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An Evaluation of the Urban Fringe Landscape Ring: The Case of Łódź, Poland

Abstract:

The article describes the spatial planning policy carried out in suburban areas that have not yet been subject to urbanisation within the administrative borders of the Polish city of Łódź and in zones located just beyond its administrative border. The aim of the study was to evaluate spatial decisions adopted in the planning documents of towns and municipalities. The evaluation included the peripheral areas around the city of Łódź called the urban fringe landscape ring. The area of the ring was divided into subzones where detailed research was conducted. The current forms of land use were compared with the planned development directions adopted in the planning documents. Breakdowns showing the percentage increase in areas designated to be developed now and in the future, as well as in areas intended for preservation in the form of open spaces, were made. The need to develop new areas was analysed in relation to demographic conditions and area development capacity. Conclusions from the study showed a significant excess of planned investment areas, the deliberate appropriation of open landscapes and a lack of local planning coherence.

Keywords:

open landscape, city of Łódź, suburbanisation, spatial planning, study of the conditions and directions of development

JEL:

O21, R14, R52

1. Introduction

We have witnessed the rapid urbanisation of suburban areas in Poland for several decades. It affects the contemporary landscapes of towns and villages and their social and economic condition. Developing agricultural and forest areas through the construction of buildings results in massive landscape changes. This is evident especially in the functional parts of large cities, where suburbanisation is a particularly intense process (Oswalt, 2016; Śleszyński et al., 2021). The phenomenon of suburbanisation has long been recognised, analysed and widely commented on in Western countries (Mumford, 1961; Harvey, Clark, 1965). Galster et al. (2001), Bhatta (2010), and Salvati and Morelli (2014) have all attempted to define this phenomenon. Various methods of studying suburbanisation are currently being developed in science (Angel, Parent, Civco, 2007; Bhatta, Saraswati, Bandyopadhyay, 2010). This phenomenon is, in general, considered the most important challenge of contemporary urban planning, sociology, urban economics, transport and environmental protection (Simon, 2008; Boone, Frangkais, 2013). Uncontrolled urban sprawl has many negative special aspects too, including low building density, a lack of spatial continuity, a lack of concentration of buildings, a lack of building clustering, spatial decentralisation, polynuclearity, a lack of land-use mix, and a lack of proximity (Galster et al., 2001; Arribas-Bel, Nijkamp, Scholten, 2011). The European Union reports regarding territorial cohesion indicate that “[...] the suburbanisation of population inevitably places greater strains on the urban transport system, while the suburbanisation of economic activity can lead to the economic decline of the traditional city centre” (Commission of the European Communities, 2007:7).

In Poland, the debate over the effects of suburbanisation has been actively ongoing for 20 years since it became clear that unrestricted spatial liberalism and an inefficient planning system were producing disastrous results (Solarek, 2013; Lityński, Hołuj, 2017; 2020; Kowalewski, Markowski Śleszyński, 2019b). The problem is even more complex when such a process is consciously designed and adopted in planning documents, such as spatial planning development studies, which is commonly called ‘conscious suburbanisation’ (Wiśniewska, 2002; Tomczak, 2018; Lityński, 2021). Scattered buildings, the deconcentration of the city structure and the launch of new developments in non-urbanised areas all negatively affect the process of optimal city development (Malisz, 1963) and directly increase its operating costs (Markowski, 2014; Chmielewski et al., 2018; Lorens, 2018; Kowalewski, Markowski Śleszyński, 2019a). The resulting problems are: unfinished urban structures, incorrect provision of technical and road infrastructure (Kaczmarek, 2020), social dysfunctions, environmental degradation, and poor quality of life (Lorens, 2005; Dmochowska-Dudek, 2010; Kajdanek, 2012). Development interference in peripheral areas also causes the need to exclude large areas from natural use and requires the consent to exclude significant suburban areas from agriculture (Śleszyński et al., 2021). This reduces the natural values of cities and their food potential (Tomczak, 2019) while also negatively affecting the open space around existing urbanised structures. The open landscape changes its shape, its morphology loses the continuous system of natural connections, and spatial cultural values are degraded (Böhm, 2008; Tomczak, 2011; 2018; Degórska, 2012).

Planning new housing in peripheral areas also results in the decentralised scattering of development and the de-urbanisation of the city centre. Undeveloped plots in city centres among compact building complexes compete with the construction offer in areas with high landscape values (Markowski, 2015). The oversupply of investment areas and new places to live in areas that are not socially and technically prepared for it is growing. This leads to spatial chaos and 'conscious suburbanisation' (Zuziak, 2005). The de-urbanisation of the city centre and the progressive suburbanisation of the suburbs has also taken place in Łódź. The city is experiencing the problem of depopulation from the metropolitan area and the scattering of development (Warsza, 2012). Since 2013, the city has been implementing a policy of 'development towards the centre' (Janiak, 2013). In 2018, that translated into development directions and spatial planning policy adopted by the City Council in the 'Study of conditions and directions of spatial development' (Study of the City of Łódź, 2018) document.

2. From the problