel and energy sector's development. This document indicates, in particular, the need for elimination of the so-called low emission by limiting the use of solid fuels in individual heating. PEP2040 assumes deviating from coal combustion in households, in cities until 2030. Nonetheless, until 2040, the possibility of using low emission coal fuel will be maintained in cities, provided that it is compliant with the so-called anti-smog resolutions⁴⁷.

⁴⁶ The Polish Energy Policy until 2040 was adopted by the Council of Ministers on 2 February 2021.

⁴⁷ Exchange of heat sources should be perceived as limiting the use of solid fuels in individual heating not only by exchanging heat sources to less emissive, but primarily as an improvement of the energy efficiency of residential buildings.

Figure no. 10. Spatial distribution of average annual density of particulate matter PM2.5 in Poland, in 2020, defined on the grounds of mathematic modelling and objective estimation in urban and urban-rural communes, as well as suburban zones



Source: own study on the basis of data of the Chief Inspectorate of Environmental Protection (pollution concentration distribution, <https://powietrze.gios.gov.pl/pjp/maps/modeLing>)

Measures in the scope of air quality improvement are carried out both at the national and local level (PEP2040, National Programme for Air Protection, National Programme for Air Pollution Reduction, air protection programmes, short-term action plans, anti-smog resolutions). Nevertheless, bigger integration of conducted measures covering all levels of air quality management is still needed.

Another problem that has a negative impact on the comfort of inhabitants' life is the increase in air temperature, which is described in more detail in the aspect of climate change in Challenge IV *Mitigating the negative effects of climate change in cities*. Nevertheless, the air temperature increase in cities and local climate change do not exhaust the list. Another aspect is also an increase in the concentration of benzo(a)pyrene⁴⁸, carcinogenic substance that originates from heating devices of small capacity, waste incineration and transport. Furthermore, air quality improvement is not supported by common use of asphalt, concrete and other impermeable materials covering large spaces. In conjunction with Los Angeles smog⁴⁹, that is, a summer type of this hazardous phenomenon, all of these negative factors affect the health of cities' inhabitants.

Excessive sealing of urban spaces with impermeable materials in conjunction with the air temperature increase leads to the so-called urban heat island effect⁵⁰. The urban heat island occurs when natural surfaces such as vegetation or water are replaced with concrete and asphalt. The effect of urban heat island increases and intensifies heat emitted from cars, conditioners and technological processes. Concrete and asphalt surfaces such as multilane roads, sealed and deprived of trees market places (squares) as well as large car parks, increase temperature and decrease humidity. It is estimated that in large European cities the difference in temperatures between a city and a suburban area can reach even up to approx. 10 degrees Celsius. The areas in question do not have a chance to retain water or cool themselves down, since surfaces heated up during the day by the sun give the heat up at night. In effect, we experience heat also at night (so-called tropical nights) – all of the above has a negative impact on health and wellbeing of cities' inhabitants, especially those who are the most sensitive, i.e. children or seniors.

Greenery is the biggest ally of cities' inhabitants in counteracting the aforementioned phenomena. Unfortunately, almost half of Polish cities' citizens have no access to green areas and attractive public spaces which they could reach on foot in a short period of time (diagram no. 11). Cities in Poland are characterised with high distinction in terms of the percentage and accessibility of green areas, in particular in residential areas⁵¹, as well as a shortage of streets equipped in greenery, so-called woonerfs (residential areas with traffic calming), as well as a space where inhabitants could have social interactions.

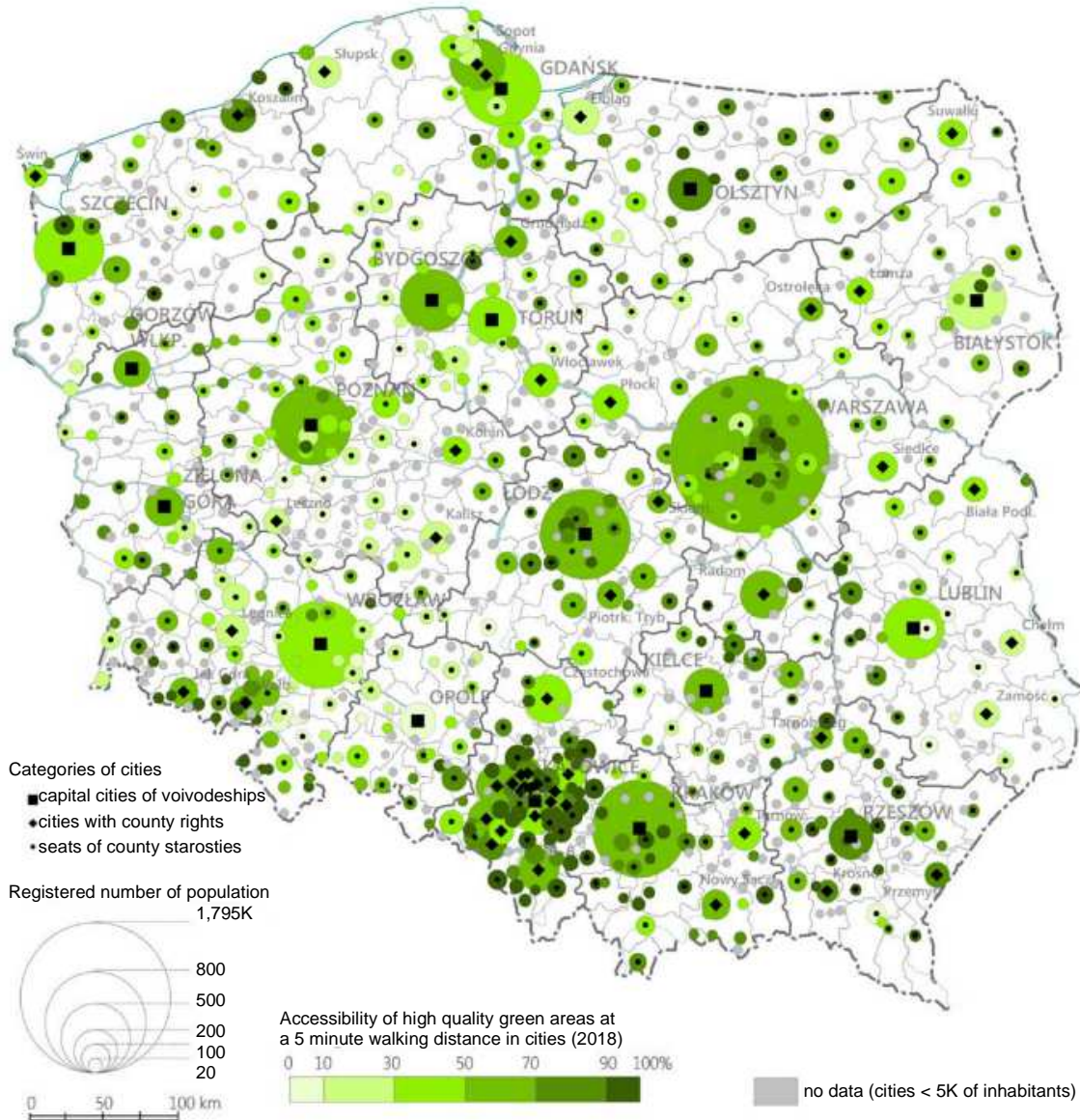
⁴⁸ B(a)P is emitted as an effect of incomplete combustion and is a component of the particulate matter.

⁴⁹ Photochemical smog (also referred to as 'Los Angeles smog', white smog or light smog) – a type of smog that occurs on sunny days when there is heavy traffic. Brown haze which usually occurs over cities during hot, sunny weather, when the mixture of pollutants, especially exhaust fumes interacts with UV radiation, and, as a result, a highly reactive gas is created, that is, ozone. This gas can cause breathing difficulties (Source: Integrated Learning Platform - MeiN).

⁵⁰ Urban area, which as a result of human actions is characterised with higher temperatures than surrounding natural areas.

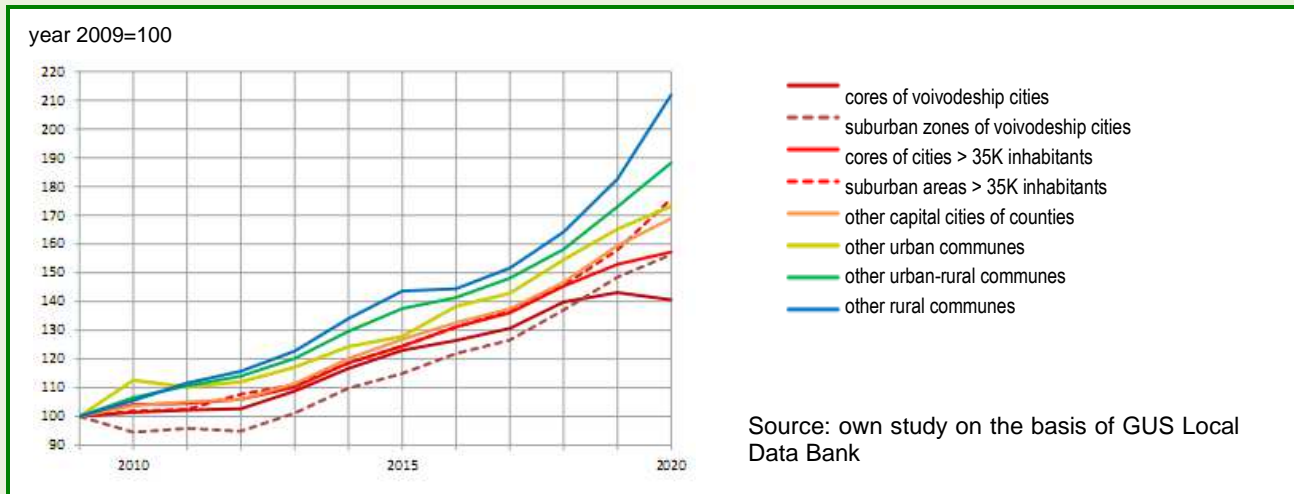
⁵¹ Green areas, as indicated by the research, are more accessible in cities with between 5 and 20K of inhabitants, where an average value of the accessibility rate to greenery complexes in good condition amounts to almost 64%. In the case of large cities (over 100K of inhabitants) it is lower by as many as 13 percentage points.

Figure no. 11. Accessibility of high quality green areas at a 5 minute walking distance in the cities, in 2018



Source: own study on the grounds of: Agnieszka Rzeńca, Agnieszka Sobol, Piotr Ogórek, Raport o stanie polskich miast: Środowisko i adaptacja do zmian klimatu (*Report on the Conditions of Polish Cities: Environment and Adaptation to Climate Change*), Institute of Urban and Regional Development, Krakow-Warsaw 2021

Diagram no. 5. Changes in the percentage of people served by sewage treatment plants with increased removal of nutrients in categories of cities and suburban zones in the years 2004-2020



The quality and development of green areas in cities is directly related to the health condition of inhabitants. In its reports, the World Health Organisation continually indicates the connection between the quality of green public spaces and the health condition of inhabitants.

The blue-green infrastructure has a complex impact on the quality of life of inhabitants. Awareness of its role in urban development is growing, which translates into its more often inclusion in planning processes carried out by urban authorities, in inhabitants', non-governmental organisations' and, more and more often, also investors' initiatives. Both small interventions in urban space sometimes referred to as 'green acupuncture' (parks, pocket forests, backyard rain gardens, green paravans or stops), as well as projects concerning large urban parks, forests and whole quarters or districts hitherto deprived of greenery in appropriate quantity and of appropriate quality, are becoming popular.

Due to the explicit tendencies to increase construction density (the compact city conception) it is more and more important to introduce greenery accompanying building facilities and streets – in places intensively developed, also on buildings (green roofs, green walls), as well as street espaliers.

Basing urban development directly on blue-green infrastructure, which has a significant impact on the quality of life of inhabitants and urban ecosystem, means that consciously managed cities will constitute a coherent network of multifunctional facilities available for inhabitants also in the direct neighbourhood of their places of residence.

Sewage treatment possibilities are also gradually improving in cities. Treatments of the highest technical grade, i.e. with increased removal of nutrients, have already covered approximately 95% of the population of the largest cities (diagram no. 5). Especially in voivodeship cities, in comparison with 2004, a spectacular increase in this index was noted from the level of slightly above 40% (among others, thanks to Warsaw). Suburban zones of those cities, in which indexes remain, despite gradually growing, at a level of 40-50%, are in a much worse situation. Sewage treatment grows at a small pace or virtually remains unchanged in smaller cities (below 35K inhabitants).

7.5.2. Proposed solutions

A. Legislative changes increasing the possibility of developing blue-green infrastructure (BGI) on intensively developed areas

Insufficient awareness and certain bad administrative decisions concerning climate change effects' mitigation are unfortunately accompanied by a number of legislative and organisational barriers. Currently binding legal provisions hinder or even inhibit the introduction of BGI elements including, in particular, trees in highly developed areas. Technical infrastructure, including underground installations, is perceived as a barrier for planting trees. Requirements for new investment in public roads excludes planting trees on greenbelts at a distance shorter than 3m from the edge of the road.

Solving these problems includes changing legal regulations concerning terms and conditions of introducing greenery in intensively developed areas, in which, pursuant to the binding provisions, the BGI development is hindered or impossible. Legislative changes aiming at making the terms and conditions of introducing urban greenery more flexible are necessary to allow creating a coherent BGI network in areas, in which conflicts between BGI elements and the existing technical infrastructure and building facilities could arise. It is necessary to allow in the national legal provisions to locate a trunk of the newly planted tree at the new road investment at a distance smaller than 3.0m from the edge of the road, i.e. at least 1 m, provided that technical terms and conditions (underground and aboveground infrastructure) as well as security requirements (using visibility triangles) are fulfilled⁵².

Furthermore, legislative changes consisting in making legal provisions regarding shaping a people-friendly public space more flexible, are proposed. Changes concern eliminating interpretative and executive difficulties, which hinder introducing in the public space elements of relaxational and recreational nature (among others: benches, deck-chairs, picnic tables, playground equipment). In order to improve the quality of public spaces within this solution, it is also proposed to change legal provisions concerning introduction of small architecture and organisation of recreational places.

⁵² Recently positive legislative initiatives have been observed regarding making terms and conditions of introducing urban greenery in public road lanes more flexible. The Ministry of Infrastructure proceeds the draft of the regulation of the Minister of Infrastructure on technical and construction provisions regarding public roads.

It is also necessary to amend the Act of 16 April 2004 on nature protection, pursuant to which, in compliance with the binding definition of green areas⁵³ self-governments are developing infrastructure at the cost of green areas by arranging and sealing the surface wherever it has been decided that relevant greenery is not properly arranged (e.g. 'wild' or idle land). While such unarranged greenery (e.g. old trees that produce extensive and correlated aerial, aboveground and underground ecosystems) often plays the largest number of biological and ecosystem functions in the city. Therefore, it is essential to amend Article 5 of the Act of 16 April 2004 on nature protection so that the definition of green areas includes, among others: urban forests, parks, lawns, green squares, promenades, boulevards, historic gardens, flower meadows, greenery accompanying roads on a construction site, squares, ancient fortifications, buildings, stockyards, airports, railway stations and industrial facilities. Moreover, due to the performed specialist functions, the definition of green areas could be extended with allotments, botanical gardens, zoological gardens, parks for children based on the concept of dr. Henryk Jordan, cemeteries, geoparks and open sports facilities. The established definition of green areas should also take into account the possibility of including water regions with banks and bottom in the ground, connected with underground water.

Simultaneously, it seems legitimate to introduce additional regulations, which would protect green areas against excessive development with sealed surfaces, as well as areas of 'wild' greenery, which play a crucial role in the context of climate change adaptation, e.g. performing retention functions.

Furthermore, it is postulated to amend provisions regarding requirements for biologically active areas stipulated in the Regulation of the Minister of Infrastructure of 12 April 2002 on technical terms and conditions which should be met by building facilities and location thereof (Journal of Laws of 2019, item 1065, as amended), in order to increase undeveloped areas' protection.

The protection could be also reinforced by the introduction of a definition of 'retention areas' including areas covered in vegetation on mineral or organic soil, characterised with the capacity to exchange water with underground water, including forest areas, idle lands and green areas. Or a clarification of a definition of biologically active areas. At the same time, additional regulations would be necessary, which would prescribe protection of such areas within cities e.g. by identification and then inclusion in spatial policy. To this end, urban climate change adaptation plans with a component identifying such areas could be also used.

B. Standardisation of planning in the scope of air protection in cities

It is necessary to review measures and possibilities of funding all administration levels influencing the air protection policy and assure enhanced coherence of measures and documents of territorial self-government and central administration.

It is necessary to assure enhanced coherence of all planning documents, including documents in the scope of air protection with development strategy provisions. Moreover, whereas the strategy is of a more general and descriptive nature, all sectoral and thematic documents such as low-carbon economy plan (LCEP), should have an operating character and should include specific tasks, agenda, specification of coordinating entities and monitoring rules (a set of indicators and manners of evaluation thereof), as is in the case of air protection programme (APP).

Provisions in self-government documents such as voivodeship anti-smog resolutions and planning documents in cities, including APPs and LCEP, spatial development plans, development plans of particular network systems and assumptions to heat, electricity and gaseous fuels supply plans (so-called communes' energising plans) established by communes, require integration with PEP2040 provisions and objectives specified in the document. Provisions included in co-funding programmes such as Stop Smog, Clean Air or urban grants, should also be consistent with PEP2040.

Cohesion of measures undertaken in the scope of air protection requires legislative changes. Valid regulations create legal barriers for communes' introduction of bans on using solid fuel heating devices at the stage of compiling spatial development plans. It is necessary to unequivocally specify in the Act of 27 March 2003 on spatial planning and development (Journal of Laws of 2022, item 503) planning governance provisions in this scope. Currently, interpretation of these provisions is ambiguous and judicial decisions questioning self-governments' resolutions in this scope constitutes communes' limitation in terms of

⁵³ Definition of green areas in the Act of 16 April 2004 on nature protection: 'green areas – areas arranged with technical infrastructure and functionally related building facilities, covered in vegetation, performing public functions and, in particular, parks, lawns, promenades, boulevards, botanic gardens, zoological gardens, Jordan's parks, historic parks, cemeteries, greenery accompanying roads on a construction site, squares, ancient fortifications, buildings, stockyards, airports, railway stations and industrial facilities.'

competences. In consequence, communes have no competences to exclude specific heating systems, specify capacity parameters or indicate specific types of fuels in the spatial development plan. In compliance with judicial interpretation, such right is vested pursuant to the Act of 27 April 2001 - Environment Protection Law (Journal of Laws of 2021, item 1973, as amended) on voivodeship assemblies (*Polish: sejmiki*) within smog resolutions. Whereas, the communes' capacity in the scope of introducing bans in spatial plans is indicated in Article 15 par. 2 of the Act of 27 March 2003 on spatial planning and development (Journal of Laws of 2022, item 503) and par. 4 point 3 of the Regulation of the Minister of Development and Technology of 17 December 2021 on the required scope of a draft of the local spatial development plan (Journal of Laws, item 2404). These provisions concern the rules for environment, nature and cultural landscape protection, which should include orders, bans, admissions and restrictions in land development. Due to the importance of air protection, it is necessary to unequivocally stipulate provisions in the direction of communes' planning governance in the scope of introduced bans.

C. Intensification of measures in the scope of inventory, monitoring and controlling air quality in cities

In the case of many elements inscribed in the subject matter of inventory, monitoring and evaluation, self-governments have limited possibilities of action. Key deficits in this case concern organisational capacity and quality of administrative staff. Thus, it is advisable to reinforce the control of environmental decisions and enforce provisions thereof. Furthermore, it is necessary to support self-governments both, in order to organise or use hitherto services (e.g. urban services), as well as to reinforce standards of control.

With regard to the new obligations of communes in the scope of controlling compliance of declarations concerning heat sources, fuel combustion sources and electricity sources with the factual state, it is necessary to properly prepare services conducting routine controls including the police, city guards and chimney sweeps.

In the Act of 21 November 2008 on supporting thermomodernization and renovation and on the central register of emissivity of buildings (Journal of Laws of 2022, item 438), no mechanisms of support for self-governments in establishing and updating CEEB have been provided for. Therefore, it is necessary to provide such support.

D. Levelling main sources of low-carbon in transport and reducing noise (reducing car traffic)

With regard to measures for better transport organisation, not only the necessity to create an attractive alternative to individual motorisation by extending the offer of public transport or improving the conditions of pedestrian and bicycle traffic, but also the necessity to reduce car traffic in key urban areas in order to improve living conditions of inhabitants (the so-called push&pull rule⁵⁴), are discussed. Such measure allows limiting air pollution and traffic noise, optimisation of using urban space in especially valuable urban areas and support revitalisation processes⁵⁵.

It is postulated to continue striving for the introduction of traffic calming zones in cities and physical calming of traffic including the introduction of new provisions encouraging development of traffic calming zones covering driveways and local roads in residential areas, as well as in the neighbourhood of educational and care facilities i.e. nursery schools, preschools and primary schools. The zones should be marked with traffic organisation and introduction of physical geometric solutions forcing speed reduction in compliance with the zone marking. In order to achieve actual zone reduction of speed, it is necessary to introduce narrow lanes, chicanes, speedbumps, raised pedestrian crossings, raised crossroads. Moreover, projects related to traffic calming and public transport should be promoted within existing road infrastructure funds.

Concurrently, a higher percentage of vehicles with alternative powertrains in car traffic will contribute to improving air quality in cities. Thus, it is essential to intensify measures for supporting purchases or other forms of possession of such vehicles and for electric cars' infrastructure development⁵⁶. Nonetheless, a special priority should be co-financing purchases of electric cars in business activities that require intensive use of cars in the urban area such as: taxis, postal and courier activities, and functioning of public institutions such as municipal police and the state police.

⁵⁴ Push&pull is a rule of introducing sustainable mobility consisting in, on the one hand, proposing an attractive alternative of city-friendly forms of transport and, on the other hand, gradually decreasing attractiveness of movement characterised with the highest external costs, *Wyzwania zrównoważonego rozwoju w Polsce (The Challenges of Sustainable Development in Poland)*, Jakub Kronenberg, Tomasz Bergler, Sendzimir Foundation, Krakow 2010.

⁵⁵ The issue of excessive motorisation in Polish cities results from a very high motorisation index. According to Statistics Poland data, in 2019, in Warsaw, it amounted to 778.0 of passenger cars per 1,000 inhabitants, in Krakow – 659.8, in Wrocław – 715.4 and in Poznań – 757.7. For comparison purposes, according to Eurostat, in Berlin – 332.2 passenger cars per 1,000 inhabitants, in Hamburg – 431.6, in Munich - 493.2. German values were still higher than data for largest British or French cities.



















⁵⁶ The location of charging stations of various capacities (kW) should depend on the character of a particular stopping place e.g. charging stations of standard capacity located in car parks at transfer nodes, car parks or shopping centres, charging stations of high capacity at outgoing roads or gas stations.

In compliance with the provisions of amendment to the Act of 11 January 2018 on electromobility and alternative fuels (Journal of Laws of 2022, item 1083), as of the beginning of 2022 self-governments obtained the possibility to set clean transport zones (CTZ). Gradual introduction of CTZs is recommended, starting with limiting traffic of vehicles that cause the majority of pollution. The plan spread over a period of years should gradually strive for full elimination of internal combustion engine vehicles in city centres and, simultaneously, reduction of noise.

E. Reducing energy intensity of residential buildings

Due to the problem of air pollution, it is important to more efficiently support measures aimed at the improvement of energy efficiency, undertaken both by single- and multi-family buildings' owners, as well as administration of public utility buildings and service facilities. Furthermore, support should cover undertakings taking into account improvement of heat insulation of those buildings and exchanging heat sources with low-carbon ones with the use of system heat, which, in consequence, will also contribute to decreasing energy consumption in a facility. Therefore, it is crucial to increase the use of funds within Clean Air and Stop Smog programmes, the use of tax instruments (a thermo-modernisation relief) and support for the development of renewable energy sources' installations. While reinforcing the aforementioned programmes, buildings covered with the maintenance should be taken into account and specific solutions should be applied.

In all measures aimed at improving energy efficiency of buildings, removal of goods including asbestos and replacing them with asbestos-free goods should continue to be emphasised.

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Legislative changes increasing the possibility of developing blue-green infrastructure (BGI) on intensively developed areas			
B. Standardisation of planning in the scope of air protection in cities			
C. Intensification of measures in the scope of inventory, monitoring and controlling air quality in cities			
D. Levelling main sources of low-carbon in transport (reducing car traffic)			
E. Reducing energy intensity of residential buildings			
Key: significance for the size category of the city:	 medium	 major	 great

Challenges of the National Urban Policy 2030

7.6. Challenge VI

Ensuring a sustainable and integrated urban mobility system in functional urban areas



7.6.

Challenge VI: Ensuring a sustainable and integrated urban mobility system in functional urban areas

7.6.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. New Leipzig Charter – ‘The Green City’
2. Urban Agenda for the EU
3. Sustainable and Smart Mobility Strategy – Putting European transport on track for the future
4. UN New Urban Agenda – ‘Sustainable Environment and Dynamic Development of Urban Areas’
5. Agenda for Sustainable Development 2030 - Goal 11. Sustainable Cities and Communities; Goal 13. Climate Action
6. *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – The New EU Urban Mobility Framework*



Mobility in functional urban areas in Poland is currently a great challenge⁵⁷. The growing suburbanisation and the lack of coherent management of spatial planning at urban level⁵⁸ generates problems resulting from the necessity to assure transport accessibility of areas at a significant distance from dense urban sprawl. In conditions of intense urban sprawl, keeping a public transport network becomes unprofitable. In suburban zones it results in the necessity of using individual car transport. It generates increased pollution, higher frequency of accidents, lost time due to the congestion. In effect, in road congestion compilations Polish cities obtain one of the worst indexes among European Union Member States (figure no. 12).

At the same time, the issue of urban congestion with individual car traffic is growing⁵⁹. In the light of complex traffic studies⁶⁰, the percentage of individual motorisation on city entrances is nearly twice as high as in the intercity traffic.

⁵⁷ More on the challenges in the scope of transport in the Sustainable Transport Development Strategy until 2030, adopted by the Council of Ministers on 24 September 2019.

⁵⁸ In this chapter, this subject matter refers only to the issue of transport. More information on spatial management of cities is included in chapter 7.2 Challenge II: Counteracting chaotic suburbanisation processes.

⁵⁹ In compliance with the Traffic Index ranking of the company TomTom, in 2020, as many as 9 Polish agglomerations (Łódź, Krakow, Wrocław, Poznań, Warsaw, Gdańsk-Gdynia-Sopot, Bydgoszcz, Szczecin and Lublin) were among the first one hundred of most congested cities in the world, https://www.tomtom.com/en_gb/traffic-index/ranking/.

⁶⁰ The studies conducted independently in a number of voivodeship cities, in the years 2015-2020, e.g. Badanie ankietowe i aktualizacja modelu ruchu. Wykonanie badań ankietowych wraz z opracowaniem wyników. Raport końcowy z realizacji etapu II (*The Traffic Model Survey and Update. Conducting Surveys and Compiling Results. Final Report on the Implementation of 2nd Stage*), Poznań/Sopot 19 November 2018, <http://www.plantap.pl/assets/Uploads/RAPORT-II-Wykonanie-bada-ankietowych.pdf>.

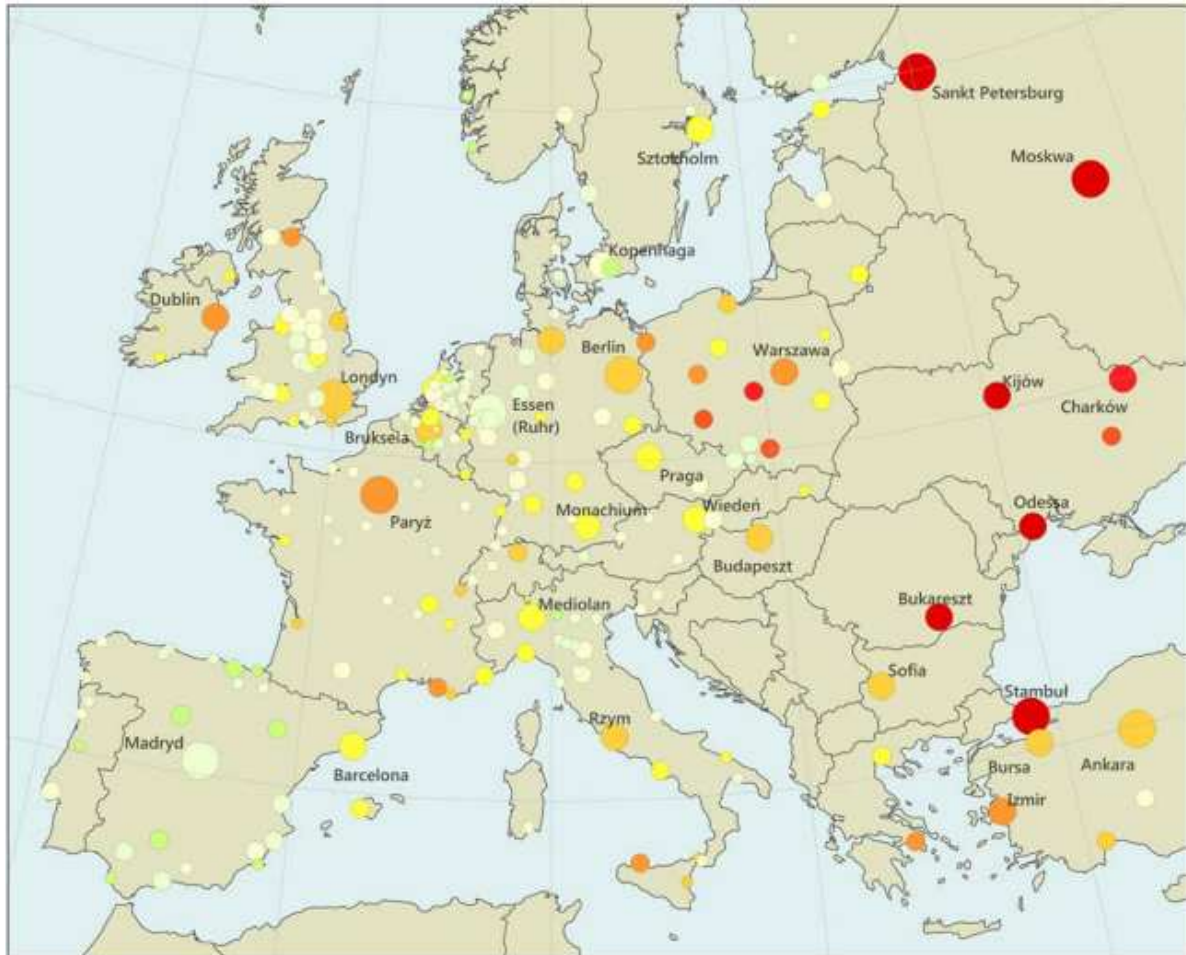
It is related to inhabitants moving outside administrative borders of cities, to suburbs, as well as places and communes surrounding the city centre, thus significantly increasing the functional urban area. Such a situation causes many problems and challenges related to mobility management in those areas, accessibility of services or public transport. It should be expected that the problem of inhabitants' migration to the suburbs will deepen in the nearest future even if due to the differences in costs of purchasing or renting real estate and the increase in migration will be accompanied with the increase in motorisation pressure.

Functioning of collective public transport is characterised with high dispersion of entities responsible for organisation thereof. This task is entrusted to communes, counties, voivodeship self-governments and a minister relevant for transport. Pursuant to the Act of 16 May 2019 on development fund for public utility bus transport (Journal of Laws of 2021, item 717, as amended) certain competences (in the scope of granting co-financing and subsidies) were also vested in voivodes. The fact that many entities participate in the public transport organisation does not constitute an obstacle for development of a coherent transport system in the cities and functional urban areas. A principal challenge is to extend the range of legal solutions for integration and stable functioning of such systems, among which the aforementioned issues related to financing are a priority.

Functioning of public transport in urban areas is a task of self-government authorities, mainly communes. Nevertheless, the coordinating role of counties' starosts and voivodeships' marshals is of significance, and in the case of regional transport this role is often crucial. The role of government administration primarily consists in recognising areas that require systemic support, properly drafting legislation and designing relevant financial tools, disseminating good standards and practices, in particular, in the scope of technical conditions and traffic safety. Development of pedestrian and bicycle infrastructure primarily lies within the responsibility of self-government authorities. The role of government administration is similar as in the case of public transport (legislation with a significant importance of regulations specifying detailed technical conditions, programming financial support, promotion of best practices). Additional tasks consists in developing pedestrian and bicycle infrastructure at national roads that fall within the competence of the General Director for National Roads and Motorways (*Polish: Generalny Dyrektor Dróg Krajowych i Autostrad, GDDKiA*). Furthermore, it is recommended at the central level to create the bicycle and pedestrian policy rules – Poland is one of a few EU Member States that do not have such policies at a national level.

The potential of public transport in functional urban areas is also limited by various development barriers of financial, organisational or legislative character. Many cities limit public transport offer within and outside their borders due to the lack of sufficient funds or a lack of agreement with neighbouring communes. An additional issue comprises differences in the dimension and type of reliefs in each type of transport (railway, regional and urban buses), which hinders integration of urban and regional transport. The potential of bus transport in agglomerations is limited by barriers that do not provide for solutions ensuring flexibility in providing services to the areas of low population density.

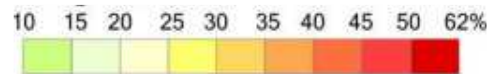
Figure no. 12. Waste of time spend on a commute due to road congestion in selected cities in Europe, in 2021



The number of population of studied cities

- Up to 100K
- 100-300K
- 0.3-1 million
- 1-3 million
- over 3 million

Traffic congestion



Source: own study on the basis of TomTom Traffic Index, 2022

Simultaneously, both rapid rail transport at city entries and rapid urban railway have been successful⁶¹, which shows a high potential of public rail transport. Barriers in developing rapid rail transport in agglomerations are related to the development and adjustment of connections, insufficiently high quality of rail infrastructure, shortages in modern rolling stock to provide services for the agglomeration traffic (with a large number of stops and fluctuation of passengers), growing costs of financing current activity or hindered traffic integration. Furthermore, cooperation between self-governments over administrative borders to the benefit of integration or creation of new connections also constitutes a challenge in this context.

Moreover, the presence of heavy freight traffic in many agglomerations, e.g. in the centre of Warsaw, is also a problem. It results from the functioning of old road structures, a lack of bypasses and a lack of active management of heavy traffic at an urban level, among others, by using smart transport systems and traffic management centres. Solutions in the scope of urban logistics and solutions for last mile are rarely used. Bypasses that support moving transit traffic outside of urban areas have a positive impact on calming traffic in such areas, however, it should be noticed that without active management of the road infrastructure that remains after the transit in urban areas, it will not cause calming of car traffic therein.

Urban mobility management is affected by inhabitants' attachment to cars, even in the case of creating an attractive offer of public transport. It is caused by the force of habit, privilege of car traffic and attachment to means of individual transport – in Poland, according to CEPiK⁶² data, in 2021, approx. 19 million of cars were registered (approximately half of them are unused, but have not been deregistered), and in larger agglomerations there are statistically more of them than in other areas and this number is systematically growing.

Changing transport behaviours is encouraged not only by the public transport development and integration. It is important, from the point of view of urban mobility, to introduce solutions related to bicycle and pedestrian traffic, as well as micromobility. In recent years the transport industry has been undergoing swift changes both in terms of technology as well as in the scope of services of shared mobility and micromobility. Services based on the economy of sharing and the conception defining mobility as a system of services (*Mobility as a Service - MaaS*) are gaining popularity. Shared mobility is an emerging area, which is constantly evolving and changing. Due to the growing popularisation, the services of sharing and using the MaaS conception should be taken into account within the multimodal transport system as support for sustainable development that allows shaping urban space on the grounds of inhabitants' needs.

Especially on shorter distances, solutions for the benefit of pedestrian and bicycle traffic are crucial. An increase in the use of bicycles or personal transportation vehicles requires developing a safe, coherent and functional communication infrastructure for these means of transport that allows increasing users' comfort and safety. In principle, the largest Polish cities have established in this scope sets of standards or catalogues of good practices. These are, among others, accessibility standards taking into account universal design, bicycle infrastructure standards or principles for shaping street greenery. Furthermore, there are various rules for social consultations regarding implemented projects. It is conducive for a significant improvement in the quality of decisions made and establishing a social consensus surrounding them.

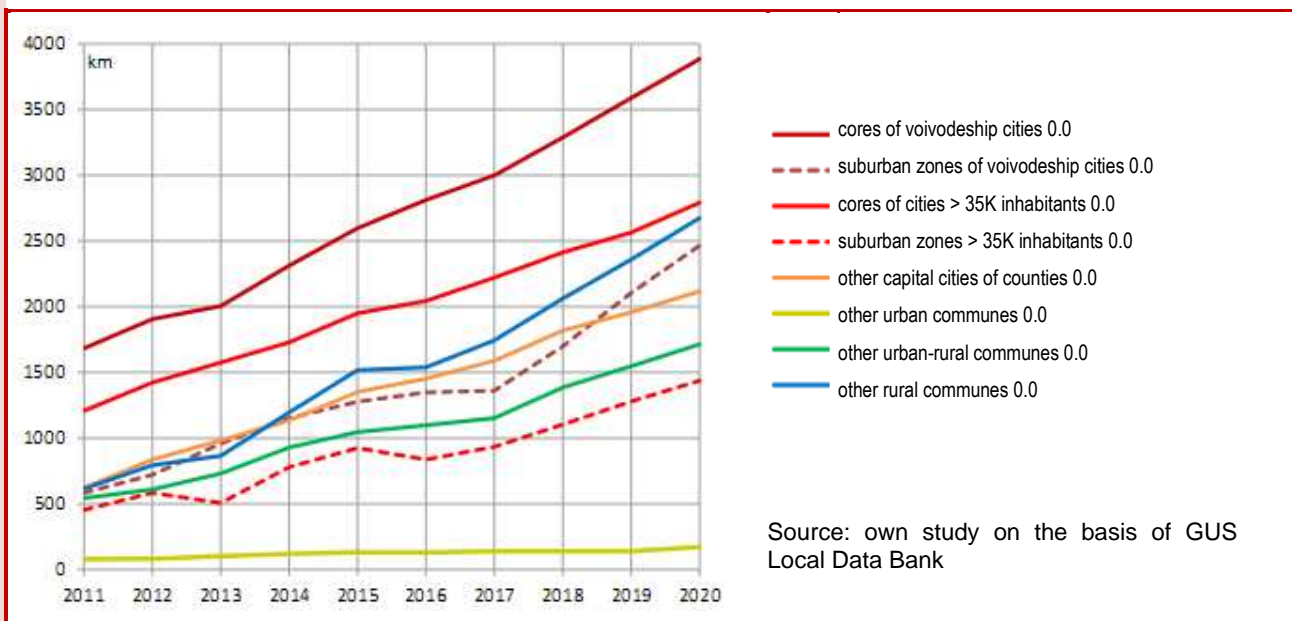
⁶¹ In the last decade, among others, the following were established: Szybka Kolej Miejska in Warsaw, Pomorska Kolej Metropolitalna, Poznańska Kolej Metropolitalna, Szybka Kolej Aglomeracyjna in Krakow, Łódzka Kolej Aglomeracyjna.

⁶² Central Registry of Vehicles and Drivers (Polish: *Centralna Ewidencja Pojazdów i Kierowców*), <http://www.cepik.gov.pl/>.

Recently, positive initiatives concerning an increased, in comparison to previous years, funding of investment related to the development of pedestrian and bicycle infrastructure or public transport within already existing national roads, such as e.g. Safe Road Infrastructure Programme 2021-2024, have been observed. Nonetheless, a lot of investment projects still do not sufficiently consider the needs of pedestrian and bicycle traffic. However, it is worth underlining that in case of the latter, the infrastructure is quickly growing (diagram no. 6). In 2011, in Poland there were 5.8K km of cycle lanes, and in 2020, this length tripled (17.3K km). In estimation per 10K inhabitants, the majority of this infrastructure was noted in non-voivodeship cities and cities with over 35K inhabitants (5.5 km), and then, in suburban zones of voivodeship cities (5.3).

The situation of pedestrian and bicycle traffic is more difficult in smaller centres. It is caused by, among others, dispersion of road management, smaller financial capacity or a lack of established standards. Nevertheless, big problems are still experienced in suburban zones, where road networks are usually devoid of pedestrian and bicycle infrastructure and actual, high speed of cars worsen the safety of unprotected road users.

Diagram no. 6. An increase in cycle lanes by the category of cities in 2011-2020



In result, a car constitutes a prevailing means of transport even at short distances. Moreover, a big problem is also the limited financing of investment in pedestrian and bicycle infrastructure, which does not have a priority. It hinders development of a network of cycle lanes and pavements.

Furthermore, the traffic organisation which is unfavourable for cyclists, including the limited use of bicycles in the opposite direction, which often prevents cyclists from using one-way streets and, as a result, they are pushed out of safer, narrower and more attractive streets to streets with higher traffic and dangerous communication arteries, has a negative impact on bicycle traffic. As a result, riding a bicycle in certain urban areas is becoming less popular and obstructs balancing transport. Moreover, a prevailing, yet, usually unfavourable, practice is to set bicycle infrastructure at an expense of already existing pedestrian space.

Studies on urban transport policies in highly developed countries show that not only the criterion of incentives for changing transport behaviours, but also measures to the benefit of limiting car traffic, are important. One of the basic problems of cities is the excess of cars caused by unjustified low cost of parking, usually transferred by owners to communes. In many cases, it is free for the owners of vehicles. All costs are transferred to the public side.

Polish cities partially use foreign experiences by introducing paid parking zones, calming traffic and limiting the supply of parking spaces in selected parts of cities in order to extend the pedestrian and bicycle traffic space. The scope of actions to a great extent depends on the determination of self-government authorities, however, these solutions become more common and gain social approval. Amendments to provisions introduced in 2018 – realignment of maximum fees, the possibility of introducing urban zones of paid parking in cities with over 100K of inhabitants – favour conducting by self-governments parking policy which is more adjusted to local conditions. Nevertheless, still the lack of the possibility to collect fees on holidays affects smaller tourist cities (cities with below 100K inhabitants). Only the urban zone of paid parking reserved for the city centres of the largest cities constitutes a mechanism that allows managing parking twenty-four hours a day, seven days a week.

Other instruments related to limiting exhaust emissions are clean transport zones, which can be established in the cities, in compliance with the local conditions, on the grounds of the amendment to the Act on electromobility and alternative fuels of December 2021⁶³. Nonetheless, at the local level there are still difficulties in introducing this solution – so far, only Krakow has made such an attempt.

While considering transport issues, their consequences for the development should always be taken into account. Urban areas orientation to cars, to which a lot of urban streets continue to be subordinated to at an expense of pedestrian and bicycle traffic, as well as greenery, despite the bad quality of air (motorisation next to household furnaces is one of two key sources of air pollution in cities and the largest source of noise), also contributes to many fatalities of road accidents⁶⁴. One of the reasons for this is designing roads and urban areas predominantly oriented on car traffic.

⁶³ The Act of 2 December 2021 on amendment of the act on electromobility and alternative fuels, and certain other acts.

⁶⁴ These issues have been discussed in more detail in the chapter devoted to Challenge VII: Improving road safety.

The low level of safety is one of the most important barriers for pedestrian and bicycle traffic development in the cities and in the functional urban areas.

The problems resulting from urban sprawl overlap with demographic processes. Satisfying the needs of an ageing society will require further adjustment of infrastructure and urban services and, in particular, better accessibility for persons with reduced mobility, including the elderly and persons with disabilities. Therefore, it is crucial to resign from the implicit possibility of parking on pavements, footbridges and underground passages to increase pedestrians' comfort in urban space.

It is worth emphasising that the durability of the urban transport network has been severely tested during the COVID-19 pandemic, which affected travellers' behaviours. Thus, it is necessary to make efforts in order to encourage changing behaviours and limit the use of cars, which is a key condition for transferring into sustainable mobility. Nonetheless, the crisis opens new possibilities of re-thinking urban mobility and making it more sustainable, favouring social inclusion, more affordable and safer with a simultaneous promotion of active and healthy lifestyle.

7.6.2. Proposed solutions

Improvement of urban mobility functioning requires simultaneously undertaking multidimensional measures, which can be divided thematically into:

A. Measures in the scope of removing legal obstacles hindering integration of the public transport system:

- In order to increase public transport attractiveness, it seems legitimate to re-analyse the possibility of developing a complex, transparent and simple system of reliefs (not only statutory) binding in means of transport both railway and bus, irrespective of the communication character (urban and non-urban) with a new system of financing thereof.
- Establishing legal possibilities of appointing commune-county-voivodeship and commune-voivodeship unions in order to organise public collective transport (voivodeship transport union), as well as the possibility of entrusting the voivodeship management, upon the consent of voivodeship communes and counties, to the organisation of public transport in the territory of the entire voivodeship, with a consideration of all branches of regional and local transport.
- Reinforcing the cooperation between the core city and neighbouring communes by creating the possibility of purchasing 'transport effect' in neighbouring communes by the metropolitan city's management e.g. the possibility of financing construction of Park&Ride car parks at railway stations in suburban areas, the possibility of financing construction of a tram line and its functioning to neighbouring cities and towns

- Analysis of the possibility of co-financing a regional tram with sources allocated to other public transport branches on similar rules as regional railway, as well as the possibility of contracting regional tram services by voivodeship organiser of public collective transport.
- Legal definition of shared transport e.g. by separating a type of a shared vehicle in the traffic law. The solution would help territorial self-government units in popularising shared mobility as an effective and ecological tool of making urban mobility more sustainable (e.g. by separating a pool of parking spaces for this type of transport). Due to the current lack of proper recognition of the sharing category on the regulatory grounds, the potential of the number of the so-called new mobility services remains unused.

B. Measures resulting from technological and organisational development of public transport, introduction of which is proposed:

- Analysis of the possibility of introducing a tram-train⁶⁵, which allows optimal use of the existing track infrastructure in agglomerations, improvement of accessibility of rail transport and reduction of the number of changes⁶⁶.
- It is advisable to introduce comprehensive optimisation of the manner of planning urban development with a consideration of all identified challenges, including satisfaction of mobility needs or climate change adaptation. A basic direction of measures in this scope is the coordination of mobility and urban spatial planning due to the Sustainable Urban Mobility Plans - SUMP. SUMP are developed with a consideration of all correlated urban areas, covered by the policy, in cooperation with relevant levels of management system. They also combine various types of transport, traffic security, freight transport, mobility management and smart transport systems. These plans should play an important role in achieving EU goals in the scope of limiting CO² emission, noise and air pollution, as well as contribute to increasing the effectiveness of the urban transport system. SUMP should provide grounds for transport plans which belong to a group of documents of a strictly sectoral nature and legally regulated.⁶⁷

Organisation and integration of solutions, as well as recommendation of legal changes with regard to SUMP will be based on experiences and results of a pilot experiment⁶⁸ concerning support for the cities in establishing SUMP.

- Simultaneously, the number of transfer nodes (railway-road) should be increased by, among others, better adjustment of the railway line routes to traffic generators (including settlement network).

⁶⁵ Łukasz Zaborowski, *Tramwaj Dla Polskich Miast (A Tram for Polish Cities)*, Instytut Sobieskiego, Warsaw 2018.

⁶⁶ Such solutions are gradually gaining popularity in Europe.

⁶⁷ The Act of 16 December 2010 on public collective transport.

⁶⁸ Pilot project that has been conducted since 2019 with the participation of the Ministry of Development Funds and Regional Policy, the Ministry of Infrastructure and the Centre for EU Transport Projects.

C. Measures in the IT scope and related to the digitalisation of mobile services:

- Transport and passenger information management reinforcement, including information in real time, to the technically possible extent, by sharing for the purposes of reusing (portal Dane.gov.pl, data for passengers) e.g. current data concerning the location of vehicles as well as other parameters thereof. Data should be shared with the use of open standard protocols API⁶⁹. It should concern both operators of public collective transport and private providers of shared transport services, as well as allow these transport operators and third parties to develop applications or websites allowing to plan travelling, book tickets, order or rent vehicles, pay for transit or allowing to make statistics concerning the quality of offered services.
- The need for standardisation in the scope of data exchange between particular intelligent transportation systems (ITS) and development of traffic management centres. It will allow exchanging data with other road authorities on the grounds of European and Polish norms and standards e.g. in order to give priority to public transport, dose entry into the city, mutually redirect traffic between road authorities in case of emergencies.
- Introduction of a requirement to equip a specific percentage of public transport rolling stock with devices counting the number of passengers should be considered with regard to beneficiaries of EU and government funds, including the National Fund for Environmental Protection and Water Management (NFEPWM). The aim of this obligation is to create tools monitoring effectiveness of measures undertaken for the improvement of public transport and facilitation of planning an offer for the future, including making transport plans. Currently binding provisions that require tests before making transport plans are, in practice, very differently implemented. Different testing methodology hinders comparisons and tests themselves are a very expensive element of making transport plans.
- In order to obtain a broad overview of the mobility of Polish citizens, conditions on which it would be possible to obtain from operators of mobile public telecommunications network data concerning transport e.g. making by operators of mobile public telecommunications network traffic flow maps on four selected days a year free of charge, should be considered. Such a solution would extend knowledge on the transport traffic collected by Statistics Poland that systematically monitors commute (especially in functional areas) on the grounds of information obtained from mobile public telecommunications network operators.
- The potential of digitalisation in transport management should be used to a greater extent. There are many fields, in which new technologies can be used: Clean Transportation Zones' access control systems, parking fees and tolls collection systems, provisions adherence control systems, modern ticket systems allowing intermodal travelling, as well as buses on demand or virtual stops providing an attractive offer in areas of low population density. Usually the biggest barrier are legal provisions which do not keep up with dynamic technological development.

⁶⁹ Application Programming Interface.

Therefore, a systematic review of new technologies is postulated in order to adjust provisions quickly. Key fields include, primarily, developing capacities of intelligent transportation systems, as well as development of rail and road autonomous vehicles.

D. Organisational measures for supporting the best practices include:

- Conducting analysis of the possibility of harmonising various tools in the scope of financial support for public transport. The aim is to promote a complex approach to public transport on occasion of various investments. For instance, reference to the objectives of a government programme Accessibility Plus should be one of the criteria for evaluation of government fund subsidies such as the Fund for the development of public utility bus transport (e.g. the use of low-entrance or low-floor rolling stock).

- Promoting sustainable urban mobility plans (SUMP) covering entire functional urban areas as a tool integrating spatial policy with transport policy, as well as taking into account correlations between particular transport branches.

- Promoting the best practices by the National Road Safety Council (*Polish: Krajowa Rada Bezpieczeństwa Ruchu Drogowego, KRBRD*) and developing a catalogue of best practices in urban space that are pedestrians' and cyclists' friendly, developing guidelines supporting safe use of devices in the scope of micromobility, organising an all-Poland contest for the best solutions and spatial projects. Furthermore, the analysis should cover creating a University knowledge centre (e.g. co-financing by governments institutes at several universities for the purposes of researching bicycle traffic). Using grants to set research priorities concerning economically effective solutions for rail transport: ultra-lightweight railway, the use of alternative power transmissions (e.g. biogas, hydrogen), railway automation (systems of steering railway traffic on sidelines, securing road-rail routes).

- Conducting analysis of the possibility of promoting and encouraging cities' and communes' self-governments located at the riverside to use water transport (water trams, water ferries) and promoting the indicated transport from in the urban transport system.

E. Measures for the increase in pedestrian and bicycle traffic:

- In the scope of legislation, the introduction of changes to provisions on road signs and signals (e.g. the order of giving green light at crossroads, direction signs for cycle lanes, horizontal signs for cycle lanes), popularisation of the opposite direction traffic in cities and coherence thereof with the existing cycle infrastructure. The solution will contribute to the improvement of safety level due to the fact that situations will be clearly defined beforehand and thus, safer.

- In the organisational and investment scope, it will be helpful to introduce new technical and construction provisions⁷⁰, as well as standards and procedures recommended for use by the minister relevant for transport⁷¹. It is necessary to analyse construction law provisions in terms of simplifying formalities related to the rebuilding of the road land in order to calm traffic. The currently prevailing solution in areas covered with traffic calming is the installation of traffic safety devices as well as horizontal and vertical markings. It can be executed on the basis of a traffic organisation project. Effects usually have questionable aesthetics, and pedestrians do not recover the space that has been taken from cars. Self-governments resign from time-consuming construction permits aimed at changing the route of curbstones, de-cobbling surfaces excluded from traffic in order to plan vegetation etc. The proposed direction of changes also matches the context of climate change adaptation, which has been described in more detail in Challenge IV.
- Furthermore, it is proposed to make provisions influencing distances between passageways and crossings across railways more flexible. Currently, the standards force creating a very long terrain obstacle. It is less arduous for drivers, yet very arduous for pedestrians (taking a roundabout way of up to 3 km)⁷².
- In the financial scope – it is proposed to allow financial support for self-governments intending to execute separate investment in the scope of pedestrian and bicycle infrastructure e.g. from Strategic Investment Programme funds or EU Funds.
- In the organisational scope – it is proposed to continue the implementation of measures for pedestrian and bicycle traffic in the scope of national road networks consisting in supplementing roads with missing infrastructure along the network managed by the General Directorate for National Roads and Motorways or across it – among others, viaducts above national roads.
- In educational scope – it is necessary to support and promote education in schools to the benefit of safe and zero-emission moving around the city.
- Moreover, it is necessary to reinforce and specify provisions to the benefit of shaping safe public urban areas in a manner that is pedestrian-friendly, including by creating safe public spaces, allowing cutting short the path of pedestrian's access between key facilities or places in a given area e.g. by introducing the ban on fencing housing estates, avoiding crossings at various levels (footbridges, underpasses) extending the access path for persons with special needs, etc.

⁷⁰ In particular, solutions resulting from ISO 21542:2011 and newer provisions should be implemented in Poland, as well as the best practices in the scope of universal design, as well as adjust implementing regulations to the Construction Law to the provisions of these standards. It will allow preventing discrepancies currently present in such regulations (e.g. several various parameters of a slipway), introduction of coherent solutions in the cities and transport facilities, and assurance of proper quality of project solutions.

⁷¹ Pursuant to Article 17 par. 3 of the Act of 21 March 1985 on public roads (Journal of Laws of 2021, item 1376, as amended).

⁷² Par. 23 of the Regulation of the Minister of Infrastructure and Development of 20 October 2015 on technical terms and conditions that should be met by crossings of railways and railway sidings with roads and location thereof (Journal of Laws item 1744, as amended).

Local spatial development plans and local revitalisation plans in the environmental impact forecast should include an analysis and recommendations on how provisions thereof will impact the conditions of pedestrian and bicycle traffic.

F. Measures for supporting active forms of micromobility provide for:

- Further work on the promotion of the best practices by the National Road Safety Council in the scope of guidelines supporting safe use of equipment in the scope of micromobility, organising an all-Poland contest for the best solutions and space design.
- Monitoring the functioning of provisions regulating traffic of electric scooters, personal transportation vehicles such as e.g. an electric skateboard, an electric self-levelling device, etc. and micromobility devices such as e.g. rollerblades, rollerskates, skateboards, scooters – human-powered, especially in the context of sharing space with pedestrians. Improvement in this area will contribute to eliminating development barriers in the sector which can constitute an alternative for individual motorisation.

G. Measures for limiting the environmental arduousness (emission of air pollution, noise and greenhouse gases) of road transport:

- In the scope of limiting the negative impact of transport on the environment it is necessary to continue measures aimed at limiting car traffic in the cities and exchanging the public transport fleet with low- and zero-emission vehicles. Financing a broader catalogue of measures related to low-emission transport, including bicycle and tram transport, within the National Fund for Environmental Protection and Water Management requires consideration.
- Promotion of clean transport zones' establishment. A lack of CTZs will lead to a further deterioration of air quality and thus, health of inhabitants, an increase in diseases and, in effect, a higher number of deaths. The CTZs should be implemented along the development of an alternative for cars: improvement of public transport offer and development of bicycle infrastructure.
- The possibility of financing or co-financing tram investment with the National Fund for Environmental Protection and Water Management allocated for the low-emission transport development.
- Allowing financing electric cargo bicycles or electric bike strollers with the National Fund for Environmental Protection and Water Management for individuals, territorial self-government units, business entities, appointed postal operators (in compliance with similar rules as subsidies for purchasing electric cars granted by the National Fund for Environmental Protection and Water Management).

H. Measures for limiting car traffic in the cities should include:




























- Analysis of the effectiveness of binding provisions concerning the rules of parking in the cities, especially in terms of spaces and areas, the character or functions of which are different from the common ones.

- Measures related to making the issue of goods transport in urban areas sustainable, among others, by promoting the use of the conception of sustainable urban logistics plans⁷³.
- Harmonious rules of weight limits for vehicles in the cities should be introduced and buffer logistics centres should be created in the outskirts. Issues related to the introduction of flexible parking space management for the needs of supplies of goods should be considered.
- Measures for the introduction of transit traffic from cities by further pressuring government administration to build bypasses and TEN-T development in Poland⁷⁴, measures of voivodeship and powiat roads administrators for the introduction of transit traffic from city centres should be simultaneously connected with measures for transforming the space of streets freed from transit, in order to calm them and promote pedestrian and bicycle traffic as well as simultaneous introduction of urban greenery. Without an active approach of the self-government, the positive spatial and environmental effects obtained as a result of building the bypass can be consumed by the increase in individual motorisation.
- Allowing self-governments to determine in the local law the organisation of the provided number of parking spaces for cars⁷⁵. It means that self-government could receive from the investor a financial envelope for transport investments which would be calculated as the number of parking spaces multiplied by the convergence index and the flat-rate equivalent of parking spaces' construction. For example, according to the urban standard, 400 parking spaces are to be created in an office block, the self-government set the convergence index at 50% - therefore, the investor builds 200 spaces and pays for the remaining 200 spaces for investment in public transport in the amount of PLN 10 million, since an average cost of constructing an underground space at a given time amounts to PLN 50K. Areas covered with convergence and the amount thereof together with the amount of rates would be set by the city council in the case study of conditions and directions of spatial development, local spatial development plans, local revitalisation plans or local urban standards.
- The possibility of making transport investment by urban self-governments decreasing urban traffic volume outside the administrative borders. For example, allowing the central city building Park&Ride car parks at stations in neighbouring communes, if it causes limiting urban traffic and will be much more economically effective than building an analogous car park within administrative borders.

⁷³ Sustainable Urban Logistics Plan (SULP) is a strategic plan aimed at sustainable satisfaction of people's and enterprises' needs in the scope of goods mobility. The tool promoted by the European Commission as support for local authorities in programming and managing flows of goods in cities and functional urban areas, uses the methodology and guidelines established for the Sustainable Urban Mobility Plan (SUMP), with which it should be integrated.

⁷⁴ On 13 April 2021 the Council of Ministers adopted a resolution on the development of the Programme for construction of 100 bypasses in 2020-2030. Within this programme, 100 bypasses will be built around Poland with a total length of approx. 820 km. Improvement of road safety, moving traffic from congested cities, cleaner air, less noise and improvement of the road network capacity – are the main assumptions of the developed Programme.

⁷⁵ Consisting in decreasing the number of parking places created within the investment for supporting public transport and car sharing (e.g. in a proportion of 1 car in basic car-sharing releases from creating 5 parking spaces indicated in the parking standard).

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Measures in the scope of removing existing legal obstacles hindering integration of the public transport system			
B. Measures resulting from technological and organisational development of public transport, introduction of which is proposed			
C. Measures in the IT scope and related to the digitalisation of mobile services			
D. Organisational measures to the benefit of supporting the best practices			
E. Measures to the benefit of promoting an increase in pedestrian and bicycle traffic			
F. Measures for supporting active forms of micromobility			
G. Measures for limiting the environmental arduousness (emission of air pollution, noise and greenhouse gases) of road transport			
H. Measures for limiting car traffic in the cities			
Key: significance for the size category of the city:	 medium	 major	 great

Challenges of the National Urban Policy 2030

7.7. Challenge VII Improving road safety



7.7.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. New Leipzig Charter – ‘The Green City’
2. Sustainable and Smart Mobility Strategy – Putting European transport on track for the future
3. EU Road Safety Policy Framework for 2021-2030 – Recommendations on next steps towards ‘Vision Zero’
4. Agenda for Sustainable Development 2030 - Goal 11. Sustainable Cities and Communities; Goal 13. Climate Action

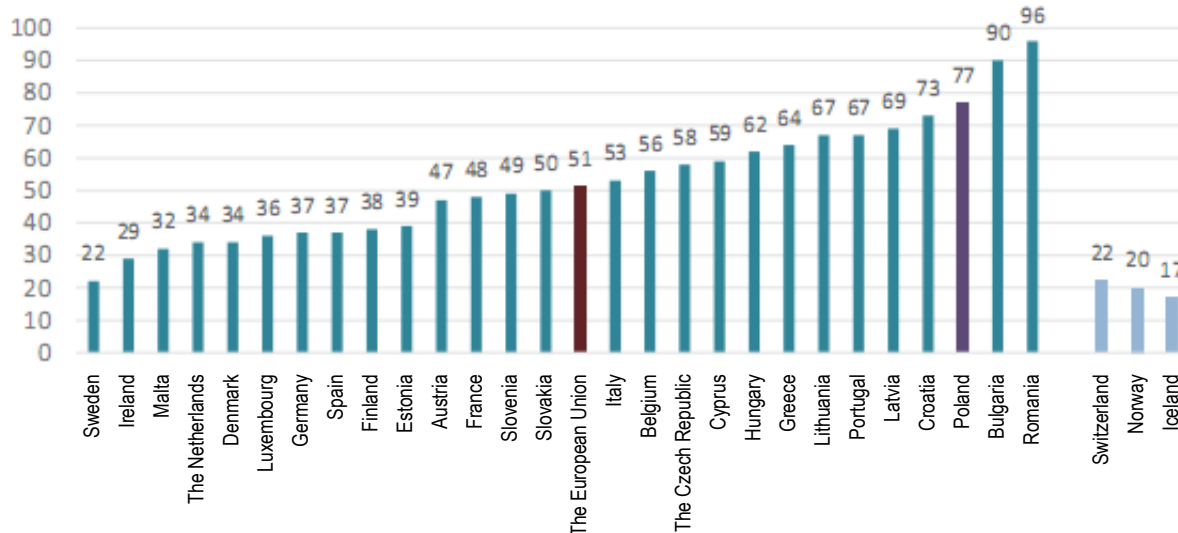


Poland is a European Union Member State in which values of road safety indicators are one of the lowest, which, in practice, means a high number of accidents, the injured and fatalities. Despite the gradual safety improvement, in 2020 the number of fatalities in road accidents amounted to 2,491 people. For comparison, this number was, however, three times smaller than in 1997, when 7,311 people died on Polish roads. At the same time, in the last 20 years traffic intensity has increased many times. The year 2020 was specific due to the drastic decrease in mobility caused by limitations resulting from the COVID-19 pandemic. Whereas, the structure of accidents remained similar to the years before the pandemic. Poland took the 24th place in terms of the number of victims in traffic in the EU - 65 people/million inhabitants. Worse situation was noted only in Bulgaria - 67, Latvia - 74, Romania - 85. An average for the EU amounted to 42 people for one million inhabitants. In the previous year, in Poland, this index amounted to 77 with the EU average amounting to 51 victims per one million inhabitants (diagram no. 7).

The issue of road safety concerns the entire area of the country, however, it is especially arduous in developed areas not only due to its concentration. In such areas over 2/3 of all accidents take place, in which over half of road users die. The low level of safety affects implementation of transport policy tasks and changing transport behaviours by discouraging riding a bicycle or moving around on foot. Approx. 7/8 of all accidents with pedestrians or cyclists happen in developed areas.

A detailed analysis of the base of the Registration System for Accidents and Drivers (*Polish: System Ewidencji Wypadków i Kierowców - SEWiK*) shows large discrepancies within the categories of cities and communes. In general, the majority of accidents happen in large cities (high intensity of traffic) and in rural areas (with deceptively smaller intensity of traffic – too high speed, dangerous manoeuvres, lack of concentration, etc.). Due to the differences in traffic speed, however, the structure of injury consequences is completely different: as calculated per population, in large cities there are much fewer fatalities than in the countryside. It should be emphasised that in suburban zones there are much more fatal accidents than in their cores (figure no. 13).

Diagram no. 7. The number of fatal road accidents per one million inhabitants in 2019



Source: own study on the basis of Eurostat data.

Also in particular cities and their surroundings there are significant differences. Among the largest cities, the biggest threat to road safety characterises Łódź, Olsztyn, Poznań and Rzeszów, and the safest cities are, among others: Bielsko-Biała, Koszalin and Toruń.

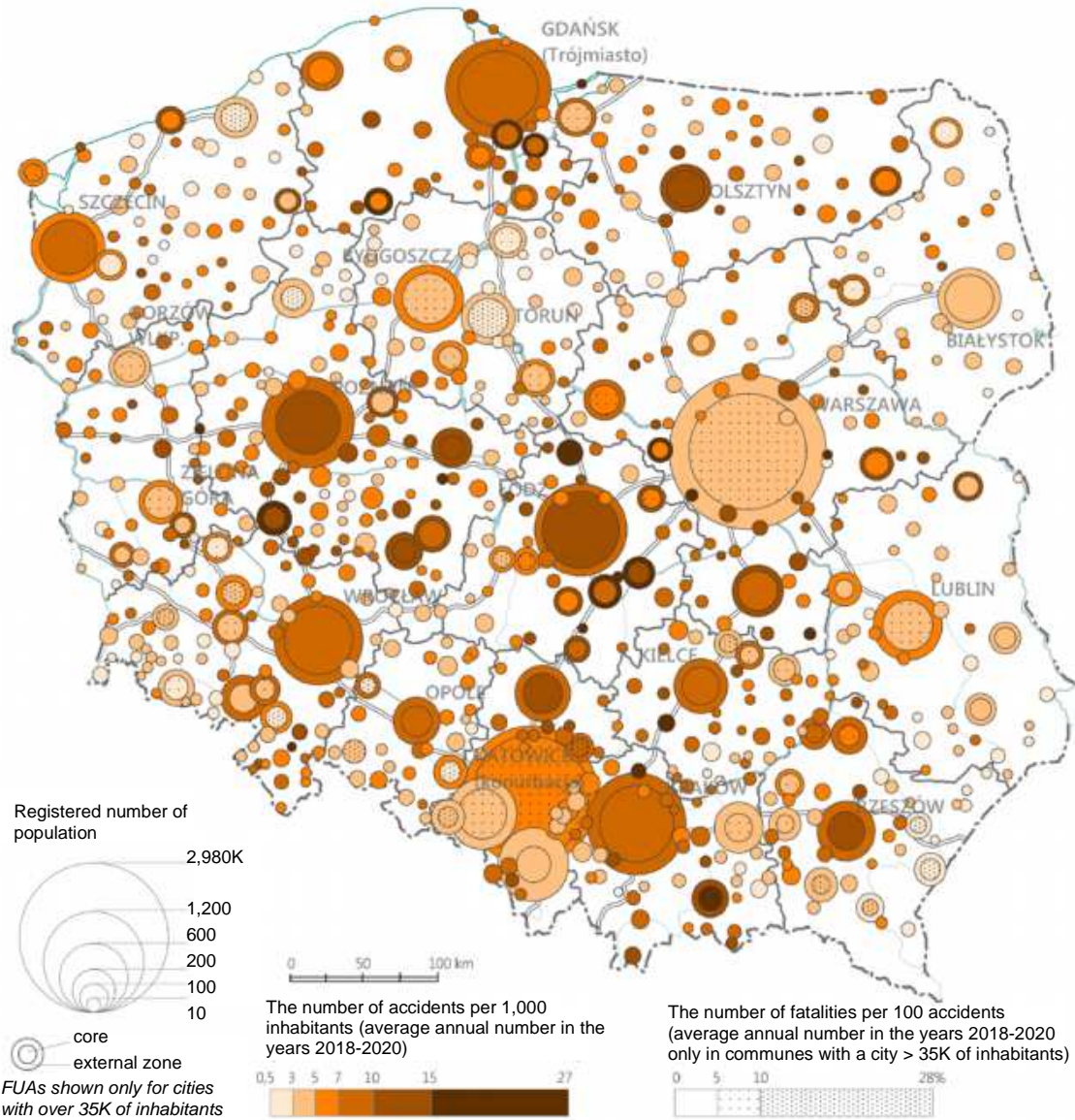
The biggest and most frequent problem of road safety in Poland is speeding and not giving way to other vehicles, which is responsible for the vast majority of all fatal accidents⁷⁶. There are more cases of violating provisions and exceeding maximum speed in urban areas, especially in the cities, than on freeways, which also causes bigger consequences. In 2020, there were significantly fewer road users – by 35%. The threat resulting primarily from speeding is an effect of increased difficulty of performing activities related to driving: limitation of the field of vision, extending the stopping distance or increased risk of being thrown out of the lane.

The most common offence, although actually rarely detected by the services⁷⁷, is parking in places not intended for this purpose. Incorrect parking deteriorates traffic safety by limiting the field of vision and freedom of movement of pedestrians, especially families with children, the elderly, people in wheelchairs and cyclists, or even forces both groups to make dangerous manoeuvres in order to pass a car parked on the street.

⁷⁶ The state of road traffic security and measures implemented in this scope in 2020, the National Road Safety Council.

⁷⁷ Pieszo i rowerem przez miasto. Stan obecny i perspektywy rozwoju aktywnej mobilności w Polsce (*On Foot and by Bicycle through the City. The Current State and Perspectives of Developing Active Mobility in Poland*), Report of the City is Ours, Client Earth - Prawnicy Dla Ziemi.

Figure no. 13. Intensity of road accidents in urban communes, urban-rural communes and suburban zones in the years 2018-2020



Source: on the grounds of data of the National Police Headquarters (Registration System for Accidents and Drivers (*Polish: System Ewidencji Wypadków i Kierowców SEWiK*))

Damages caused by improper parking also concern public property: damaging street greenery, surface of pavements and cycle lanes, or small architecture facilities.

Polish provisions do not sufficiently prevent the occurrence of traffic offences. They should be reinforced in the scope of their enforcement effectiveness. Taking the right to use their own traffic enforcement cameras away from commune (city) guards in 2016 drastically decreased the number of these devices. Simultaneously, introducing in 2013⁷⁸ the obligation to warn about stationary traffic enforcement cameras in the form of warning boards (sign D-51) and the requirement of yellow casing of the device made an impression that the traffic enforcement cameras determine speed on Polish roads instead of road signs.

The report of the Supreme Audit Office of 2019 concerning the functioning of sectional speed measurement indicated difficulties arising due to servicing a great number of offences detected with traffic enforcement cameras by the General Inspectorate of Road Transport (administrator of radars). From among 204K of registered and verified offences committed in the years 2015-2017 on road sections covered with sectional speed measurement, as many as 115K, that is, over a half of cases were barred by the statute of limitations⁷⁹.

The high number of road accidents resulted in accelerating work on amendments to the Act of 20 June 1997 the Road Traffic Law. In June 2021, legal changes increasing protection of pedestrians entering crossings entered into force. The first weeks of functioning of the provisions brought an expected result - the number of road accidents with participation of pedestrians was smaller than in analogous periods in previous years. Whereas, as of the beginning of 2022, a change in the scale of tickets for road offences entered into force.

A very important impact on road traffic safety and shaping behaviours of road users is also attributed to the issues related to infrastructure accessibility and functionality. In functional urban areas, the biggest problem comprises shortages in pedestrian and bicycle infrastructure along main communication lines. This fact not only worsens road traffic safety, but also has a negative impact on achieving sustainable development objectives, discouraging inhabitants to move on foot or ride a bicycle at short distances (e.g. reaching a store, taking children to school, arriving at a railway station). The quality of the newly developed infrastructure is also of importance. Adherence to the construction provisions results in adjusting roads' geometry to higher speed than the one indicated on road signs. A high number of accidents has been noted in many urban arteries built in the last two decades, and consecutive attempts to decrease the allowed speed do not generate desirable results in those places. Provisions omit one of the most important execution factors i.e. the spatial influence: the width of lanes, shaping perspectives, the route, small architecture, etc.

⁷⁸ Regulation of the Minister of Transport, Construction and Maritime Economy of 14 March 2013 on the terms and conditions of location, manner of marking and taking measures by recording equipment; the regulation was revoked on 1 January 2016.

⁷⁹ Report of the Supreme Audit Office, *Odcinkowy pomiar prędkości w ruchu drogowym (Sectional Speed Measurement in Traffic)*, Warsaw 2019.

The essence in this context is the issue of shaping the culture of drivers' behaviours. It includes not only drivers' training, but also shaping the media message, popularising knowledge on binding road provisions or improving awareness of consequences of non-adherence thereto. Measures undertaken in this scope require improvement, it is necessary to emphasise the issue of road traffic safety and the need to respect provisions in the media, among others, by educating and running social campaigns more frequently.

Improvement of the road traffic safety is a complex task that has many addressees at central, regional and local level. In summary, territorial self-governments manage the largest network of public and internal roads. Whereas, from the perspective of shaping the road traffic safety policy, measures undertaken at the central level are crucial – starting from the legislative initiative and significant resolutions passed at the national level⁸⁰, conducting supervision over relevant entities executing main tasks in this area, introducing road investment support instruments (e.g. the Government Road Construction Fund, Strategic Investment Programme) or support for European Union funds' beneficiaries (the Centre for European Union Transport Projects). Common achievement of the road traffic safety improvement objective requires both effective legal frameworks and the system of incentives and support for urban investment e.g. in the area of improving moving around the city as well as the safety of pedestrians and cyclists.

7.7.2. Proposed solutions

Proposed measures should be divided into three groups: changing legal provisions, developing investment support tools for self-governments together with substantive support and educational measures.

A. Measures in the scope of changing legal provisions include:

- A change in the provisions consisting in introducing the possibility of parking on pavements only in indicated places.
- A wider use of physical means of calming traffic – making provisions more flexible in order to facilitate using them: extending and specifying the possibility of using infrastructural means of calming traffic, allowing the use of the so-called 'Berlin cushion', raised junctions, speed bumps before pedestrian crossing, road narrowing, etc. in local conditions.
- Evaluation of projects based on the guidelines and examples of best practices in terms of changing future provisions of statutory nature and implementing acts.

⁸⁰ It concerns, among others, technical conditions of public roads and situation thereof, road signs and signals, as well as technical terms and conditions for using them, the amount of tickets.













B. In the scope of developing investment support tools for self-governments the following should be included:

- Introduction of the criterion of using solutions compliant with the 'Guidelines and standards recommended by the minister relevant for transport' or best practices examples, to the assessment of applications for government funds (e.g. to the Government Road Construction Fund, Strategic Investment Fund).
- Setting a special pool within already existing or planned funds for the implementation of road network supplementation with infrastructure for pedestrians and cyclists, with the indication of priority areas of measures (road to school, to transfer node, etc.), including allowing traffic calming in urban areas.

C. In the scope of education:

- Further development of the knowledge base with another guidelines and standards recommended by the minister relevant for transport and catalogues with examples of best practices.
- Concentrating educational campaigns on behaviours crucial for safety and extending knowledge in the scope of relevant road behaviours through the agency of public media, within the frameworks of their mission (programmes, information spots, etc.).
- Implementation of the Vision Zero⁸¹ consisting in determining the numerical target, action plan, engagement of urban institutions and local communities. Effective implementation of the programme requires preparing a textbook describing terms and conditions for the introduction of the Vision Zero at a local level (cities); assuring financing sources e.g. by creating a special-purpose fund for cities implementing integrated tasks in compliance with the long-term plan; providing self-governments with tools to introduce measures improving the RTS – guidelines, examples of good practices; developing a platform for disseminating information and collecting opinions of the local community (the form of communication with the inhabitants); developing a model (template) of urban/local Mobility Observatory allowing systematic monitoring of the programme implementation, including developing an integrated system of collecting data on threats in road traffic, taking into consideration verification on the grounds of hospital data, traffic studies and studies on behaviours of road traffic participants (accidents, victims, communication behaviours, KPIs - Key Performance Indicators).

⁸¹ Vision Zero is a strategy aimed at limiting the number of fatalities in road accidents to zero. The conception was created in Sweden, where the number of victims was successfully limited to a minimum. In Poland, the Vision Zero is successfully implemented by Jaworzno. In 2017, they managed to reduce the number of deaths on roads to zero. In consecutive years, only a few victims have been noted.

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Measures in the scope of changing legal provisions			
B. Developing investment support tools for self-governments			
C. Measures for education			
Key: significance for the size category of the city:	 medium  major  great		

Challenges of the National Urban Policy 2030

7.8. Challenge VIII Increasing housing availability



7.8. Challenge VIII: Increasing housing affordability

7.8.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. New Leipzig Charter – ‘The just city’
2. Urban Agenda for the EU
3. UN New Urban Agenda
4. Agenda for Sustainable Development 2030 - Goal 11. Sustainable Cities and Communities



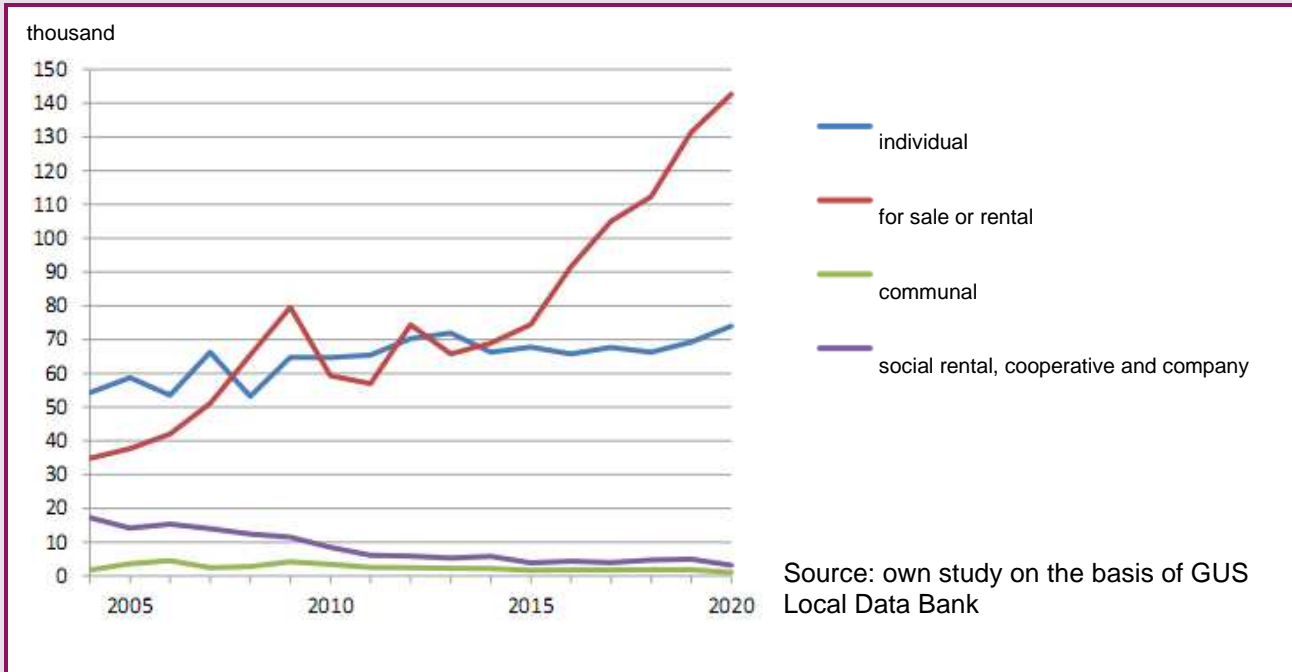
The level of satisfying housing needs is one of the key elements conditioning the quality of life in cities and impacting development thereof. Furthermore, higher accessibility of housing has a decisive impact on the improvement of the demographic situation in cities and their functional areas both in the context of population growth rate and in the context of internal and external migrations.

Cities have diverse problems in the housing sector in terms of a scale and scope, and conduct very different policies in this scope. In the National Housing Programme (NHP)⁸² the following problematic areas have been identified: a deficit of housing, a renovation gap and a low standard of housing, low accessibility of housing, demographic challenges, as well as the need to improve spatial quality. Additional challenges include: varied housing situations in particular cities and regions and a lack of established practice of cooperation between public authorities and the private sector in the implementation of housing projects.

The housing market in Poland was especially intensively developing after accession to the European Union: 2.6 million of flats were released for use in the years 2004-2020. An especially dynamic growth occurred in the segment of construction intended for sale and rental by developers. The volume of individual construction performed for own use by an investor fluctuated to a relatively slight extent (diagram no. 8). Whereas, the share of other construction forms (social rental, cooperative, company, communal) is very low and throughout the years its volume was constantly decreasing. In 2020, it amounted to only 4.1K of flats released for use, while in 2004 – 19.0K. A record number of communal flats after 2004 were built in Warsaw (3.3K), then Toruń and Poznań (1.2K each). Among the largest cities, disproportionately fewer communal flats with regard to the number of population were released for use, among others, in Bydgoszcz, Gorzów Wielkopolski, Opole and Szczecin (figure no. 14).

⁸² The National Housing Programme was adopted on 27 September 2016 under the Resolution of the Council of Ministers no. 115/2016.

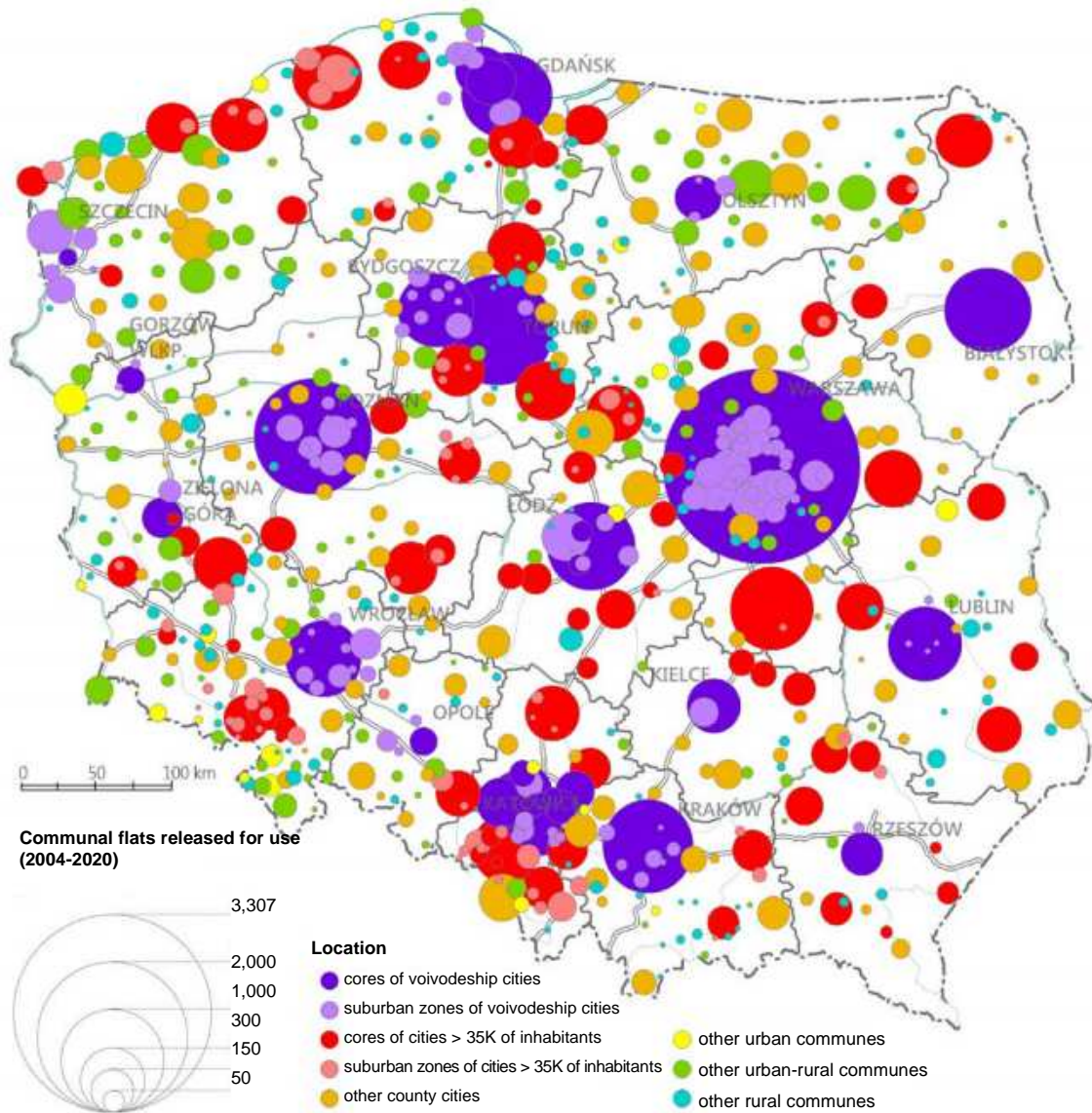
Diagram no. 8. The total number of flats in thousand released for use in Poland in the years 2004-2020 by construction type



For many years the ownership market has prevailed in the country, and the national housing policy in majority consists in supporting purchasing flats or reaching ownership. Despite the fact that in Poland, the market of new developer construction and the market of mortgages are intensively developing in large cities, approx. 60% of the population cannot afford purchasing a flat with ownership rights. In consequence, a large proportion of the society are left with the possibility of using the rental sector which is mainly based on individual persons renting flats on the private market, and the institutional rental sector is only starting functioning.

Therefore, a wide range of measures resulting in decreasing the role of the ownership housing sector with a simultaneous increase in accessibility of social rental flats are needed. Such measures should be inscribed into the National Housing Programme and contribute to better allocation of public funds in compliance with the social needs and requirements. As a result of the observed shortages in social housing, currently, the priority should be to reinforce the sector of affordable housing for rent.

Figure no. 14. Communal flats released for use in the years 2004-2020 by the category of communes



Source: own study on the basis of GUS Local Data Bank

After the introduction of the National Housing Programme, the state housing policy experienced a turn in the direction of supporting social housing for rent, the scale of which is predominantly decided on by self-government authorities. Within this housing policy evolution, in compliance with the Act of 10 December 2020 on amendment of certain acts supporting housing development (Journal of Laws of 2021, item 11), solutions that widely supplemented and improved instruments available for commune self-governments within conducted local housing policies entered into force⁸³.

Such direction of policy requires stable continuation and the sector of accessible housing – further development and financial support from public funds. Accessible housing is defined as housing with lower than market accessibility costs resulting from, among others, tools for supporting housing users (housing benefits, rent benefits) or systemic solutions (non-profit or limited profit formula, availability of construction land, social commissions, tax reliefs). Therefore, social housing is an element of an accessible housing system, more regulated and directed at low-income households (from very low, through low, up to average).

In Poland, social housing comprises communal housing (rented in compliance with social or standard rental rules, for an unspecified period of time) and housing within resources of Social Housing Associations (SHA). At the end of 2020 communal housing resources amounted to 806.7K flats, i.e. 5.4% of total resources and resources of Social Housing Associations 106.7K, i.e. 0.7% of the total number⁸⁴. Communal housing is present in all Polish cities. Whereas, flats available within the SHA formula are present only in approx. 25% of cities and several rural communes. In 2016, social rental construction was present in all cities with over 200K of inhabitants, in 19 cities with between 100 and 200K of inhabitants (82.6%), in 34 cities with 50-100K of inhabitants (72.3%), 81 with 20 – 50K of inhabitants (60.9%) and in 85 cities with population below 20K of inhabitants (12.1%).

⁸³ Among the most important changes the following should be enumerated:

- a higher grant from the Supplement Fund at BGK for communes to build social housing (from 20% of investment costs to even 35%); introduction of the rule of financing the commune's contribution instead of refinancing;
- increasing support for communes to build and renovate public housing (to cover up to 80% of investment costs);
- renovation bonuses for SHI/SHA older than 20 years (currently, the general rule allows obtaining from the Thermo-modernisation and Renovation Fund a bonus to renovate a building that was built before 1961);
- rental free periods for SHI/SHA residents (rent lower by even 20%) after credit repayment by the company;
- in the case of building social housing with higher participation of a resident in construction costs, there will be a possibility of a rent-to-own agreement;
- housing benefits in 'Flat for start' programme also for persons without rental capacity (option for 'bouncing back' – supplements to rent also for residents of flats rented from the investor by the commune and sub-rented to a resident – until now it could have been obtained only by direct tenants with rental capacity);
- financing creation of common areas for seniors in public housing;
- appointment of the Government Housing Development Fund credited with the amount of PLN 3.4 milliard from the already operating COVID-19 Counteracting Fund (data on the grounds of the Information provided by BGK on the implementation of the financial plan of the Government Housing Development Fund for 2021). The GHDF resources are used to finance a part or all of the commune expenditures to subscribe shares or stocks in the established or operating social rental housing company (social housing initiative). The support amounts to 10% of the planned housing investment of the existing SHA/SHI or in the case of a new SHI – PLN 3 million.

⁸⁴ Data of the Ministry of Development and Technology.

Investment in accessible, including social rental, housing is insignificant.

In 2020, per approx. 221K of housing released for use, communal housing constituted only 0.5% of the total, within SHA's resources – 0.7% and for a few years this share has been decreasing. Nevertheless, along with consecutive amendments of provisions stipulating an increase in the intensity of support for this type of construction with budget funds, there is a chance for breaking this unfavourable trend, which should be reflected in the statistics in the nearest future.

Currently, SHIs (Social Housing Initiatives)⁸⁵, formerly SHAs, are the most important apart from communes, entities of local housing policy, available in the majority of cities with at least 20K of inhabitants. However, it should be emphasised that for many potential social rental housing users in a worse financial situation the initial participation in the construction costs constitutes a barrier to participate in the programme, although, it simultaneously allows associations to finance new investment.

Situation in the scope of social housing is diverse in terms of regions. Cities with a large number of communal flats situated in old buildings that are in a bad technical condition and require intensive modernisation, are in an especially difficult situation. Unfortunately, it often exceeds the financial possibilities of the territorial self-government unit. Thus, it is necessary to search for funding sources to create inter-sectoral solutions and to establish partnerships between various types of entities and institutions. According to Statistics Poland data at the end of 2020, 136,156 of households were waiting for rental of communal premises and for rental of temporary premises – 16,898 (it is assumed that 86% of the demand for rental of communal premises is noted in cities). It should be noticed that GUS statistics covers the demand for housing by individual, communal income limits (and other local criteria). There is a significant need to modernise communal resources, which often exceeds the possibilities of territorial self-government units.

Cities that conduct an active housing policy (especially large ones) depart from selling communal housing to the benefit of tenants and from using large discounts in privatisation. They often exclude from privatisation various categories of housing e.g. newly built and modernised, situated in attractive locations or determine the amount of necessary resources excluded from privatisation. Nevertheless, privatisation of communal housing still leads to a significant decrease in communal resources. In 2020, 34.1K of communal flats were sold to tenants, 0.5K were returned to owners and only 1.0K of flats were built⁸⁶.

Flat users with low income can benefit from the housing benefit system, currently ineffective in the case of private rental. Recently, a system of rent benefits offered in the first years of use (Flat for start programme) has been in operation, addressed at non-communal tenants of new resources or resources modernised within the communal revitalisation programme in the Special Revitalisation Zone⁸⁷. In the context of revitalisation – the statutorily introduced catalogue of regulations addressed at the housing sphere is not sufficiently introduced by communes with financial limitations.

⁸⁵ Pursuant to the Act of 10 December 2020 on amendment of certain acts supporting housing development (Journal of Laws of 2021, item 11), newly established companies are called Social Housing Initiatives (SHI), whereas they have the same competences and rules of operation as Social Housing Associations (SHA).

⁸⁶ The Ministry of Development, Raport Stan Mieszkalnictwa (*Report on the State of Housing*), Warsaw, March 2020, <https://www.gov.pl/attachment/26de9999-aa40-42c0-9396-74d3e2684a14>.

⁸⁷ The Act of 9 October 2015 on revitalisation, Journal of Laws of 2021, item 485.

Implementation of revitalisation projects in the housing scope is also hindered by the complex ownership structure. Housing communities established on the grounds of privatisation of communal resources are not at a disposal of sufficient resources for renovations and modernisations, especially in crisis areas.

Measures undertaken in the housing area in cities should have not only a territorial dimension, but also special direction at groups at a risk of marginalisation. Among a range of innovative accessible housing forms, special support should be provided to Social Rental Agencies (SRAs)⁸⁸, sheltered housing (supported and training), assisted housing, housing cooperatives and co-living of unrelated persons in a similar life situation. Due to the process of society ageing, projects aimed at the improvement of the quality of life of seniors at the place of residence are needed.

In order to increase social housing resources, communes can use resources of other entities. In this context, solutions allowing the use of private housing resources and resources of other entities e.g. housing cooperatives, natural persons or SHI (former SHA) are needed. According to BGK data in the period between 2007 and 31 August 2021, with the share of subsidies from the Subsidies Fund, 785 rental housing was built by the SHA on the grounds of an agreement concluded with a commune. They are rented by communes and rendered available to communal tenants. A solution to increase accessibility of flats for rent for persons with low income is to adopt the Act introducing the SRA model.

Currently, the housing policy conducted in cities is usually generally defined only in the urban development strategy, limiting the scope of action to managing own housing resources in the long-term programme of managing the communal housing resources. Economic resilience of local self-governments can be significantly reinforced by directing the communal housing policy on developing affordable housing by increasing the pool of social housing, increasing accessibility of renting cheap flats or supporting flats' users at the exploitation stage. Thus extended local housing policy with reference to available medium-term programmes could take the form of a communal housing development strategy. It would be prepared with a consideration of economic and socio-demographic data, providing a presentation of both the demand and supply situation in a given problematic area. In order to implement the housing development, self-governments could also use other tools as e.g. a social bonus, investor standards, innovative forms of using uninhabited flats. Solutions for consecutive years thus adjusted to local conditions and processes would also contribute to better influencing individual decisions of inhabitants regarding their life decisions.

The situation in the scope of housing in Poland is affected by the needs resulting from the consequences of a refugee crisis caused by military operations in Ukraine. The situation, including the scale of refugee migration, is dynamically changing. In the first place, it is necessary to provide a residence base for people running away from war in the short-term (a few weeks) and medium-term (a few months) perspective. It is assumed that the maximum migration absorbing power in Poland can be estimated at 2.9-3.1 million people. It varies significantly by regions.

⁸⁸ SRAs were introduced to legal order under the Act of 28 May 2021 on the amendment of the Act on certain forms of supporting housing construction and certain other acts.

Approximately 15% of total number of places was estimated in the Masovian Voivodeship, over 40% is located in five regions: Lower Silesian, Silesian (approximately 9% each), Lesser Poland, Pomeranian, Greater Poland and West Pomeranian (approximately 8% each). As many as half of the migration-refugee absorbing power comprises households of Polish citizens and Ukrainians' families who came to Poland before war for work purposes or constituted a 'rooted' ethnical minority. Whereas, a relatively small absorbing power is related to a typical accommodation and aid base i.e. in tourist and social aid facilities and in the commercial market of flats for rent. In the vast majority, self-governments do not have a base of flats that could be allocated for refugees' needs in an emergency situation.

7.8.2. Proposed solutions

A. Increasing the pace of social housing development in the cities

Continuation of support for communal and social rental construction also taking into account striving for higher energy efficiency of resources - solutions providing entities responsible for conducting local housing policy with appropriate financial support should be implemented with the use of various sources (including state budget, the European Union funds). It is necessary to assure stable continuation of the social rental housing programme on the basis of housing investment executed after 2015⁸⁹. The horizon of preferential support should be extended until 2024, when the ten year period of the programme funding rules will have passed.

A new instrument for supporting households participating in the housing premises construction costs in social forms of housing should be introduced, which would finance (in various forms, amounts and in compliance with the rules indicated in the act) a part or all of the household resources intending to, among others, rent a flat within SHA/SHI resources (payment of the resident's own participation in construction costs) or to obtain a flat within housing cooperative resources (payment of a building contribution).

It is necessary to popularise the use of an instrument being the social rental agencies in local housing policies. As a new solution, social rental agencies require support allowing initiation of their functioning as well as promotion in order to build awareness concerning availability of such a solution among self-governments, non-governmental organisations, social aid institutions, flat owners and residents.

In the context of changing economic and social situation, it is necessary to verify and settle the following issues:

- analysing the possibility of limiting participation of natural persons in costs of building SHA flats in order to increase accessibility of these resources, especially for young people;
- determining the legitimacy of introducing a continuous acceptance of applications for refundable financing;

⁸⁹ After amendment of the Act of 26 October 1995 on certain forms of supporting housing construction by social housing associations and other entities.

- assuring durability and relevance to the reported demand for budgetary financing within the Subsidies Fund and BGK co-financing due to differences in preferential credits' interests by relevant statutory provisions;
- considering decreasing bureaucracy in procedures of applying for financial support and preferential refundable financing;
- conducting analysis of the binding system of housing benefits in terms of necessary changes;
- re-analysing regulations regarding rent in communal resources in order to introduce higher authority of communes to make independent decisions on rates and conditions of rental e.g. in order to be able to implement special housing programmes - assisted housing, social rental agencies;
- conducting analysis of the possibility to give the social housing financing programme the formula of a long-term programme pursuant to the provisions of Article 136 the Act of 27 August 2009 on public finances;
- conducting analysis of the impact of introducing tax on the value of third and consecutive real estates on the supply of accessible housing.

B. Intensification of housing substance renovation processes

● One of the most important tasks consists in supporting thermo-modernisation and renovation work in existing housing resources that do not meet contemporary technical standards, among others, in the scope of energy saving and heat insulation. An inventory of buildings should be taken and analyses of the legitimacy of transforming housing substance into more energy efficient should be conducted. It is particularly important with regard to communal resources that are inhabited by persons at the biggest risk of energy poverty. Funds for supporting these measures should be permanently available within the Thermo-modernisation and Renovation Fund and the Subsidies Fund, and the need for increased intensity of support in the case of buildings that belong to the communal housing resources should be taken into account.

● It is important to limit the energy consumption and pollution emission in housing resources. It is planned to introduce solutions directed at supporting owners and administrators of multi-families buildings by introducing a new RES bonus for purchasing and fixing renewable energy sources on housing premises, which will not be related to the thermo-modernisation investment, so that it will be also available for use by post-thermo-modernised buildings' owners. Furthermore, it is planned to provide within the European Funds higher support for renovations/thermo-modernisation of communal buildings within combating the energy poverty phenomenon, as well as higher support for investment implemented with the support of the Subsidies Fund (renovations of communal housing inhabited by persons at a risk of energy poverty), on the condition of changing the heat source to low-emission. Additional support will be given to the new social construction sector (implemented by SHA/SHI and housing cooperatives) in the case of purchasing and fixing the RES installations related to the building at the construction stage.

- It is advisable to develop financial instruments at a national level for the improvement of housing in revitalisation areas. Marshal offices as entities experienced in revitalisation procedures should have the right to develop Revitalisation Housing Funds (RHF) intended for supporting housing projects implemented within communal revitalisation programmes. Implementation of housing projects in the scope of revitalisation should be supported due to the high share of housing development in revitalisation areas, diverse structure of housing substance ownership, high execution costs of renovation-construction ventures, the significance of good quality of housing for the wellbeing of inhabitants and local communities. RHF should, with a deliberate limitation of allocating funds for housing projects, operate in compliance with the rules similar to the JESSICA Initiative and/or regional loan funds, i.e. grant low-interest loans to finance a part of the costs of housing projects' implementation. The refundable nature of the instrument gives a long-term perspective of supporting housing projects in communal revitalisation programmes. The RHF should be available for all owners and administrators of residential real estate functioning in a given revitalisation area and for all types of renovation investment, including those concerning routine maintenance of common parts of buildings and individual flats.
- Positive results can be brought by the popularisation among self-governments of good practices in the scope of improving the technical standard of existing resources and building new housing such as:
 - 'Housing for renovation', in which the city offers rental of free premises that are in a bad technical condition in exchange for renovating them by new tenants at their own cost. In such a situation, the city undertakes to provide project documentation and obtain all necessary permits. In the case of large premises, their prior division is also possible. The territorial self-government unit lowers costs for preparing premises for occupation, and tenants obtain an independent flat at lower costs than in the case of buying a flat on the free market. This instrument is usually addressed at young inhabitants, in particular at families with children, who cannot afford buying a flat.
 - Transformation of unused public utility premises into residential buildings functioning in accordance with the model of 'a friendly house' intended for three or more generations that can be, but do not have to be, related. This model assumes a building's adaptation for several independent flats for rent, in which, at the lowest floors flats for seniors are provided, and at higher – for young people, including those leaving foster care or care and educational facilities. Separating in such buildings a flat with a large floor area can be transferred to the persons running family foster homes.

C. Regulation and support for assisted housing

- It is necessary to provide statutory guarantee of support for communes in developing assisted housing resources in order to increase accessibility of this type of solutions with statutory definition of an assisted flat.
- Such measures should be implemented on a large scale and should engage all entities operating on the residential real estate market, among others, by using the social bonus (social bonus is discussed in more detail in part D.). In order to assure that services provided in the assisted flat are each time adjusted to the needs of a person benefiting from such support, it is necessary to develop and implement a catalogue of services. It is necessary to identify mechanisms obliging to renovate communal uninhabited flats and using them for housing purposes, including assisted housing and introduction of mechanisms of funding such measures (financing or significant co-financing from the central budget, if possible with the use of the European Funds) and significant incentives to undertake them. Within good practices the development of a special formula of a Social Rental Agency dedicated to the groups that require the biggest support can be promoted depending on the socio-demographic situation of particular cities, among others: seniors or young married couples and families with children, whose housing needs are not satisfied, as groups especially important for the demographic development of cities, in particular, those experiencing serious problems related to de-population. It allows temporary transfer of ownership flats by seniors for rent within the SRA's tasks in exchange for an offer of renting assisted flats adjusted to their needs.



















D. Cooperation of communes and the private sector to the benefit of increasing accessibility of housing

- In the Polish legal order there are already initiatives in operation aimed at supporting social coherence and counteracting ghettoization in cities such as the Housing for land programme. However, it is crucial to continue the direction of social diversity within urban units. Achievement of this objective requires introduction of investor standards concerning flats of various size, structure, type and standard⁹⁰. A possible instrument of change consists in introducing social benefits in specific cases, within large housing investment, as a result of which a part of flats are allocated to the pool of accessible flats. Implementation of social bonus understood as an obligation of a market investor to allocate a specific part of flats to social resources (in exchange for external benefits of a given location, to a large extent resulting from communal investment) requires unequivocal legal regulations in the Act on spatial planning and development.
- It is necessary to create and popularise a catalogue of post-environmental urban standards for investors concerning, among others, heating, cooling, maximising the biologically active area, retention, assuring convenient conditions for moving around and accessibility for non-motorised persons (pedestrians and cyclists).
- In order to assure inclusivity of urban areas, cooperation between communes and investors to the benefit of increasing the supply of flats in open housing estates, is postulated. Limiting fencing housing estates is possible under local law passed in compliance with Article 37a of the Act on spatial planning and development.
- Communes should cooperate with housing cooperatives by offering them land or buildings, which can be developed in compliance with the comprehensive vision of spatial development of a commune.

⁹⁰ It is postulated to mix flats within a complex of buildings of various bases of residence, that is, rented and free market ownership flats with affordable housing (public, under SHA, cooperative, assisted and other).

E. Integrated programming of housing development in the cities

It is recommended as good practice in programming housing development in the city to introduce a strategic document titled Urban Housing Policy. Cities with over 20K of population should be obliged to introduce this document. This measure, preceded by a wide diagnosis of the housing market in terms of demand and supply, will improve awareness of territorial self-government units regarding the possibility of using their own housing potential (not only within communal resources) and needs in this scope. It will increase the interest in new implementation tools (among others in the scope of investor standards, social bonuses, PPP instruments). It can also be an element of existing strategic documents. It is even more important in the situation of a refugee crisis. The scope of the housing policy can be influenced by many new conditions related thereto. They will shape both new and wider needs and, at the same time, will give additional development perspectives. With an active housing policy conducted by the cities, with many aforementioned aspects thereof, it will be possible to use it for counteracting occurrence of unfavourable trends which have been observed and noticed so far.

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Increasing the pace of social housing development in the cities			
B. Intensification of housing substance renovation processes			
C. Regulation and support for assisted housing			
D. Cooperation of communes and the private sector to the benefit of increasing accessibility of housing			
E. Integrated programming of housing development in the cities			
Key: significance for the size category of the city:	 medium	 major	 great

Challenges of the National Urban Policy 2030

7.9. **Challenge IX**

Improving investment capacity of cities



7.9.

Challenge IX: Improving investment capacity of cities

7.9.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. **New Leipzig Charter** - C. Key principles of good urban governance

2. **Urban Agenda for the EU** – Jobs and Skills in Local Economy

3. **EU Territorial Agenda 2030**

4. **Agenda for Sustainable Development 2030** - Goal 8. Decent Work and Economic Growth, Goal 9 . Industry, Innovation and Infrastructure, Goal 11. Sustainable Cities and Communities



An active investment policy of self-government authorities is crucial for improving the city's competitiveness, attracting new inhabitants and investors. However, providing good living conditions for inhabitants entails increasingly high costs. In view of the decreasing prevalence of current income over expenditure, it is necessary to introduce proper support for self-governments.

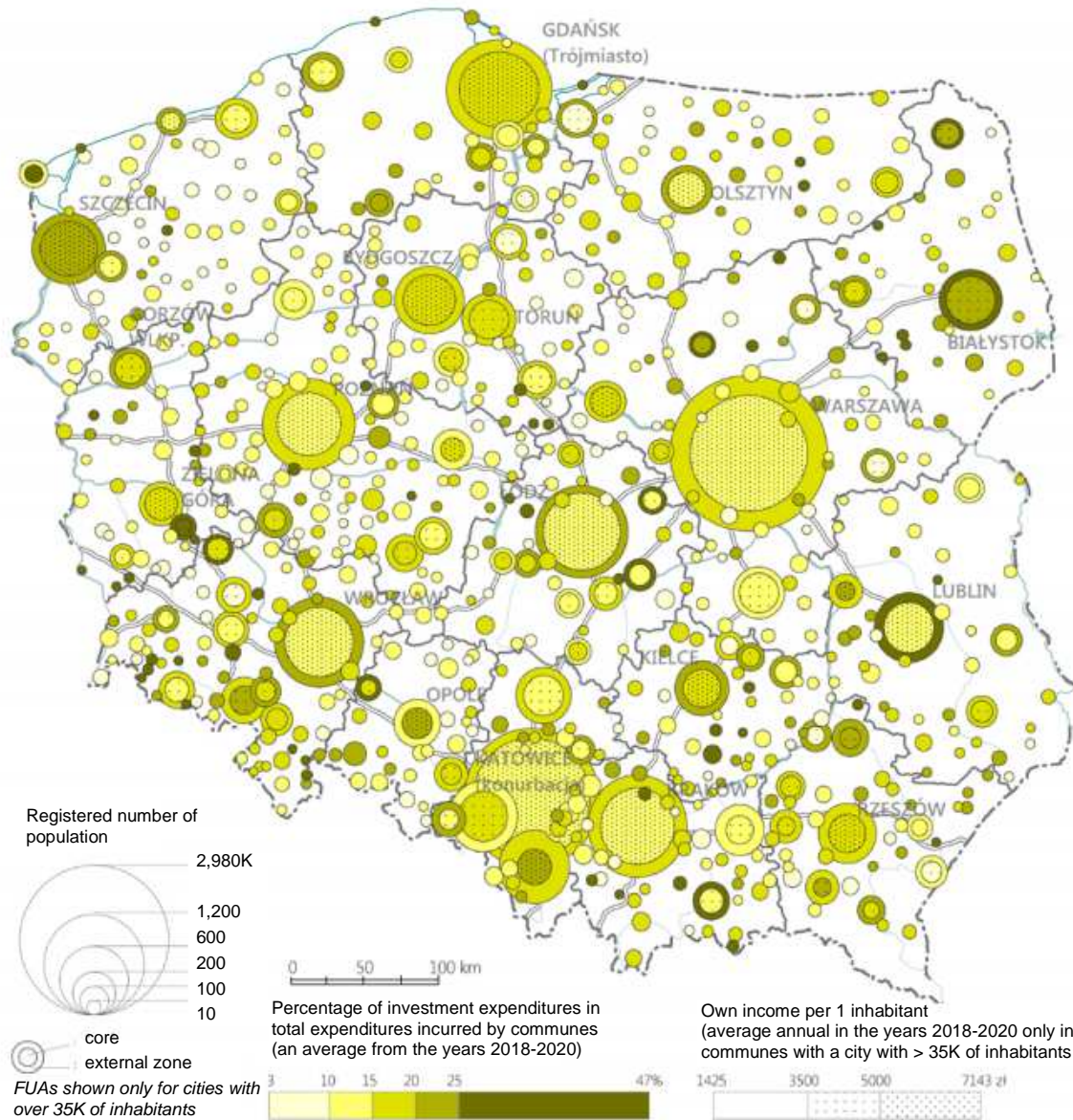
A crucial problem for self-government authorities consists in commissioning by the central authorities tasks directly to communes (e.g. on the grounds of binding provisions or agreements). It increases the scope of financial tasks at a local level, simultaneously making finances dependent on transfers from the State Treasury. Self-governments' share in income is relevant to the assigned tasks. The rule of adequacy states the necessity of significant co-financing of entrusted tasks⁹¹.

The basis for self-governments conducting an active investment policy is provided by their own resources. In recent years, an increase in self-governments' property income has been observed, however, a faster increase has been noted by the sphere of expenditures. It directly translates into decreasing the investment capacity of the cities. In the years 2013-2019 a basic income source of cities with poviat rights was generated by PIT and current transfers (57.7% of total income). In the years 2013-2019 the current income of cities with poviat rights increased by 6.6% per year, however, an average increase in current expenditures amounted to 7.2%⁹². Since October 2019, the PIT rate decreased from 18% to 17%, which translates into smaller income of self-governments. In the years 2018-2020 property investment expenditures usually amounted to 10-25% of total expenditures, whereas, this index was significantly higher in relatively wealthier suburban zones (figure no. 15). Furthermore, data analysis shows that in the years 2009-2020 (reference to the previous period is incomparable) with a consideration of inflation and registered changes in the number of population, own income of communes was growing relatively the fastest outside of agglomerations, whereas, in larger cities (voivodeship cities) this pace was the slowest (figure no. 15).

⁹¹ In Article 9 of the European Charter of Local Self-government it is stipulated that the amount of financial resources of local communities should be adjusted to the scope of rights vested in them by law.

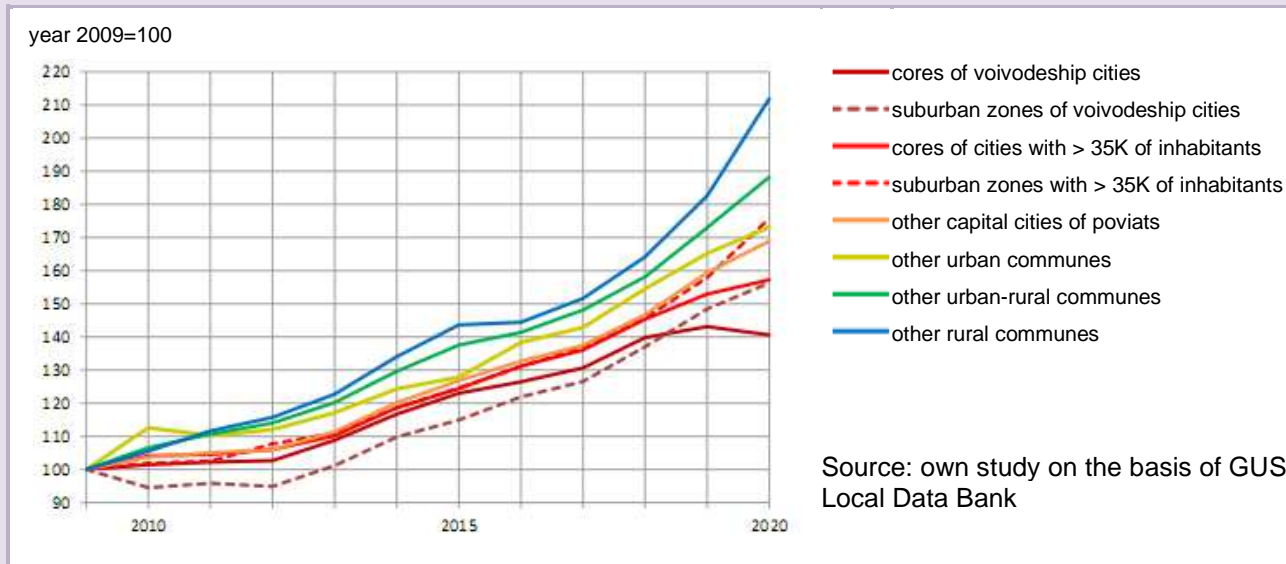
⁹² INC Rating, the Polish Bank Association, *Sytuacja finansowa jednostek samorządu terytorialnego (Financial Situation of Territorial Self-government Units)*, 2019 <https://zbp.pl/getmedia/90f24a40-d219-40ef-98ce-50053e3929eb/1-Raport-o-stanie-finansow-JST-2019-INC-Rating-ZBP>.

Figure no. 15. Investment expenditures in urban communes, urban-rural communes and suburban zones in the years 2018-2020



Source: own study on the basis of GUS Local Data Bank

Diagram no. 9. Changes in own income of communes in various categories, in the years 2009-2020



In total, in 2020, the income of territorial self-government units amounted to PLN 304.9 milliard (i.e. 100.4% of the plan). In comparison to 2019, in total, income earned in 2020 was higher by PLN 26.4 milliard (i.e. by 9.5%). Own income – recognised together with shares in PIT and CIT – increased year by year by PLN 10.6 milliard (7.8%). During the pandemic, a relatively small decrease in income due to share in the revenue from PIT and an increase in income due to share in the revenue from CIT were noted. The PIT gap was set off with an increase in other income. Territorial self-government units closed 2020 with a budget excess in the amount of PLN 5.7 milliard despite a planned deficit at PLN 21.2 milliard. This positive budget result of territorial self-government units results from a large investment support given by the state in 2020, in particular, within the Government Local Investment Fund. Nonetheless, it should be noticed that an actual drop in the dynamics of an increase in own income in voivodeship cities in the amount of 2.5% (diagram no. 9) was noted in 2020.

In the research conducted by the Polish Economic Institute, 74% of small cities indicated that the Covid-19 pandemic will have a negative impact on their financial situation, and in the case of 12% - to a significant degree. The analogous report concerning medium cities showed that 85% of research centres indicated worsening of the financial situation, and in the case of 23% - to a significant degree. Metropolises were especially affected by the drop in income generated from fees for perpetual usufruct of real estate and lower revenue from sales of public transport tickets. Twelve largest cities associated in the Union of Polish Metropolises (UPM) noted a decrease in income by 7.7% in the period between January and September 2020 in comparison to the analogous period in 2019.

The amount was thrice as high as the drop for all territorial self-government units that amounted to 2.5%. The negative impact of the pandemic affected large urban centres to a higher extent. It should be presumed that additional restrictions introduced at the end of 2020 and at the beginning of 2021 had an impact on the intensification of these phenomena.

In compliance with data concerning financial situation of territorial self-government units taking final settlements made at the beginning of 2021 into consideration, the operating surplus, that is, the difference between current income and current expenditures in 2020, in urban communes, constitutes less than 5% of the current income (almost 7% in 2019), and in cities with poviatic rights approx. 3.5% (over 7% in 2019). For comparison, in rural communes it amounts to 10.5% of current income.

Moreover, an obstacle for urban investment development constitutes using public-private partnership (PPP) in self-governments investment strategies too rarely. Implementation of investment in the PPP formula provides a number of benefits for public institutions including, in particular, the possibility to optimise spending budgetary resources by engaging private capital in public investment and the possibility of using the knowledge and experience of business.

The basis for success in the PPP project implementation is not only the well-prepared documentation and effectively resolved procedure aimed at selecting a private partner, but primarily a smooth, long-term cooperation of the public entity and private partner throughout the PPP agreement execution.

In compliance with the justification of changes introduced pursuant to the Act on amending the act on public-private partnership and certain other acts (Journal of Laws of 2018, item 1693), legislative intervention was aimed at creating better conditions for development of initiatives in the scope of PPP, especially by guaranteeing better quality of preparatory works and conducted procedures. Introduced changes were aimed at increasing the scale and effectiveness of investment executed in the PPP formula.

Pursuant to the Act on PPP and licence regulations, public entities, mainly self-governments, initiated 602 procedures in total, as a result of which they concluded 158 agreements, and in the case of 80 agreements the legal grounds for selecting a private partner constituted PPP in compliance with Article 4 par. 1 of the Act on public-private partnership⁹³.

A special type of a PPP agreement is the EPC (Energy Performance Contract). It allows executing and financing an undertaking aimed at the improvement of energy efficiency between a public authority and a supplier of services related to energy consumption. In compliance with Article 7 par. 3 of the Act of 20 May 2016 on energy efficiency (Journal of Laws of 2021, item 2166), obligations under the Energy Performance Contract do not have an impact on the level of national public debt and the deficit of public finance sector in case the energy utilities incur the majority of the risk of construction and obtaining a guaranteed level of average annual energy saving.

A crucial barrier in the execution of investment in the PPP formula is a lack of funds at the preparatory stage for necessary expertise, tests, demand analyses, technical documentations, conceptions, including development of the Functional-Utilisation Programme initiating the process of PPP investment execution. This documentation is necessary in the process of conducting pre-execution analyses or while applying for advisory support at the national level.

⁹³ Status as on 30 June 2021 on the basis of the Ministry of Development Funds and Regional Policy's data.

In Poland, small value PPP projects prevail – almost 80% of concluded agreements are projects of PLN 40 million value, often too small to be of interest for the private sector. Costs of preparing a small PPP project are comparable to costs of preparing a large project, and execution of investment in the PPP formula usually becomes profitable only after exceeding a specific level of investment expenditure. Therefore, it is more difficult to obtain favourable external financing. Furthermore, the ambiguity of the impact of obligations under PPP agreements on the level of the commune's indebtedness is problematic for communes' treasurers. Provisions on the risk division are so flexible that there are concerns (resulting from self-governments' experiences) that an audit conducted by the Supreme Audit Office or the Regional Chamber of Audit can negate the applied division and will classify the undertaking as a project increasing the level of public debt.

Human capital, that is, units' knowledge and skills that allow generating economic value, is currently considered the most important basis of continuous economic growth and social development. The central role of human capital is especially underlined in conceptions of the so-called new economy and creative class. The possibility of accessing highly qualified staff is at the same time the basic factor of locating modern services sector's companies.

Today, the effective pro-investment policy requires undertaking measures that take into account various expectations and needs of investors at the pre-investment stage, during investment and at the post-investment stage and additionally differentiating companies' needs with regard to their size, level of technological advancement or origin of capital. Self-governments that play a leading role in the pro-investment policy have such competences; it should be, however, noticed that apart from large cities, they usually refer to obtaining investors related to production activity.

Nonetheless, many self-governments neither have human resources, nor competences in this scope. Moreover, the shortage of integrated measures aimed at reinforcing the potential of smart regional specialisations in cooperation with the research and development and scientific sector, is noticeable. Whereas, in the era of knowledge-based economy, the capacity of organisations located in urban centres to improve their competences by exchanging experiences, knowledge and good practices, as well as entering various networks of business or social cooperation, are of great importance.

Furthermore, reinforcing cities' ability to develop and execute development plans constitutes a significant challenge. Problems that have to be solved to improve the standard of strategic management in the cities and functional urban areas, differ in terms of subject (the main ones include: coordination, professionalisation of staff and access to tools and techniques supporting managerial processes) and nature (legal, organisational, technical).

Diversity of needs results not only from the size of cities, but also, or perhaps mainly, from their status. While cities with poviats rights (including metropolitan centres) and centres with high transport accessibility primarily need instruments supporting the strategic management process at the supralocal level, the numerous group of other cities is today at the beginning of building a potential for strategic development management and needs systemic support in this scope.

Therefore, it is still necessary to create conditions for continuous cooperation of territorial self-government units. Developing a system of relevant incentives remains a challenge despite the opportunities created pursuant to the amendment of the Act on development policy rules of 6 December 2006, adopted in July 2020, which introduced the mechanism of supporting area development ventures in the form of a territorial agreement and the possibility of preparing a supralocal strategy by cooperating territorial self-government units.

These instruments are aimed at improving the quality of planning expenditures and participation in costs for a larger number of entities, which is especially important in the context of improving the investment capacity of cities and their functional areas.

7.9.2. Proposed solutions

A. Increasing income resilience of territorial self-government units (own income, operating surplus, public services costs)

It is necessary to improve income resilience and stability of territorial self-government units.

Systemic changes in the scope of territorial self-government units' income are necessary in this context, which should allow:

- improving financial stability of territorial self-government units (assuring anti-cyclicality, improving income flexibility, continuous improvement of fiscal efficiency);
- increasing independence of territorial self-government units and territorial self-government units' financial system;
- territorial self-government units' activation in measures increasing income and improving effectiveness of the measure.

In compliance with the assumptions of the Polish Deal⁹⁴, self-governments should have a guarantee of stable income so that they can plan and execute the budget easier and more effectively. Amendment of the Act on territorial self-government units' income and certain other acts⁹⁵ changes the rules for determining certain incomes of self-governments. The Act provides for, among others, introduction of a new part of a general subsidy for communes, counties and voivodeships i.e. the development part. Moreover, legal grounds for providing territorial self-government units in 2021 from the state budget with funds in the amount of PLN 8 milliard to supplement the general subsidy, were created. Furthermore, new principles of determining amounts of territorial self-government units' shares in revenues due to the Personal Income Tax (PIT) and Corporate Income Tax (CIT) were determined. Additionally, the mechanism securing territorial self-government units' income due to their share in the revenues from PIT and CIT against excessive influence of fluctuations in the economic cycle and consequences of legal changes, was introduced. In the light of this rule, planned, total income due to the territorial self-government units' share in revenues from PIT and CIT per a given budget year, cannot be lower than the referential total amount of income due to this share binding before the amendment of the Act. In the consecutive years, the referential amount will be indexed with the GDP medium-term dynamics in current prices, that is, it will take into account the economic growth and inflation.

Additionally, funds can be transferred in equal monthly instalments. From the point of view of the currently binding regulations, it is important to transfer public funds to territorial self-government units' budgets so that it does not constitute a barrier in use thereof on development measures. Thus, (taking into consideration Articles 242-243 of the Act on public finance) it is valid to supply territorial self-government units' budgets primarily with the new stream of current income e.g. subsidy, which would increase the individual liabilities repayment rate, therefore increasing independence of territorial self-government units and assuring support in the investment area.

Other pro-investment measures include making budget rules more flexible, as well as solutions increasing the limit of territorial self-government units' debt repayment and supporting the use of the European Funds. Systemic changes in the area of public finance should be aimed at the assurance of financing the state's strategic objectives and simultaneously maintain the rules for the stability and balance of public finance. It requires conducting complex and coherent measures in the whole area of public finance both with regard to the income and expenditures, as well as the rules for allocation of funds to various groups of public finance

⁹⁴ The document Polish Deal was announced on 15 May 2021. It is a policy paper type of a document that includes a development plan for the nearest decade.

⁹⁵ The Act of 14 October 2021 on amendment of the Act on territorial self-government units' income and certain other acts (Journal of Laws item 1927, as amended).

sector units and various fields of public tasks, with a consideration of their territorial aspect⁹⁶.

Another important issue consists in guaranteeing the mechanism of reliable settlement of financial results of introducing new regulations both for the expenditure and income sides of territorial self-government units' budgets. In the scope of the expenditure side concerning allocation of new tasks or changing the scope of the hitherto tasks, it is valid to introduce a mechanism verifying actually incurred expenditure by information templates specified in the implementing act and regarding the extent of financial effects related to the specific regulation in order to avoid situations related to the overestimation thereof. It is legitimate to review legal barriers that cause a significant tightening of current expenditures of self-government budgets. An example of this type of a barrier is the necessity to finance public schools or facilities run by the territorial self-government unit, the economic existence of which is unjustified (e.g. too small number of students and/or branches, high costs of building renovation, etc.), and which cannot be eliminated due to the negative opinion of the school superintendent (despite the leading body providing students of a given school with opportunities to continue education in other public school of the same type).

B. PPP promotion in investment measures undertaken by the cities

While contracting financial obligations territorial self-government units must be fully aware of their impact on the level of debt and correctly interpret incurred expenditures in the scope of accounting and financial reporting. It is important that the provisions of agreements concluded by territorial self-government units do not allow other interpretations of obligations, in the context of including them in public debt, than the ones assumed during preparation and negotiation of the undertakings' terms and conditions.

- Determining the character of financial obligations contracted by territorial self-government units is complex. The Ministry of Development Funds and Regional Policy prepared a guide⁹⁷ on legal and financial terms and conditions of PPP agreements. It seems reasonable to adopt conclusions formulated in the new study as guidelines for identification and classification of financial obligations contracted by territorial self-government units and conducting training in this scope. It is proposed, as follows a wide promotion of the PPP guide updated by the Ministry of Development Funds and Regional Policy due to the complexity of the subject matter;
- continuation of educational measures, primarily workshops addressed at treasurers, territorial self-government units' employees engaged in PPP projects' preparation, decision-makers and members of Regional Chambers of Audit.

The formula for funding infrastructure investment allowing provision of public services, assuring execution of a responsible urbanisation in the cities and at the national level, significantly extends the potential portfolio of the PPP subject matter. Popularisation of PPP (including the hybrid public-private partnership⁹⁸), requires, however, a significant increase in the amount of public support.

Therefore, it is proposed to create a preferential loan facility for territorial self-government units funding costs of drafting a PPP. Such a loan could be redeemed in case of concluding a PPP agreement covering the prepared draft.

In order to limit costs and increase possibilities of implementing projects in the PPP formula, also in the case of small projects, methods of promoting and applying initiatives of packaging, that is, joining projects should be established.

The proposed solution assumes continuation of measures in regional PPP knowledge centres in voivodeship Information Points of the European Funds (IPEF), whose task is to provide substantive assistance in drawing up projects, including counselling for the PPP package.

⁹⁶ Strategy for Responsible Development for the period until 2020 (including the perspective until 2030), Specific objective III – Effective state and economic institutions contributing to growth as well as social and economic inclusion.

⁹⁷ Michał Bitner, Marcin Wawrzyniak, *Analiza. Wpływ zobowiązań finansowych z umów o PPP na deficyt budżetowy i dług publiczny. Praktyczny przewodnik (Analysis. The Impact of Financial Liabilities from PPP Agreements on Budget Deficit and Public Debt. Practical Guide)*, Ministry of Infrastructure and Development 2019.

⁹⁸ With the use of the European Funds.

Their field of interest would be PPP projects implemented within the urban policy, that is, concerning, in particular:

- improvement of environment conditions;
- investment in technical infrastructure;
- satisfaction of housing needs and ensuring access to basic social services;
- increasing the importance of public transport, cycling and walking, as well increasing the accessibility of cities by revitalising the public transport network;
- development of a shaping safe and universally accessible urban space;
- investment in infrastructure to increase access to digital services.

These solutions do not require a legislative intervention and are characterised with a relatively low capital intensity, and could be implemented with support from the European funds.

C. Development of local labour markets and innovation ecosystems

The quality of local pro-development policy plays a key role among the so-called soft factors of locating new investment and mechanisms of rooting already operating enterprises.

The concept of local policy's quality should be understood as the capacity of self-government authorities to meet economic challenges, especially in the area of new investment and supporting development of local entrepreneurship. In the complex economic reality, effectiveness of measures undertaken by territorial self-government units is decided by the ability to apply systemic solutions.

- Among intervention tools that are worth applying in this scope by self-governments and central administration the following should be enumerated:
- review of existing initiatives, policies and sources of financing related to the labour market;
- dedicated programmes aimed at the development of human capital through studies and work;
- dedicated programmes attracting or keeping specialists (appropriate housing policy);
- informal education centres i.e. co-working zone distinguished by a free access for students, as well as FabLab, Makerspace, Hackerspace;
- stimulating the exchange of experiences and establishing a cooperation network by supporting business tourism development.

Among intervention tools that are worth applying in this scope by self-governments the following should be enumerated:
















- establishment of an urban company coordinating the work of the most important labour market institutions and implementing the pro-investment policy (services provided to investors pre-investment, during investment and post-investment as well as agency between a potential investor and self-government);
- model cooperation of a self-government, a university and business in the scope of professional activation;
- networking with regional universities, searching for various areas of cooperation;
- improving the investment offer, as well as professionalisation and comprehensive investor services in the whole functional urban area.

Innovative, local manners of supporting social innovativeness taking into account practical development of willingness and ability to respond to social needs in a non-obvious manner (citizenship education), programmes supporting local innovators, and opening local administration to collective approach to solving local problems should be promoted.

D. Reinforcing cooperation to the benefit of integrated development policies at the local (coordination of measures undertaken by urban organisational units and communal legal persons) and supralocal level

It is necessary to clearly situate in the binding legal order the coordinating role of the executive body of territorial self-government units towards organisational units and communal legal persons in the strategic management process. It will result in preventing the siloed approach inside the territorial self-government units, that is, a situation when particular office departments have different objectives and operate in a different manner and their cooperation is ineffective. Therefore, the obligation to coordinate drafting strategic plans and programmes and their implementation by the office, urban organisational units and communal legal persons should be introduced directly to the Act on the communal self-government as tasks allocated to a village mayor, president or mayor.

Furthermore, it is necessary to introduce systemic incentives to undertake continuous cooperation between territorial self-government units. Development of an incentives system will be related to the introduction of changes to the Act on territorial self-government units' income and/or introduction of relevant provisions to acts on territorial self-government units of a systemic nature, the Act on development policy rules and the Act on sustainable urban development.

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Increasing income resilience of territorial self-government units (own income, operating surplus, public services costs)			
B. PPP promotion in investment measures undertaken by the cities			
C. Development of local labour markets and innovation ecosystems			
D. Reinforcing cooperation to the benefit of integrated development policies at the local (coordination of measures undertaken by urban organisational units and communal legal persons) and supralocal level			
Key: significance for the size category of the city:	 medium	 major	 great

Challenges of the National Urban Policy 2030

7.10. Challenge X Unlocking the social potential



7.10.

Challenge X: Unlocking the social potential

7.10.1. Diagnosis of the problem and characteristics of the challenge

Reference to international documents:

1. New Leipzig Charter – ‘The just city’

2. UN New Urban Agenda

3. Agenda for Sustainable Development 2030

– Goal 4. Quality Education, Goal 10. Reduced Inequalities, Goal 11. Sustainable Cities and Communities

4. European Pillar of Social Rights of 2017

5. Action plan to the benefit of the European Pillar of Social Rights of 2021



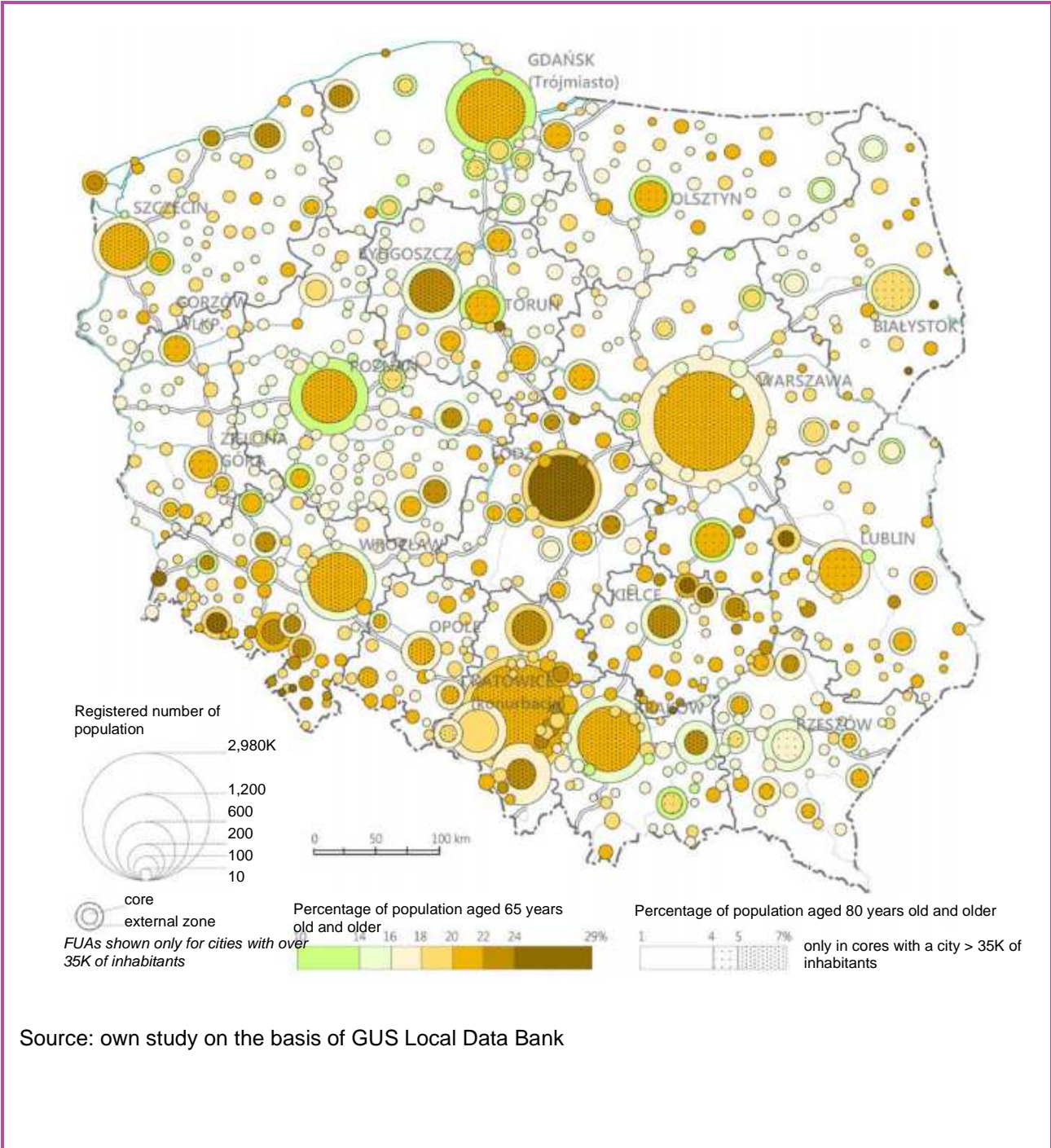
An important characteristic feature of cities is the concentration of many development problems, including social problems. Main challenges in this area are related to the territorial diversity of population processes - migration processes, ageing society, low population growth rate, as well as social diversity and polarisation in various areas of social functioning. Additionally, cities face numerous challenges resulting from megatrends, i.e. globalisation, knowledge-based economy development, growing demand for innovation and the need for more effective use of resources, civilisation threats (pandemic, climate crisis, economic crises, and even military conflicts). Consequences of these processes manifest in the form of a series of phenomena that constitute a serious challenge for urban development.

One of the key social problems constitutes unfavourable changes in the age structure of the population and the deepening process of society's ageing. In the years 2004-2020, the number of population aged 65 years old and more increased in Poland from 7.1 million to 12.1 million, including in voivodeship cores from 1.4 million to 2.1 million (an increase by 44%). However, the growth of this category of population was even faster in suburban zones (by 53%). The so-called binary ageing of society, i.e. a rapid increase of the percentage of the elderly (people aged 80 years old and more in the population of persons aged 65 years old and more) is becoming a serious problem. This population in the whole country increased from 966K to 1,684K, including in voivodeship cores, where it increased by as many as 90%, and in the cities with over 35K of inhabitants – by 205%. Cities with the highest percentage of persons at post-working age are Łódź and Bydgoszcz. Whereas, regions affected by this problem to the largest extent are the Świętokrzyskie and Lower Silesian voivodeships (figure no. 16).

The problem of shrinking cities, which concerns both regional centres (in particular, among others: Częstochowa, Płock, Radom, Tarnów, Wałbrzych), as well as the majority of small and medium cities, is explicitly related to suburbanisation processes (outflow of population from cities to suburban zones) and low attractiveness of the labour market (a lack of inflow). In the case of cities affected by de-population and the problem of decreasing number of persons at working age, it is necessary to use the potential of labour market resources as fully as possible. Although the employment rate in the group of people aged 20-64 years old increased in Poland in 2019 (73% PL, 73.1% the EU), and the unemployment rate in January 2020 was the lowest in the EU (2.9% PL, 6.6% the EU)⁹⁹, the analysis of the professional activity of various groups indicates a significant diversity in this area, also territorial diversity.

⁹⁹ Eurostat, Employment - annual statistics, 2019, https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Employment_-_annual_statistics.

Figure no. 16. Percentage of population aged 65 years old and older in 2020, in urban communes, urban-rural communes and suburban zones. Age structure in cities with over 35K of inhabitants and their suburban zones



In particular, persons with disabilities and their carers, the elderly, persons with low qualifications and women are insufficiently represented on the labour market. According to Statistics Poland and Eurostat data, the employment rate of persons with disabilities at working age amounts to only 26.8% (2019). The strategy for persons with disabilities for the years 2021-2030 adopts as the target an increase of the professional activity rate of persons with disabilities at working age up to 45% in 2030.

It is crucial to introduce measures for removing systemic and physical barriers for activating professionally passive groups, including groups at a particular risk of deprivation and poverty, living in disadvantaged areas. The social economy sector also requires further support and development.

In social economy enterprises (SEE) approx. 2.3% of all employees are employed¹⁰⁰. Reintegration and support for persons in a difficult life situation prevents social exclusion. In the years 2016-2018, 1,144 of social enterprises were established, including 23% on the basis of existing SEE.

Moreover, a crucial barrier in labour market participation is the fact that in Polish cities only 18% of children aged below 3 years old is covered with institutional care, which constitutes a significant barrier in parents' participation in the labour market. As shown by the research, the care gap between the end of the properly remunerated parental leave and the access to guaranteed early education and care lasts two years in Poland. It means that between the first and the third year of a child's age, the parent performing the role of a carer (usually the mother) is deprived of the possibility to perform work.

In the context of ageing society, it is necessary to better use the potential of the silver economy¹⁰¹ (both in the scope of demand and supply, as well as innovativeness in this scope), including extending professional activity and limiting professional passivity. As indicated by Eurostat, in Poland, in 2019, only 49.5% of persons from the group of people aged 55-64 years old were employed (the EU average is 59.1%). In compliance with the forecasts, in 2024, persons from this group can make up 25% of the whole population. Society ageing contributes to the increase in the cities' budget burden due to the growing expenditures in the area of healthcare and social aid. It is necessary to introduce measures for de-institutionalization¹⁰² of care for persons that require support in everyday functioning.

As of the beginning of the 21st century, a growing level of Poles' education has been observed in statistics, however, the implementation of the life-long learning idea continues to be a challenge. In Poland, there are almost half of learning adults as in the case of the EU average (PL – 5.7%, the EU – 11.1%). Whereas, according to the Digital Economy and Society Index (DESI) for 2020, Poland held 23rd place in the EU out of 28 Member States (in comparison with the 25th place in 2019). It means that it is necessary to introduce further measures increasing social knowledge and awareness in the area of digital skills. It is also crucial to support green competences¹⁰³. Activity in these areas is of great significance in the context of civilisation challenges. Increasing the level of competences will foster managing in the dynamically changing environment.

It is necessary to develop competences of cities' inhabitants corresponding with the labour market needs, especially by educating adults. Broader engagement of universities in adult education can fill in the gap caused by the decreasing number of students due to demographic reasons. Nevertheless, university staff have to be prepared to provide services to such university students and course participants. Building a high quality university education open to the occurring needs requires close cooperation with employers. It is necessary both to develop educational resources available online as well as to develop digital competences of teachers.

¹⁰⁰ The National Programme for Social Economy Development until 2023, https://www.ekonomiaspoleczna.gov.pl/download/fiLes/EKONOMIA_SPOLECZNA/KPRES.pdf.

¹⁰¹ System wytwarzania, dystrybucji i konsumpcji dóbr i usług ukierunkowany na wykorzystanie potencjału nabywczego osób starszych i starzejących się oraz zaspokajający ich potrzeby konsumpcyjne, bytowe oraz zdrowotne. Gospodarka senioralna. Nowy sektor gospodarki narodowej w Polsce (*The System of Production, Distribution and Consumption of Goods and Services Aimed at Using the Purchasing Power of the Elderly and Ageing People and Satisfying Their Consumption, Living and Health Needs. The Senior Economy. The New Sector of the National Economy in Poland*), Marzena Rudnicka, Aleksander Surdej.

¹⁰² De-institutionalisation in the context of taking care of the elderly and dependent people can be understood as shifting the emphasis from institutional care provided at inpatient care facilities to care provided in the local environment, with a consideration of numerous formal and informal institutions. Rafał Bakalarczyk, *Deinstytucjonalizacja w opiece nad osobami starszymi i niesamodzielnymi (De-institutionalisation in Care for the Elderly and Dependent People)*, Institute of Social Policy, the University of Warsaw.

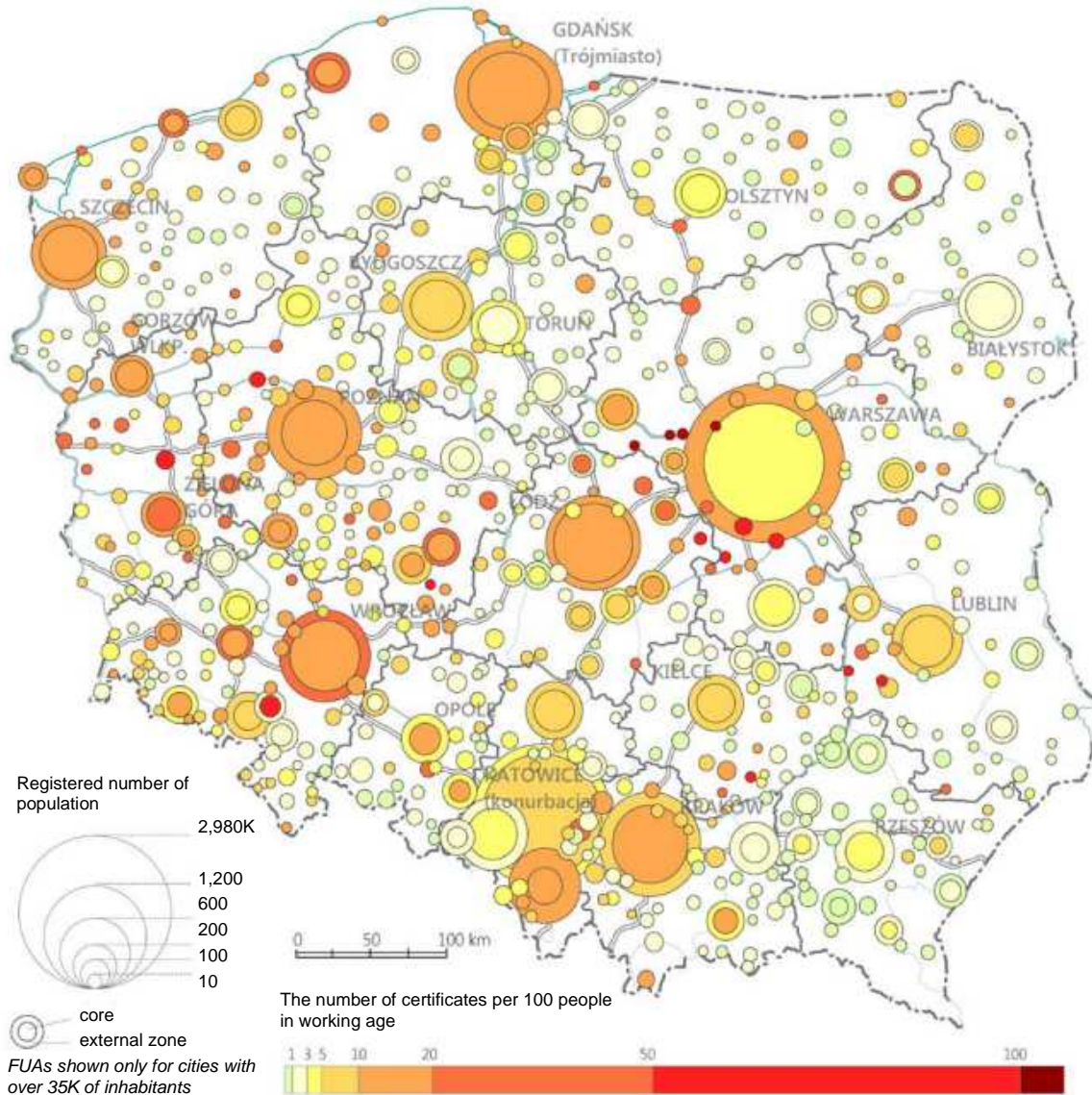
¹⁰³ Behaviour and competences in the scope of circulating capacity in the consumption and production process.

In recent years the demand for new employees, also in the cities, has been satisfied as a result of the inflow of persons outside the territory of our country. Among persons arriving in Poland were both persons returning to the country after emigration, mainly from Great Britain and Germany, as well as foreigners. The majority were Ukraine citizens: in 2014 it was 41K persons, whereas in 2019 – almost 215K - by 424% more. According to Statistics Poland, in the years 2009-2018, the scale of immigration was fluctuating between 155K and 222K. Immigrants of other nationalities are attracted mainly by large cities. The relatively low responsiveness of cities to migration both permanent and circular is a challenge. So far, a lack of the long-term policy in this scope and organisational-infrastructure non-adjustment have been observed, which may prove to be especially problematic in the situation of large migration movements. Especially large cities which are usually the first choice of immigrants face big challenges concerning assurance of housing, care or education for prospective inhabitants.

Detailed research shows that a favourable foreign immigration model of location has been observed in Poland. Immigrants settle in small and medium cities, especially in the industrial Western and Southern part of the country (figure no. 17). It results from the demand for workforce, especially in industrial processing sectors and also, trade and other downstream services, as well as agriculture (areas with intensive vegetable and horticulture production in the Masovian voivodeship). It is assessed that the largest cluster of Ukraine immigration in Poland has, so far, been Wrocław and its surroundings. However, the current model of location can change in the case of small and large migration movements.

The aforementioned situation regarding migration and inflow of foreigners to work in the territory of Poland has significantly changed after the Russian invasion of Ukraine in February 2022. A month after starting armed activities over 2 million refugees came to Poland. Those are mainly women with children, adolescents and the elderly. Simultaneously, it is assessed that after starting armed activities, over 200K of citizens returned to Ukraine, primarily men at working age. The refugees' sex and age structure means that the activity of those persons on the labour market, especially at the beginning, will be limited. Self-governments' need to organise activities adjusting refugees to professional work, as well as providing care for children and education conditions for adolescents, will increase.

Figure no. 17. The number of registered certificates on entrusting performance of work to foreigners in Poland, in 2017, in urban communes, urban-rural communes and suburban zones



Source: own study on the grounds of Agata Górny, Przemysław Śleszyński, 2019, Exploring spatial concentration of foreign employment in Poland within simplified procedure, *Geographia Polonica*, 92, 3, pp. 331-345 (simplified), in compliance with data of the Ministry of Family, Labour and Social Policy

This situation overlaps with the fact that it is difficult to determine the period of refugees' stay in Poland. At the same time, as a result of the war in Ukraine, there may be shortages of employees in the labour market in professions performed by men in the nearest future.

7.10.2. Proposed solutions

A. Increasing availability of public services (e.g. access to child care facilities for children aged below 3 years old, care services for the elderly and persons in need of support in everyday functioning)

One of the measures aimed at preventing depopulation consists in building a support system for families with small children, including increasing accessibility of care for children aged below 3 years old. European funds will finance both measures in the scope of establishing care facilities, as well as co-financing them in the initial period of functioning. Whereas, the national funds will be allocated to the assurance of co-financing care (Family Care Capital)¹⁰⁴, as well as co-financing of existing care facilities in order to decrease expenditures incurred by parents. It is necessary to increase the potential of territorial self-government units and other entities to establish and run care facilities indicated in the Act of 4 February 2011 on care for children under the age of 3¹⁰⁵ and training in the scope of providing care. It will allow increasing the supply of facilities providing care for children under the age of 3.

The group of inhabitants that require special support are seniors. It is postulated to establish and test new forms of day care for the elderly, including persons with dementia disorders, as well as persons with disabilities, who, due to their health condition, are not able to function independently, extending the accessibility of home healthcare, development of innovative forms of healthcare for the elderly, including telemedicine solutions, development of the support for informal carers for the elderly and supporting information measures in the scope of available healthcare. It will be possible to implement effects of tests as practice for the territorial self-government units, which will increasingly, also in financial terms, feel the effects of the ageing society.

B. Reinforcement of the education and learning system in the cities

Civilisation transformations increase the demand for employees able to satisfy labour market requirements. Thus, development of qualifications and competences of students and pupils of technical-vocational schools in the context of adjusting them to the local labour market, is of great importance. At the local level, cooperation with employers should be reinforced by, among others, joint implementation of competences development programmes, as well as internship programmes and practical classes, and establishing and supporting the activity of Academic Career Agencies. Additional support in this scope is provided by European funds, among others, ERASMUS+, which allows Polish students to undergo practices in the international environment and gain professional experience with European employers. Education of doctoral students at doctoral schools should be based to a greater extent on the cooperation with entrepreneurs and urban self-governments, among others, as a result of popularising the so-called implementation doctorates. Self-governments should strive to provide education programmes for high school students at faculties that correspond with local labour markets.

Optimisation of cities' expenditures on education-related objectives should be used on territorially-oriented interventions in degraded areas, including improvement of availability of remedial and additional classes. The offer would concern schools with low results situated in the social-economic deprivation areas. Identification of such schools would require cooperation with self-governments of cities and schools' headmasters.

The problem experienced by many cities, especially smaller ones, is the deficit of psychological help in schools. Currently, receiving by students help from a psychologist often requires commuting to a poviats city, which constitutes a significant barrier. The presence of a psychologist (full-time or during on-call time) in each educational facility should be standard so that help is easily accessible for students, irrespective of the place of residence and the family's socio-economic status. It is especially important that the psychologist is

¹⁰⁴ The solution proposed in the Polish Deal consists in providing parents of children aged between 12 and 35 months old with a benefit – in total PLN 12K for second and every consecutive child.

¹⁰⁵ The Act of 4 February 2011 on care for children under the age of 3 (Journal of Laws of 2021, item 75, as amended).

present in primary schools, which requires engagement of relevant authorities (communes). Currently, funding psychological and pedagogical clinics (within educational subsidies) lies within the poviats self-government's competences. The proposed solution requires legislative changes that are included in the competences of the minister relevant for education and upbringing¹⁰⁶.

C. Support for social economy development in the cities

Due to the high level of social issues' concentration in degraded areas, support for social economy entities will be crucial for removing development barriers. In the National Recovery Plan, adoption of the Act on social economy and investment support related to the solutions introduced in the Act, primarily constituting the answer to the challenges caused to the sector by the pandemic, have been planned. Within the European Social Fund Plus, comprehensive support services for social economy entities will be provided, including training, counselling, legal and business support by the Social Economy Support Centres (SESCs). SESC's will also provide financial support for creating and maintaining jobs in new and existing social enterprises. In the national programme for ESF+ the following have been planned, among others: preferential healthcare support for social economy entities and implementation of the Social Enterprise Manager Academy undertaking comprehensive measures aimed at building competences of social enterprises' management. A particular significance from the point of view of the silver economy is attributed to training for persons aged 50+ with business experience in the scope of social economy in order to prepare them to provide counselling services for social enterprises, act as an interim manager or personal development coach. Activities in this area are also strongly emphasised in the Accessibility Plus programme, which provides funding for entrepreneurs interested in investing in products and services adjusted to needs of persons with disabilities and seniors.
















¹⁰⁶ As of 1 September 2022 the Ministry of Education and Science plans to start implementation of the first stage of standardisation of employment of teachers, psychologists, pedagogues, speech therapists, pedagogical therapists and special pedagogues in preschools and schools. Legal solutions in this scope are included in the bill on the amendment of the act on education system and certain other acts, which is currently processed at the Senate (Print 2096, <https://www.sejm.gov.pl/Sejm9.nsf/PrzebiegProc.xsp?nr=2096>). The bill provides for the employment dimension to be dependent on the number of students in a preschool or school.

D. Measures in the scope of migration and refugee policy in the cities

The migration policy at the level of cities and their functional areas can be a tool counteracting depopulation and an answer to deficits within the labour market. This process is already visible today in many Polish cities and forecasts indicate deepening of this trend in the future. In order to improve this process, tools and procedures facilitating accepting migrants in cities are necessary. Support in this area is aimed at better use of the potential of persons, who are interested in working and studying in Poland, as well as supporting employers searching for foreign employees. It is necessary to activate information and consulting centres supporting starting work by foreigners, introduce solutions allowing career and entrepreneurship development by foreigners, as well as introduction of provisions facilitating access to the Polish labour market. These measures should be supported with providing information on the terms and conditions of residing and living in the cities. Access to information concerning public services in the city, especially transport, healthcare and care for children, is of crucial importance for the quality of life at the local level. It is important to adjust websites of public institutions and other entities to the migrants' needs. In order to increase attractiveness of living in Poland and improve the level of migrants' assimilation, it is necessary to create conditions for swift adaptation of migrants' families, among others, by including children in the education system. This process may be aided by solutions adopted by European countries with many years of experience in migration policy implementation. The exchange of self-governments' experiences in this scope can be executed with financial support from the EU within implementation of international projects of exchanging good practices of aid schemes such as ERASMUS+.

The issue of migrants' integration has been on a completely different scale since the escalation of war in Ukraine, in February 2022. Migration that until then had been mainly of profit-making nature, took a refugee form. It has proceeded dynamically and it is difficult to determine its final scale and character. Irrespective of the sex and age structure of persons who come to Poland as a result of acts of war in the territory of Ukraine, these persons have often experienced the trauma of acts of war, death of their loved ones or losing all of their belongings. Such persons primarily need psychiatric and social help. A big challenge for self-government consists in undertaking measures aimed at activation of refugees and including them in professional activity, as well as measures to the benefit of refugees, who, for various reasons, are unable to start working. It is extremely important to develop forms of cooperation and collaboration with refugee groups' representatives for proper identification of their needs and integration with the environment in which they are staying. It is a vitally crucial issue related to preventing alienation of refugee groups and, at the same time, assuring functioning compliant with their cultural needs and lifestyle. Currently, it seems that due to the higher possibilities of accommodation and potential labour market, the majority of refugees will be staying in large cities and surrounding areas. Cities also have the necessary infrastructure supporting mitigation of various problems related to the necessity to help people in crisis situations.

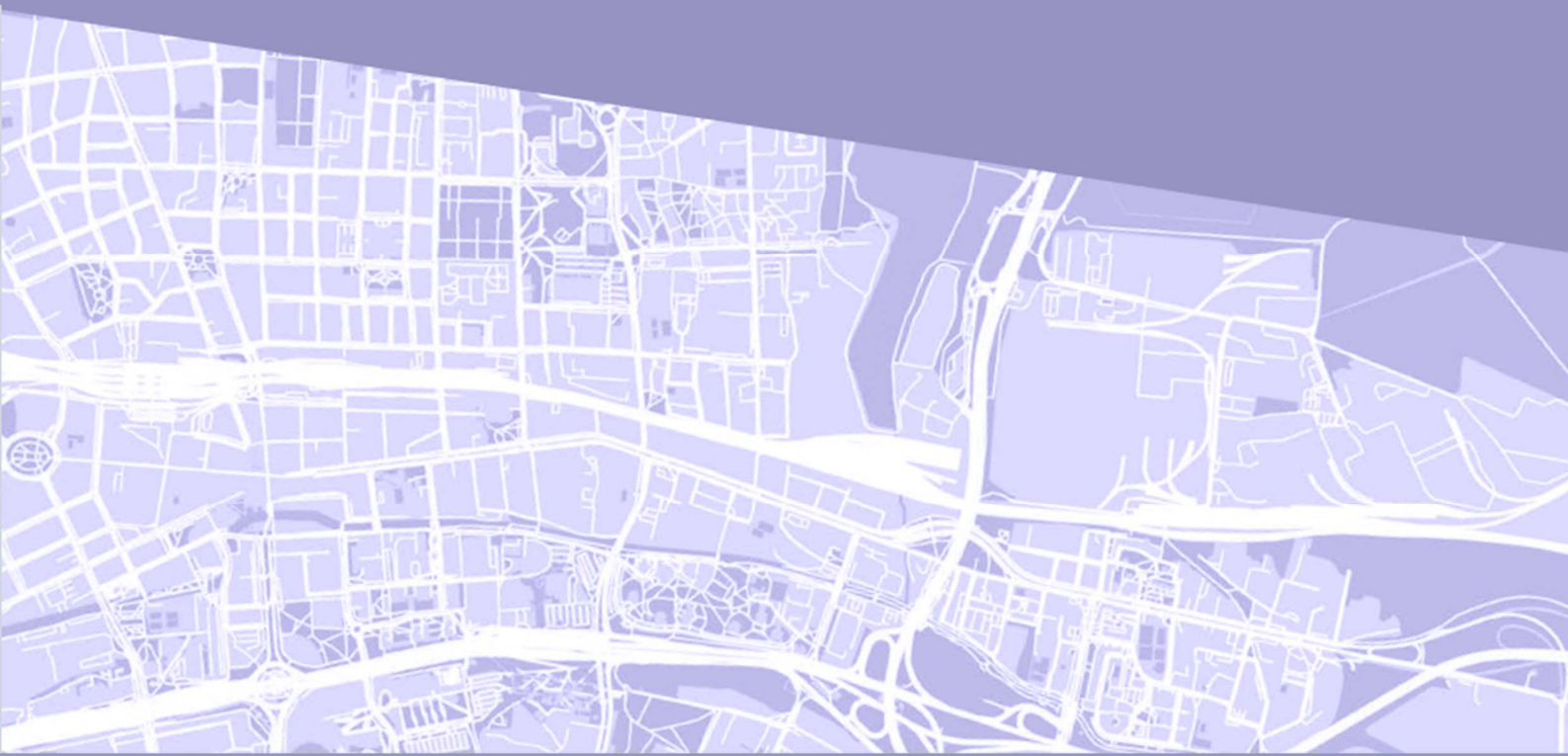
The activity of local communities is of great support for self-government authorities in undertaking measures to the benefit of refugees. It is necessary to maintain this activity, which so noticeably occurred at the beginning of the refugee crisis. It is crucial that self-government authorities receive a clear communication on the form of support from government administration, assumed forms of cooperation and assistance in the scope of solving refugee problems, as soon as possible. The current scale of the refugee problem exceeded the hitherto assumed scopes of providing aid and undertaken measures for which self-governments were prepared in case of sudden and catastrophic situations.

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Increasing availability of public services (e.g. the access to nurseries, care services for the elderly and persons in need of support in everyday functioning)			
B. Reinforcement of the education and learning system in the cities			
C. Support for social economy development in the cities			
D. Measures in the scope of migration and refugee policy in the cities			
Key: significance for the size category of the city:	 medium	 major	 great

Challenges of the National Urban Policy 2030

7.11. Challenge XI

Accelerating the pace of digital
transformation of cities



7.11.

Challenge XI: Accelerating the pace of digital transformation of cities

7.11.1. Diagnosis and characteristics of the challenge

Reference to international documents:

1. European Strategy for Data

2. Urban Agenda for the EU

3. EU Security Union Strategy

4. **Agenda for Sustainable Development 2030** – Goal 8. Decent Work and Economic Growth; Goal 9. Industry, Innovation and Infrastructure; Goal 11. Sustainable Cities and Communities; Goal 13. Climate Action

5. Path to the Digital Decade –



Digitalisation is one of the most important challenges faced by the Polish cities. Due to the dynamic pace of the ICTs (Information and Communication Technologies) development, this change is often defined as the fourth industrial revolution. Implementation of new ICT solutions in the public sphere and development of social digital awareness is necessary to build a modern society. In fact, the subject matter of digitalisation development concerns each type of public authority, however, the actual possibilities clash with inhabitants' or other urban stakeholders' expectations at the local level.

Digital competences' development and data accessibility mean not only the improvement of management competences, but also the important element of developing economic possibilities in cities and functional urban areas. In European countries a swift IT development has been observed in the conditions of an experienced demographic crisis (ageing society), which provides opportunities for economic development. Digital transformation is seen as one of the opportunities to re-industrialise Europe not only in the advanced technologies industry, but also in traditional industries. The necessary condition of a successful transformation is that the public sector catches up to the private sector. It is crucial to introduce measures that will prevent slowing down the pace of many potential development initiatives and undertakings in the public sector's surroundings. Such initiatives can be of a calibrated nature and can contribute to stimulating the local and regional sector of modern services, including services of high level of technological advancement (the use of Artificial Intelligence and the Internet of Things).

Digital transformation can increase the effectiveness of implementation of offices' tasks, decrease costs and improve functioning thereof, as well as increase data accessibility for reuse, administration services, transparency of processes and monitoring execution of current tasks and adjustment thereof to changes. Nonetheless, the potential in this scope remains insufficiently used by self-governments. The use of services such as electronic management of documents, systems such as ERP (Enterprise Resource Planning) or cloud services remains at a relatively low level¹⁰⁷. Statistically, there are 1.5 ICT specialists per self-government office, and almost a half of self-government administration units do not train employees in the scope of ICT. The situation is similar in the scope of digital services for inhabitants – only 46% of cities assure author's solutions for handling matters (including e-service). Offices usually indicate the lack of funds (63%), employees not using the existing solutions (24%) and a lack of staff with relevant competences (17%), as well as issues with the public or commercial offer available on the market (20%) and low interest or insufficient digital competences of inhabitants (4%, but as many as 7% in the case of large cities)¹⁰⁸, as barriers in digitalisation.

Social expectations, and even the growing social pressure of inhabitants results in the objective necessity of

¹⁰⁷ Statistics Poland, Wykorzystanie technologii informacyjno-komunikacyjnych w jednostkach administracji publicznej, przedsiębiorstwach i gospodarstwach domowych w 2019 roku (*The Use of ICTs in Public Administration Units, Enterprises and Households in 2019*), <https://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/wykorzystanie-technologii-informacyjno-komunikacyjnych-w-jednostkach-administracji-publicznej-przedsiębiorstwach-i-gospodarstwach-domowych-w-2020-roku,3,19.html>.

¹⁰⁸ Cyfrowy urząd?, Badanie Sieci Obywatelskiej Watchdog, 2020 (*Digital Office? Study on the Citizens Network Watchdog, 2020*), https://siecobywatelska.pl/wp-content/uploads/2020/12/SJJ_raport_cyfrowa_gmina.pdf.

urban self-governments entering the path of swift digital transformation. The needs of particular groups of inhabitants (children, learning adolescents, working persons, the elderly) and the needs of economic entities conducting activity in the territory of a given city require varied and adjusted solutions.

Last year, covering the period of COVID-19 pandemic, showed a rapid change in noticing the potential in digital tools and abilities. It turned out that many processes can be executed more effectively, faster and simpler than so far. It is estimated that effects of the pandemic accelerated the digital transformation in Poland by 4 to 5 years. It illustrates the potential of digital transformation. It causes a huge business and social leap, and actual verification of many binding regulations. It leads to the necessity of adjusting relevant regulations so that they do not differ from the contemporary reality and do not hinder occurring processes.

Despite the fact that shortages still happen, in the case of highly urbanised areas, the accessibility of fast stationary Internet infrastructure is no longer the most important challenge. The necessity to develop infrastructure servicing mobile networks due to the growing number of logging in devices (not only telephones, tablets, etc.) should be taken into consideration. Currently, it is also crucial to emphasise the development of digital services and competences in the cities. Problems and challenges in the scope of digitalisation are also diverse with regard to the cities' size. In the case of the biggest centres, metropolitan areas and large cities, effective management of large data and information bases is especially problematic. Simultaneously, the largest centres have better access to qualified ICT specialists. Whereas, medium and small cities operate on a smaller amount of data, yet, it is more difficult to solicit proper technical staff. Popularisation of remote working may be an opportunity for smaller urban centres in the scope of soliciting specialists.

Administration has for a long time operated with huge sets of data that require relevant tools allowing effective use thereof. The big data conception, which has been developing in recent years, naturally matches the needs of offices. Unfortunately, big data solutions are not currently significantly used in the public administration. In many cases, the collected data is not distributed outside the administration. The hitherto practice adopted by administration bodies often places this data user in the background. In consequence, data is very often shared in formats preventing or hindering reuse and adopted sharing models are licence-based.

It is necessary to assure that all new and old systems have security adequate to the risks occurring in cyberspace (especially compliance with requirements stipulated in the National Interoperability Framework). It also requires proper funds for experts in cybersecurity and stipulating clear and transparent procedures for reporting incidents in all urban institutions.

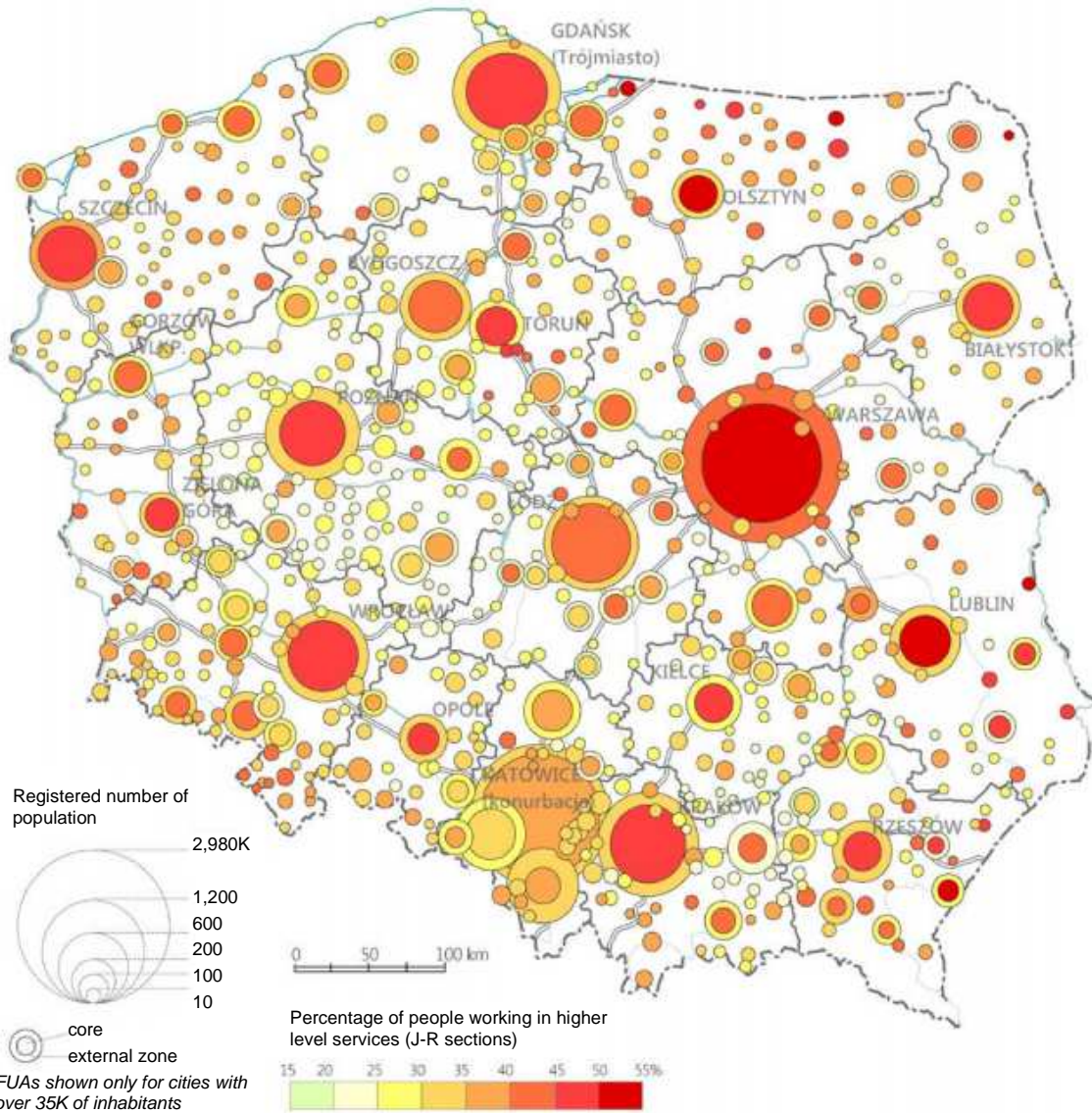
Inhabitants of self-government communities expect improvement of living conditions, including the speed and ease of handling administrative (office) matters, that is, workflow, automation of processes regarding issuing various decisions and settlements, shortening the time spent on collecting and analysing documents, or access to digital services offered by the cities (e.g. digital parking or managing waste). Convenient and intuitive access to public services, including administrative, and open public data resources that can be reused (e.g. geodesic maps), but also the development of digital platforms, especially in the scope of mobility services, are growing in significance.

The functioning of administration is to a great extent based on the traditional, material form of documents, which hinders the introduction of digital solutions. In such a case the information flow is significantly limited due to the lack of databases generally available to office employees, which are aimed at exchanging information. It forces citizens to deliver the same documents to various institutions time and time again. Implementation of new IT solutions is difficult due to high costs of adjusting institutions to new tasks. It is essential to ensure that the staff have been educated so that it is possible to introduce new technological solutions in the office.

Smaller cities struggle with the so-called brain drainage, that is, migration of highly skilled employees to metropolitan areas. A chance to mitigate this process is provided by the popularisation of hybrid work which turned out to be especially beneficial during the COVID-19 pandemic. Persons hitherto functioning in the most developed labour market could live in regions of their background and work for the majority of time at their homes (flats). It especially refers to professions among the so-called higher level services (IT, finance,

education, consulting, public and economic administration and generally 'independent professions' and 'office professions'). They are concentrated especially in the biggest settlement centres and due to being highly efficient, they at the same time highly remunerated. It would be also beneficial for the largest cities struggling with serious communication difficulties and traffic congestion as a result of highly developed commutes in the higher level services (figure no. 18).

Figure no. 18. Percentage of people working in higher level services in 2016, in urban communes, urban-rural communes and suburban zones



Source: own study on the grounds of: Śleszyński P., Wiedermann K., 2020, Studium szacunku liczby i struktury pracujących oraz bazy ekonomicznej miast w Polsce (*The Case Study on the Estimation of the Number and Structure of Workers and the Economic Base of Cities in Poland*), Studies of the Industrial Geography Commission of the Polish Geographical Society, 34, 4, pp. 184-205 on the basis of the original methodology of estimating the number of workers

7.11.2. Proposed solutions

A. Improvement of the self-governments' digitalisation level (systems)

It is necessary to create good conditions for introducing self-governments' digitalisation and, in particular, it is crucial to assure stability, greater clarity and simplification of legal provisions. It is essential to replace changes of provisions covering with digitalisation single, analogous processes and procedures with changes allowing a comprehensive and automated approach taking into account all systems and registers participating in the process. Therefore, it is necessary to assure legal regulations facilitating exchange, integration and use of data crucial for urban management.

- Measures should be aimed at further establishment of digitalisation-related recommendations, standards and guidelines: from collection, integration and sharing data for reuse, through developing e-services, up to architecture of IT systems, while preserving flexibility thereof.
- In many cases, it is essential to create common digital and organisational solutions for groups of self-governments or central groups (e-services platforms, systems for managing and archiving documentation, common data warehouses, common cloud solutions, common infrastructural solutions and even common IT offices), which will allow more effective use of funds and generating savings at the stage of creating, maintaining and developing systems.
- Creating a wide cooperation forum (including at the expert level) between the government and self-governments: wide communication and consultation of ICT solutions planned by the government, e.g. by creating a dedicated platform for communication and cooperation with self-governments; including self-governments in designing, implementing and testing government ICT projects.
- Development and popularisation of API programming interfaces allowing cooperation of systems and data exchange, in particular, sharing data for reuse via API (e.g. dynamic data), self-governments' access to data not introduced to central systems.
- Assuring the integration or interoperability of ICT systems will facilitate implementation of cities' tasks in a fully electronic manner and will reinforce the process of developing advanced online services at the highest maturity level. It is necessary to ensure mutual communication between central and local systems and creating appropriate conditions of cooperation, as well as providing cities with the optimal use of urban data processed in various systems irrespective of their construction.
- Following the creation and development of e-services, in particular, at the point of contact of central and local services, proper adjustment of the entire process should be ensured so that a case could be handled electronically. It is especially important due to the units' organisational capabilities to handle electronic applications and to control the entire process by the authorities, which on the grounds of the administrative law are responsible for data and final conclusion of the case (providing the service).

B. Developing competences and awareness regarding digitalisation among officers and inhabitants

Following systemic changes, it is necessary to develop awareness and competences both among employees and decision makers of offices and institutions, as well as improving digital competences of inhabitants, entrepreneurs and other users:

- Education and improvement of competences of office employees – by indicating specific benefits for the city provided by digitalisation, in particular broader use of data to manage the city; developing competences to use data and digital solutions, sharing data for the purposes of reusing and establishing functional requirements concerning ordered solutions, while assuring taking into account all stakeholders' needs; constant development of digital competences and competencies in the area of broadly understood digitalisation (e.g. possibilities of sharing and exchanging data in the GDPR context or good practices in using the public procurement law in IT orders); improving competences of all office employees by providing regular training (including in-company, also e-learning);
- Creating conditions for cooperation between self-governments and between self-governments and government administration units e.g. building a cooperation network, common digital projects (including creation of a relevant legal environment), exchanging good and bad practices and joint development of standards and guidelines with a consideration of digital accessibility, improving digital competences, among others: in the scope of new methods of soliciting data processing and sharing;
- Improving awareness and competences of inhabitants – by keeping an active communication, training and providing several various support channels with the use of urban digital solutions; engaging inhabitants at the stage of designing and testing digital solutions aimed at servicing them;
 - supporting development of students' digital skills (both within formal and informal education);
 - preparing the management of territorial self-government units and employees responsible for the implementation of educational tasks in territorial self-government units for strategic planning of digital development of education within the self-government's territory;
 - supporting acquisition of basic ICT competences by adult persons, who do not use the Internet (supporting local and regional social initiatives in this scope, basic training and broadening knowledge of coaches, developing and promoting self-learning methods), counteracting digital exclusion especially in the case of seniors: creating a map of points providing training such as: libraries, clubhouses, community centres, third age universities, district councils;
 - improving social awareness of the opportunities and threats of developing information society (online educational opportunities, smart consumption, flexible forms of employment, awareness of safe use of devices).

Commonness of using ICTs in a creative and engaged manner, in combination with the promotion of cooperation between administration and citizens, provides a chance to develop digital competences more effectively and actually use and improve obtained knowledge and skills.

C. Organising, processing and opening public data

Opening public data will contribute to increasing citizen's share in co-deciding on public matters. The advantage of open data primarily consists in the opportunity of reusing it as a base for creating new products and services and thus creating jobs in innovative economy branches. Administration, or more broadly speaking, the public sector acts in this context as a provider of data which can be later processed by other entities e.g. by entrepreneurs. Apart from economic purposes, public data can also be used by the administration to carry out analyses, plan strategically and make decisions faster. Open data provides the opportunity to analyse social problems and quickly react to them and, in consequence, to mitigate negative effects.

Measures in the scope of organising, processing and opening public data focus on two aspects:

- improvement of the quality of collected and shared public data irrespective of the place of storing and sharing it, in compliance with pillars of openness and standards of sharing data¹⁰⁹;
- improvement of the quality of data shared on dane.gov.pl and other portals of local significance for the cities and their functional areas.

In order to facilitate reuse, public data and metadata must be prepared in a user-friendly manner. Communicative and understandable for the recipient language is crucial. Always, whenever possible, data should be shared as open data (in compliance with the principle of data openness) and via API.

The effective use of data is a crucial factor of improving productivity in all sectors, including the transport sector, by making urban mobility more efficient, sustainable and safe. Furthermore, developing tools for managing mobility and car parks, which will contribute to mitigating negative external effects such as congestion and air pollution, is of key significance. Development of innovative solutions especially based on artificial intelligence often requires a large quantity of data, which can be obtained only by combining data from various entities and sources.

Accessibility and reuse of data is limited by costs of data collecting and digitalisation, challenges related to data standards and interoperability issues. Building National Access Points to transport data is aimed at making data accessing easier. Assurance of data accessibility enumerated in delegated regulations of the ITS Directive (2010/40/EU), in particular, with regard to data concerning mobility in cities, i.e. Delegated Regulation (EU) 2017/1926 and Delegated Regulation (EU) 2015/962, is of great importance. This concerns, in particular, data regarding traffic provisions, traffic management tools and traffic plans, or providing information to passengers on multimodal travels.

D. Development of cities in the environment of digital solutions saturation (communication, consultation and participation in decision making)

Digital solutions can facilitate and accelerate many managerial processes in the cities. It primarily concerns interactions in the scope of communication, consultation measures or participation in decision making and effective integration of existing data bases e.g. in the scope of monitoring the air quality in the cities.

Social participation is becoming more and more common practice in Poland. The Internet and the entire range of digital solutions give the possibility of engaging the society in decision making processes more. The immense potential lies in Internet tools based on geo-information systems. Methods based on participatory technologies using geographical systems of spatial information should be implemented integrally with traditional forms of society participation. Simultaneous use of modern and conventional manners of social participation can significantly activate inhabitants in activities undertaken to the benefit of their neighbourhood. Broader use of solutions based on geo-information systems, such as geo-survey and geo-

¹⁰⁹ Pillars of openness and standards of sharing data are defined in the Programme of Opening Data for 2021-2027, Resolution no. 28 of the Council of Ministers of 18 February 2021.

discussion, is required in measures undertaken by local self-governments. They will improve social communication and allow omnidirectional cooperation based on maps between various stakeholders. It will also allow better understanding and presentation of e.g. proposed spatial transformations through the agency of visualisation, assessment and discussion.

E. Development of the ecosystem of digital public services for inhabitants, entrepreneurs and employees



















Sharing the full catalogue of public services requires hammering out a common approach of the government administration, regions and local self-governments in the scope of dividing roles in their establishment and development. It is also essential to define relations between government service portals and regional digital platforms so that they are complementary and do not double implemented solutions. It is important that digital solutions are shared according to commonly established standards (standardisation of processes and not only services), which will constitute a point of reference for designing solutions in compliance with users' expectations.

The Public Service Monitoring System will be rendered available, which will allow monitoring services provided by the territorial self-government. System recipients will be as follows: government and self-government administration institutions, institutions managing national and regional programmes, public intervention assessment units, as well as the society, entrepreneurs and scientific environments. The society will gain access to statistical information describing parameters of public services provided by self-government administration at local and regional levels, as a result of which, it will be possible to consciously participate in economic planning by controlling the intentions and results, as well as in the public debate on the directions of development and quality improvement of public services. Whereas, government and self-government administration institutions responsible for providing public services or supervision thereof will use the system to monitor services, carry out benchmarking, identification of good practices and undertaking improvement measures. The system will provide support for the services' quality improvement process in particular territorial self-government units, by supplying objective information.

Conducting the aforementioned activities and establishing a stable policy in this area requires introduction of permanent coordination mechanisms, which will allow systematising cooperation and maintaining effects thereof in the long-term. Homepage of the portal gov.pl will ultimately be a digital gate of the Polish state and, at the same time, a map of its institutions. This portal will be the main place of sharing public information by the Polish administration – the portal's homepage will also act as the homepage of the Public Information Bulletin (PIB). The portal will connect public administration websites in one uniform and transparent information system. A citizen will find here a standardised list of entities performing public tasks.

Public administration entities will operate their own websites on the portal. These websites will also act as websites of entities publishing in the PIB. Therefore, the hitherto most often independently functioning two channels of information concerning activities of public administration units: PIB portals and websites will be combined. Thus, the mode of presenting the functioning of Polish public administration will be unified. In order to introduce joint running of PIB websites, it is valid to adjust legal provisions in order to avoid significant doubts in the aforementioned scope.

Technologies more and more often used in designing services are technologies concerning Artificial Intelligence and the Internet of Things. Therefore, it is necessary to analyse legal provisions concerning aggregation, processing and collecting data by using the aforementioned technologies with a consideration of basic rights of inhabitants.

Solutions or a direction of solutions	Large cities	Medium cities	Small cities
A. Improvement of the self-governments' digitalisation level (systems)			
B. Developing competences and awareness regarding digitalisation among officers and inhabitants			
C. Organising, processing and opening public data			
D. Development of cities in the environment of digital solutions saturation (communication, consultation and participation in decision making)			
E. Development of the ecosystem of digital public services for inhabitants, entrepreneurs and employees			
Key: significance for the size category of the city:	 medium	 major	 great

8. Implementation of the National Urban Policy

Implementation measures of the National Urban Policy 2030 are primarily aimed at introducing solutions for counteracting challenges defined within the urban policy. It is crucial to effectively undertake measures defined in the National Urban Policy 2030. It is essential not only to effectively implement postulated solutions, but also continuously monitor and evaluate effects of the entire process. The implementation process also assumes mechanisms for solving possible problems occurring at the implementation stage.

It should be underlined that steps taken in order to implement each of the solutions proposed in the NUP 2030 can differ in terms of details. Solutions for some challenges are more of a general nature, whereas others are more specific and refer to identified changes in provisions, mechanisms of financing or organisational forms. The scope and manner of introducing proposed solutions will be accompanied by in-depth consultations and education campaigns, which will guarantee support and as wide acceptance as possible for proposed changes.

The implementation plan discusses systemic principles of the NUP 2030 introduction, while measures to the benefit of introduction of particular solutions result from the substantive scope of particular challenges.

The following should be taken into account in preparation of the NUP 2030 implementation plan, among others:

1. A review of existing public policies (sectoral strategies) and implemented strategic projects in order to identify synergy.
2. Collecting inspiration on the grounds of national and foreign examples of best practices in the scope of urban policies in order to use experiences in implementation of goals and projects of the NUP 2030, in particular strategic and pilot projects.
3. Defining the manner of measuring progress in the plan implementation in order to assure effective monitoring.
4. The analysis of stakeholders in order to identify implementation process participation and networking them to the benefit of cooperation, as well as taking care of effective information channels (a definition of concepts, processes, etc.).

Benefits from adopting the implementation plan cover both, taking into account work organisation, establishing relations and cooperation (inside the government administration, as well as with other partners), and increased effectiveness of investing public funds in sustainable development of cities and their functional areas.

It is expected that the implementation plan should have the following positive effects:

1. Presentation of a practical manner of the NUP implementation.
2. Improvement of the transparency and clarity of internal (breaking down the siloed approach of government administration's organisation) and external communication (among others building partnership relations with self-governments, with the world of science and social organisations).
3. Identification of government administration resources and adopting an optimal structure of operations.
4. Creating proactive attitudes of government administration in the scope of urban subject matter.
5. Providing the NUP 2030 recipients with a presentation of the logics of public intervention of the government in functional urban areas.
6. An increase of trust among stakeholders and building a social consensus around goals of the NUP 2030.
7. Detailed definition of responsibilities of particular government administration units for the implementation of specific solutions and projects (hosts and co-hosts of particular challenges).
8. Outlining a detailed plan of action with a timeline and identification of milestones for evaluation of the NUP 2030 implementation.
9. Indicating synergy between particular public policies.
10. An increase in knowledge on social, economic and environmental processes occurring in Polish cities.

8.1. Implementation mechanism based on the appointment of the Executive Board of the National Urban Policy

In order to prepare proposition of provisions and recommendations for the draft of the new National Urban Policy, the Interdepartmental Team for Updating the National Urban Policy 2030¹¹⁰ was appointed. After adopting the document, the objective of the National Urban Policy 2030 implementation's management optimisation is to appoint a permanent body in the form of the Executive Council of the NUP 2030. Due to the scope of activities, a two-tier organisation of the Council is adopted: at the decision making level (relevant ministers) and at the working level (representatives of relevant ministers). The Council's work is managed by the minister or vice-minister relevant for regional development, who is at the same time the President of this Council.

¹¹⁰ Appointed under the Order of the Minister of Development Funds and Regional Policy of 10 September 2020.

The decision making level of the Executive Council of the NUP 2030

Members of the Executive Council's decision making level include: ministers, secretaries of state or undersecretaries of state of departments directly engaged in the implementation of the National Urban Policy. They represent at least the following government administration departments that have an impact on the implementation of the NUP 2030:

- public administration,
- construction, spatial planning and development, and housing,
- energy,
- climate,
- culture and national heritage,
- environment,
- transport,
- economy,
- labour,
- social security,
- family,
- public finance,
- computerization,
- education and upbringing,
- state assets,
- communication,
- sports,
- rural development.

Furthermore, representatives of organisations associating urban and rural self-governments are invited to participate at the decision making level, i.e.:

- Association of Polish Cities,
- Union of Polish Metropolises,
- Union of Polish Towns,
- Association of Polish Self-governments,
- Association of Voivodeships of the Republic of Poland,
- Association of Polish Counties,
- Association of Rural Communes of the Republic of Poland.

Furthermore, the Council invites the following representatives to participate in its works:

- central body of the government administration relevant for statistics,
- authorities (management) of institutions, state-owned companies, especially related to development in urban areas:
 - National Fund for Environmental Protection and Water Management,
 - Polski Fundusz Rozwoju S.A.,
 - PFR Nieruchomości S.A.,
 - Bank Gospodarstwa Krajowego S.A.,
 - National Property Stock,
 - Centre for EU Transport Projects,
 - National Centre for Research and Development.

Selection of institutions and state-owned companies engaged to work for the Executive Council of the NUP 2030 is flexible and can be adjusted under a decision issued by the President. Furthermore, by the President's decision, representatives of other departments, who are not members of the Executive Council, can be invited to the meetings of the decision making level.

Representatives of organisations associating self-governments and representatives of state-owned companies and institutions especially related to urban areas development participate in the meetings of the Executive Council with an advisory vote.

Meetings of the decision making level should be held at least once a year e.g. on the occasion of the National Urban Forum (including the Urban Policy Congress). If needed, by President's decision, organisation of additional meetings is admissible.

Upon the request of the minister relevant for regional development or departments' representatives, the decision making level adopts a plan of action with the timeline for implementation of milestones included in solutions to particular challenges. The key task of the Executive Council is to specify tasks to be performed by particular departments in identified scopes of work resulting from the NUP 2030 document, and monitoring the National Urban Policy 2030 implementation. At the Executive Council's meetings, reports on the implementation of the action plan together with the timeline and discussion on factors contributing to possible deviations, as well as tasks to be executed in the nearest future, are adopted.

The scope of measures for the urban policy implementation specified below is organised and monitored at the decision making level:

- verification of measures' results, including effectiveness of methods selected in solution sheets;
- verification and change of measures' timeline;
- decision regarding identification of entities responsible for the implementation of solutions;

- evaluation of the national (among others: the Government Road Construction Fund, the National Fund for Environmental Protection and Water Management's programmes concerning cities, the Strategic Investment Programme, the Railway Fund, the Fund for the development of public utility bus transport, programmes and funds for housing development) and European (the European Union Funds, the EEA Financial Mechanism and the Norwegian Financial Mechanism, the National Recovery Plan) funds' impact on achievement of objectives related to the National Urban Policy;
- identification of new challenges by commissioning the analysis of social, economic and environmental factors, and addressing challenges reported in the dialogue process conducted with urban self-governments, social organisations and the world of science.

Meetings are also aimed at discussing and searching for solutions regarding issues differing between departments.

Moreover, thematic areas are selected at the decision making level's meetings for pilot projects' implementation. Furthermore, this level approves directions of educational and promotional measures for the National Urban Policy 2030, and identifies the most important areas for scientific or scientific-implementation research.

The working level of the Executive Council of the NUP 2030

The working level of the Executive Council is working continuously. Services for the Executive Council of the NUP are provided by the representative of the minister relevant for regional development.

Meetings at the working level are, depending on the needs, participated by persons managing organisational units (e.g. directors) and substantive employees of all aforementioned ministries, institutions and organisations associating self-governments (Association of Polish Cities, Union of Polish Metropolises, Union of Polish Towns, Association of Polish Self-governments, Association of Voivodeships of the Republic of Poland, Association of Polish Counties, Association of Rural Communes of the Republic of Poland). Representatives of other departments, which are not members of the Executive Board, institutions, state-owned companies and authorities of particular self-governments, as well as representatives of social organisations and the world of science, as well as organisations associating entrepreneurs, can also be invited to the meetings at the working level.

The working level of the Executive Board of the NUP 2030 is a platform for cooperation, discussion and exchange of experiences in the area of conducted measures, carried out projects or proposed solutions in the area of urban policy. Meetings are aimed at inter-departmental negotiation and preparation of documents subjected for approval at the decision making level. The working level's meetings are organised, in principle, as needed and serve for exchanging knowledge, preparing, establishing and then agreeing on positions and solutions, as well as experiences in a given area of the National Urban Policy 2030 of particular departments, institutions and state-owned companies. It is aimed at improving the quality of the drawn up legal acts or strategic documents, as well as assurance of synergy of measures undertaken for the development of Polish cities.

Documents prepared and negotiated by the working level of the Executive Board of the NUP 2030, and later approved by the decision making level, are, among others:

- positions of the Executive Board of the NUP,
- opinions concerning the principles of granting national and European funds,

- drafts of legal acts,
- reports concerning the action plan with timeline and implementation milestones,
- reports on the evaluation of urban policy,
- identified new challenges,
- proposed new solutions,
- directions of educational and promotional measures,
- priorities in the scope of studies on urban policy and in broader terms on the development of cities and functional urban areas,
- the most important thematic issues of the annual National Urban Forums, including the Urban Policy Congress.

Applications hammered out within works of the Executive Board of the NUP 2030 will be the subject of discussion during meetings of the Subcommittee for territorial dimension¹¹¹ responsible for, among others, coordination of sectoral policies and financial instruments from various sources, implementing objectives of the regional policy, including the urban policy.

8.2. National Urban Policy as targeting support in other programmes and strategies

The need to assure coherence of implemented public investment with sustainable development objectives is more and more often noticed. The solution is the in-depth analysis of the financial support orientation in terms of actual impact on the sustainable development of cities. The National Urban Policy 2030 is a document translating the sustainable development principle into the most important directions of measures. In this context correlating objectives set in the NUP 2030 with the programme of development directions of cities and functional urban areas

together with the implementation of investment will allow better orientation of spending funds. It indicates, among others, the necessity to establish a systemic approach to the assessment of submitted applications or drawing up projects for the cities, limits the risk of allocating support to investment non-compliant with the objectives of the National Urban Policy, as well as contributes to the increase in the awareness of sustainable development objectives among decision makers.

Objectives and directions indicated in the National Urban Policy 2030 will be taken into accounts in assessment mechanisms of applications in funds such as, among others:

- Subsidies Fund,

An example of the approach:

The city can obtain co-financing from the National Fund for Environmental Protection and Water Management to its own contribution, provided that the building of the culture facilities specified in the application is passive, has photovoltaics and will assure management of 'grey water'. The measure under the NUP consists in the limitation of energy consumption and improvement of water management in urban areas.

An example of the approach:

Co-financing from the Government Road Construction Fund will be granted to measures compliant with the technical-construction provisions concerning public roads, which will take into account the principle of universal design and assurance of roads' accessibility to persons with special needs through the lifetime thereof.

¹¹¹ Decision of the President of the Coordination Committee for Development Policy of 1 October 2020 on appointment of the Subcommittee for Territorial Dimension.

- Government Road Construction Fund,
- Funds for low-emission transport, the National Fund for Environmental Protection and Water Management,
- Railway Fund,
- Strategic Investment Programme,
- Fund for the development of public utility bus transport,
- programmes and funds for housing development co-financed from the state budget,
- European Union Funds.

At the level of considering applications, additional points should be given for a systemic approach to investment, also taking into account aspects exceeding the industry.

Additional points are intended not only to shape systemic thinking, but also compensate for the usually higher costs of investment taking into account additional measures. It constitutes a certain break-through of thinking patterns that complementary measures can be postponed while waiting for new funds.

The National Urban Policy 2030 will be also implemented with the use of the additional financial support for self-governments. In this scope, it is crucial to consider the possibility of extending the eligibility of costs of complementary measures.

The extended eligibility is defined as the possibility to allocate a small part (e.g. up to 3%-5%) of obtained funds on complementary measures compliant with the NUP 2030

objectives, however, managed by other public entities. Therefore, a measure resulting from the NUP is e.g.: shaping proper transport attitudes, i.e. encouraging commuting by public transport, on foot or a bicycle. The above financial motivations are key for broad implementation of the National Urban Policy 2030 in Polish cities.

An example of the approach:

Extended eligibility allows building several hundred metres of pavement and cycle lane at the county, voivodeship or national road as a part of the communal investment in construction or development of the education infrastructure (e.g. a primary school building).

8.3. Strategic projects

In the Appendix to the NUP 2030 strategic projects for the implementation of the National Urban Policy 2030 objectives have been included. Some of the projects are pending, whereas others are planned for activation or are of a pilot nature.

The aim of strategic projects is to develop model solutions for particular measures related to the use of these tools. In effect, good practices in solving specific problems or counteracting barriers are to be established, generating specific positive results for the functioning of cities and functional urban areas which will be available for use by other territorial self-government units. The list of projects indicates main directions of developing model and effective solutions concerning new or complex issues related to the development of cities and functional urban areas that result from the National Urban Policy 2030. The scope and possibilities of implementing particular pilots will depend on the available funds, as well as organisational and institutional capabilities.

The list of strategic projects proposed for activation is not closed, which means that other projects planned for activation by relevant departments, or projects, conceptions of which will be established in the course of the NUP 2030 implementation, can be included in the catalogue of projects implementing the urban policy. The discussion forum on propositions and conceptions of projects in the area of urban policy implementation is the Executive Board of the NUP 2030.

8.4. NUP 2030 Monitoring

Effective implementation of the proposed solutions requires adopting an implementation plan including the plan of action and timeline. Plans not only systematise and put works in order, but also allow reliable monitoring of the implementation of proposed implementation principles and subjecting them to substantive assessment. The aim is to meet expectations that constituted the grounds of the National Urban Policy 2030.

The plan of action and the timeline are adopted by the decision making level of the Executive Board of the NUP 2030 not later than half a year as of the NUP 2030 adoption by the Council of Ministers.

Monitoring of the National Urban Policy 2030 implementation plan should be considered in three areas:

- verification of the timeline of planned measures;
- evaluation of legislative, organisational, etc. measures undertaken within the NUP;
- observation of the changing socio-economic situation and conditions in cities and functional urban areas in order to introduce possible changes in challenges or solutions.

The first area concerns verification of undertaken measures with the adopted timeline. Due to the fact that some solutions are related to legislative changes, the last point submitted for assessment of compliance with the timeline comprises addressing government bills at the Sejm. In the case of changes in regulations that fall within delegations of currently binding acts, verification of the timeline is being conducted until publishing in the Official Journal. Changes in the rules and regulations of competitions, principles of granting funds, etc. are being verified with the timeline until effective implementation thereof. The report on the implementation of the action plan with the timeline, including explanation of any delays, is presented at least once a year at the decision making level of the Executive Board of the NUP 2030.

The implemented changes resulting from the NUP 2030 solutions are continuously evaluated by collecting information from stakeholders, conducting a dialogue with self-governments and scientific environment, collecting comments from inhabitants and entrepreneurs, conducting an analysis of press publications, etc. The Executive Board can commission research to the Institute of Urban and Regional Development and other institutes or universities, in order to assess effects of implemented changes. Once a year, at the decision making level of the Executive Board of the NUP 2030, information concerning assessment of effects together with possible propositions regarding modification of undertaken measures, is presented.

Observation of changes in the socio-economic situation and conditions significantly influencing the development and functioning of cities and functional urban areas is carried out on the basis of a dialogue with self-governments, scientific environment, information held by the institution or analysis of statistical data and information from the media. An active attitude of institutions participating in the Executive Board of the NUP 2030 for definition of new challenges and proposition of new solutions or changes in the currently proposed solutions, is expected.

Upon approval of the decision making level of the Executive Board of the NUP 2030, reports on monitoring are published on the publicly available website of the NUP 2030.

Appendix 1 – Pending and proposed strategic projects

PENDING STRATEGIC PROJECTS

Project name	Project description
City Partnership Initiative	<p>Within the City Partnership Initiative it is important to reinforce and promote cooperation, as well as exchange experience and knowledge between cities. Due to the CPI, cities and project teams extend their knowledge and develop competences in cooperation with other cities, as well as experts and specialists.</p> <p>Detailed analysis of good practices and unrestrained exchange of knowledge and information between participating in the project representatives of cities allows to draw conclusions and prepare solutions and measures to be used in their own city.</p> <p>Within CPIs cities cooperate in the scope of thematic networks corresponding with their needs. Results of work will also allow the central administration to take established solutions into account in legislative work. CIP 2021-2023 thematic areas:</p> <ul style="list-style-type: none"> ● Digital city, ● City of PPP (Public-Private Partnership) initiatives, ● Green city.
Advisory Support Centre	<p>The Advisory Support Centre (ASC) is a strategic project of SRD and NSRD 2030, which in an innovative manner provides advisory services aimed at increasing administrative effectiveness of local self-governments. It allows self-governments to acquire and consolidate key competences for diagnosing local communities' needs, strategic planning and investment processes' management. The ASC pilot implemented in the period between September 2020 and the end of March 2023 is aimed at bringing self-governments closer for better and more effective cooperation in order to implement good quality projects and investment. The catalyst of cooperation in communes will be an experienced team of experts which will direct self-government administration's measures in order to improve the quality of life of inhabitants and restore the local economy.</p> <p>Thus conducted cooperation will improve effectiveness of implemented measures and will optimise costs of providing public services across administrative divisions.</p> <p>The ASC is aimed at improving effectiveness of territorial self-government units in the scope of reinforcing institutional competences and potential, in particular, by increasing awareness among the self-government administration of the need for</p>

Project name	Project description
	<p>cooperation between territorial self-government units making the functional area, as well as benefits from undertaking common, integrated and long-term measures using elements of endogenic potential of the area; improving the ability to identify and prioritise development undertakings on the grounds of in-depth diagnosis of the socio-economic situation and forecast, identification of development barriers and potentials, as well as intensifying and increasing effectiveness and quality of planned development measures in partnership with neighbouring self-governments (supralocal dimension of development cooperation) and local stakeholders (interinstitutional cooperation and social participation) in functional areas.</p>
<p>Action Plan for Cities WUF11</p>	<p>Programme of the Action Plan for Cities is an initiative accompanying the 11th session of the World Urban Forum - WUF11 – the biggest and most important event related to cities. It is also an implementation instrument provided for in the National Urban Policy 2030.</p> <p>Developed together with the cities, the Action Plan for Cities will be Poland's response to the challenges related to the implementation of sustainable development objectives specified in Agenda 2030 – announced and signed in June 2022, during the 11th session of the World Urban Forum in Katowice.</p> <p>The idea of the Programme is to assist cities in responsible and sustainable development. It provides for individual advisory support for the cities that want to implement projects concerning sustainable development objectives at the local level. Furthermore, general instructions for inhabitants concerning active participation in the city development, for instance co-management and influencing urban space, will be established.</p> <p>In consecutive years, supporting cities in orienting urban policies on sustainable development is planned.</p>
<p>Revitalisation Regions – reinforcing the capacity of communes to programme and implement revitalisation measures</p>	<p>The programme is aimed at reinforcing the capacity of communes to programme and implement revitalisation measures. The programme is executed by the Revitalisation Teams functioning in Marshals' Offices, which due to the subsidy granted from the Technical Assistance 2014-2020 Operational Programme, will provide advisory and training support for communes in four thematic modules:</p> <ul style="list-style-type: none"> ● accessibility in revitalisation – reinforcing the self-governments' capacity to take into consideration the issue of accessibility both in strategic programming (including development strategies, revitalisation programmes), spatial planning, as well as preparing and implementing specific projects (including revitalisation projects), in compliance with the standards specified in the Accessibility Plus 2018-2025 Programme; ● revitalisation management and local community inclusion in revitalisation programmes' implementation – reinforcing self-government competences in the scope of socialising the revitalisation process by, among others, creating systemic mechanisms for reinforcing local communities

Project name	Project description
	<p>and social participation in shaping public space, as well as reinforcing communes' capacity to diversify sources of funding revitalisation measures, i.e. higher engagement of private investors, housing communities/cooperatives and SHAs, and NGOs in revitalisation programmes' implementation;</p> <ul style="list-style-type: none"> ● using tools resulting from the revitalisation act – improving awareness of self-governments and reinforcing communes' capacity to use statutory revitalisation tools (communal revitalisation programme, Revitalisation Committee, Special Revitalisation Zone, local revitalisation plan); ● monitoring and evaluation of revitalisation measures - reinforcing the communes' capacity to develop effective systems of monitoring local development (at the communal level taking into account internal diversification of the commune), including monitoring and evaluation of revitalisation programmes. <p>The scope of support offered by Revitalisation Teams is individually developed in each voivodeship with a consideration of regional conditions and challenges. An integral component of the Programme comprises 16 regional websites on revitalisation, which supplement the National Centre for Knowledge on Revitalisation (www.rewitalizacja.gov.pl). The programme has been implemented in the years 2019-2022. It is a part of the Strategy for Responsible Development titled: A set of measures for supporting self-governments in programming and implementing revitalisation. The Programme Operator is the Ministry of Development Funds and Regional Policy.</p>
<p>Local Development Programme</p>	<p>The Programme is aimed at improving social and economic situation in small and medium cities in Poland by providing conditions for the quality improvement of life as a result of a local social and economic development, with a consideration of the participation percentage of citizens in urban management, and in compliance with the environment protection rules, as well as reinforcing institutional capacity of self-government authorities in these cities.</p> <p>The Programme consists of two parts:</p> <p>I: Local Development Programme Competition</p> <p>The grant competition for comprehensive development measures (infrastructural and soft), including for the benefit of reinforcing and improving local administration's capacity. The competition was announced in May 2019 and consisted of two stages. Out of over 200 submitted propositions of projects, 54 cities, which drew up propositions for the Local Development Plan and Institutional Development Plan, qualified for the second stage. Finally, grant support for implementation of plans was given to 29 cities. Projects will be implemented from July 2021 to April 2024.</p>

Project name	Project description
	<p>II: Predefined project, that is, support for the cities. The role of the predefined project is to support implementation of project measures in cities-laureates of the Local Development competition, the bilateral Polish-Norwegian cooperation and broad popularisation of integrated management methods and tools for other cities in the country and developing recommendations for the National Urban Policy 2030. The predefined project has a structure of several measures, which can be presented in four thematic components:</p> <p>Component 1: Advisory support, integrated development management tools and model – implemented by the Association of Polish Cities.</p> <p>Component 2: Management review in territorial self-government units and creating an institutional development self-assessment tool for the territorial self-government unit – implemented by the Organisation for Economic Cooperation and Development (OECD).</p> <p>Component 3: Bilateral cooperation and popularisation of good practices from Norway and Iceland – implemented by the Norwegian Association of Local and Regional Authorities.</p> <p>Component 4: Thematic training and development of specialist management and implementation tools - implemented by the Institute of Urban and Regional Development.</p>
City with Climate	<p>The City with Climate initiative was inaugurated in 2020 and is aimed at popularising modern, effective and efficient solutions for quality improvement of inhabitants' life and raising cities' resilience to negative effects of climate change.</p> <p>Awards are granted to the undertakings consisting in the implementation of functionally related investment in the scope of rainwater management and shaping urban greenery, including: 'green-blue' infrastructure, liquidation of impermeable surfaces, rainwater management systems, green areas development in cities and energy transition by using the potential of renewable energy sources and promoting the prosumer energy, as well as cooperation in the form of energy cooperatives, among others, energy clusters and collective prosumers. In 2020, within the programme, the following were organised: competitions - School with Climate, City with Climate – the best implemented project, study 'City with Climate – Leader in Category' and urban workshops being a cycle of discussions with self-governments and non-governmental organisations aimed at establishing solutions increasing the comfort of city inhabitants' lives in the climate change conditions. Due to the great interest in the initiative, it was decided to continue it in 2021 and in the consecutive years. Within the 2021 edition of the City with Climate, the Ministry of Climate and Environment conducted an analysis of measures undertaken by the cities, aimed at measuring effects in implementation of the climate and environment policy and re-organisation of the competition City with Climate – best implemented project, the study Leader in Category. Cities with the best results and outstanding cities</p>

Project name	Project description
	<p>were proposed a cooperation in the scope of the specialist strategic consultation with renowned institutions. The result of the cooperation between cities and experts will be road maps of climate transition with definition of ambitious objectives in this process.</p> <p>At further stages of the project subsidies are provided for, at the maximum amount of 50% of eligible costs, however, not more than PLN 1 million per investment. Implementation of this part of the programme has the possibility of re-organising the competition in the consecutive years. The City with Climate initiative is subject to extension and planned update of the name End concrete in city centres.</p>

STRATEGIC PROJECTS PROPOSED FOR ACTIVATION (INCLUDING PILOTS)

Project name	Project description
Model areas	<p>The project results directly from the strategic project indicated in the National Strategy of Regional Development 2030 – Innovative Territorial Partnerships. Areas of pilot projects indicated with scientifically supported measures of public administration, business and social organisations provide a field for testing solutions in the scope of modern technologies, new organisation forms of public services or social participation inscribed in the implementation of objectives of the NUP 2030. Pilot measures can include, depending on the nature of tested solutions, area of the district, city, selected communes, partnership of communes or the entire functional urban area. Entities executing pilots can function as territorial partnerships made of enterprises, business associations, government and self-government public institutions, research institutes, universities etc., which focus on the general conception of solutions tested in space.</p> <p>Partners participating in pilot measures will support government administration with gained knowledge and experience in prepared legislative changes and, in the case of changes regarding the local law, also self-governments. Knowledge gained by economic entities will contribute to the development of innovative products and services. Measures within model regions are supported with public funds (national and EU funds, as well as other financial mechanisms) from the special pool or within sectoral measures. Pilots can cover a number of issues relevant from the point of view of the national urban policy's implementation. Examples of measures as follows:</p> <ul style="list-style-type: none"> ● innovative forms of social participation in spatial planning, exceeding current statutory provisions, e.g. building 3D models, charrette workshops, etc.; ● micro-referenda concerning fate of the housing estate, district, etc. e.g. taking into account votes of parents depending on the number of children; ● new forms of public transport organisation e.g. buses on-demand (route set dynamically on the basis of reports), virtual stops (i.e. the possibility of busses stopping in a specific situation at bus stops not physically indicated); ● building a network of solutions for the implementation of new technologies, e.g. hydrogen so as to concentrate activities of various entities, e.g. hydrogen buses, hydrogen trains, hydrogen cars of the post office and couriers, using the common infrastructure for filling tanks, developing common maintenance infrastructure;

Project name	Project description
	<ul style="list-style-type: none"> ● assistance for housing initiatives supporting revitalisation processes, e.g. partnership with universities to the benefit of flats for young scientists, with associations to the benefit of assisted housing, achieving desired proportions of particular types of housing in a given area, etc. <p>Developing a platform for exchanging know-how and information as well as a base of good practices in the scope of measures counteracting drought in the cities.</p>
Advisory Support Centre Plus	<p>Continuation of the pilot project the Advisory Support Centre which is an innovative advisory project for improving administrative efficiency of local self-governments. It allows self-governments to acquire and consolidate key competences for diagnosing local communities' needs, strategic planning and investment processes' management. It is planned to activate another edition of the ASC Plus for 2022-2023, within which the support will be addressed at medium cities losing socio-economic functions along with their functional areas for preparing territorial and supralocal strategies.</p> <p>The Advisory Support Centre project is aimed at bringing self-governments together so that they cooperate better and more effectively in order to implement good quality projects and investment. The catalyst of cooperation in communes will be an experienced team of experts who will direct self-government administration's measures in order to improve the quality of life of inhabitants and restore the local economy.</p>
Green transformation of cities and functional urban areas	<p>The aim of the project implemented within the National Restoration Plan is to support green transformation of cities by providing funds to finance specific types of investment influencing 'greening' of urban areas, more effective use of funds, decreasing the level of pollution or counteracting the loss of biological diversity. Furthermore, the intervention is aimed at minimising human impact on environment (rational management of funds, taking into account environmental effects in management and planning, raising ecological awareness of the society); changing the development model of Polish cities (giving priority to climate change mitigation and adaptation measures and, in broader terms, pro-ecological); improvement of the quality of life and health of inhabitants (improving the quality of public space from the point of view of needs for spending leisure time (with a particular emphasis on natural functions), allowing changing transport behaviours consisting in prioritisation of active mobility (walking, cycling) and increasing accessibility of environment-friendly public services); as well as increasing the attractiveness of the cities from the point of view of conducting business activity and social capital development.</p>

Project name	Project description
	The objective will be achieved by supporting comprehensive investment in public space proposed by the cities and functional urban areas. Investment will be executed by self-governments on the grounds of identified needs, their own strategic documents and with reference to the commonly established operating rules of the instrument.
Knowledge platform for the cities	The internet platform, which is a national knowledge centre, gathers activities of various departments addressed at the cities and functional urban areas. Sectoral initiatives concerning the objectives of the NUP 2030, taken by relevant ministers will be presented on one platform with regard to e.g. activated projects or competitions for subsidies addressed at cities, planned or adopted legislative changes influencing urban development.

Appendix 2 – Summary of public consultations

The National Urban Policy 2030 is a document which will replace the National Urban Policy 2023, adopted on 20 October 2015. The necessity to conduct public consultations on this document results from the Act of 6 December 2006 on development policy rules. The consultation process can be divided into two stages – the first, informal stage covered a debate on the assumptions to the NUP 2030, the second, formalised one covered public consultations.

First stage of consultations – a debate on the assumptions to the National Urban Policy revision

In formal terms, the works on the revision of the National Urban Policy 2023 were intensively conducted from Autumn 2020, when Assumptions to the NUP's revision were presented during the 3rd National Urban Forum. They were subjected to a broad discussion, which initiated formulating postulates, recommendations and guidelines to the revised document.

A crucial element in the process of preparing the NUP's revision is the openness to the dialogue with various stakeholders of urban development. The Ministry of Development Funds and Regional Policy cooperated with the Association of Polish Cities, engaging and inviting cities to submit their postulates, propositions and recommendations for the new NUP 2030. The National Urban Policy 2030 was the topic of meetings within the Local Development Forum. Propositions and recommendations to the NUP 2030 were sent to the Ministry of Development Funds and Regional Policy in the form of surveys, also directly from the cities. An important partner in the in-depth analysis of needs, challenges and solutions was the Institute of Urban and Regional Development. For months, groups and teams associating the work of representatives of various environments, both practitioners and researchers of urban development, had been working under the auspices of the Institute.

Furthermore, in the course of works on the document, a wide dialogue with urban traffic environments, as well as social and economic organisation has been conducted. The debates and expert meetings devoted to the new NUP 2030 also constituted an important element of the preparations. Some of them concentrated on specific challenges and propositions as, e.g. workshops organised in cooperation with the UNEP/GRID-Warsaw Centre titled 'Environmental challenges of Polish cities – postulates to the National Urban Policy's revision'. The improvement of the dialogue and participation in measures related to the National Urban Policy 2030 is also strengthened by various cooperation projects implemented by the department also directly with the cities (e.g. in the scope of revitalisation, environment measures, urban mobility, etc.), or cooperation of self-governments regarding solving common problems and challenges.

Second stage of consultations – formal public consultations of the NUP 2030 project

The prepared project of the National Urban Policy 2030 was presented to a wide group of recipients at a special conference – the 4th National Urban Forum. This meeting was an official opening of public consultations which lasted from 21 December 2021 to 31 January 2022. Moreover, a presentation of particular challenges and solutions and a discussion between representatives of relevant departments, experts and representatives associating self-government were held at the meeting.

In total, 475 comments were received within public consultations. Comments could have been submitted via a specially created form on the website of the Ministry of Development Funds and Regional Policy. It was designed so as to allow the entity to accurately submit a comment marking a wider or narrower fragment, which the comment was referring to. Almost 80% of received comments were submitted via the form.

Submitted comments came from all Polish regions, from varied entities – cities, self-government associations, non-governmental organisations, Marshals' offices, experts, industrial institutes, entrepreneurs and urban traffic.

Propositions of changes concerned many aspects of the document and had a significant impact on its final shape. The number of submitted comments indicates a great interest in the prepared document of the National Urban Policy both among self-governments and non-governmental organisations.

Among entities participating in public consultations on the document, a substantial number were in favour of solutions proposed in the NUP 2030, however, issues raising doubts were also indicated, for example concerning the formulation of given solutions. Nonetheless, it should be underlined that proposed solutions will be the subject of discussion and further work within the Executive Board, which acts as the body monitoring the NUP 2030 implementation.

Solutions which have a broader social impact will also be the subject of further consultations with relevant entities. Public consultations indicated a great interest in issues such as housing accessibility, natural environment and climate change or urban mobility. Challenges in this area and solutions proposed in this scope seem to be the most urgent urban issues to the benefit of which measures should be undertaken in the upcoming years. Therefore, the solutions proposed in the National Urban Policy 2030 and manners of introduction thereof will be accompanied by the continuation of an extensive dialogue and information campaigns which will guarantee support and the highest possible approval of the proposed changes.

The report on the public consultations is available on the website of the Ministry of Development Funds and Regional Policy¹¹².

¹¹² <https://www.gov.pl/web/fundusze-regiony/poLityka-miejaska>.



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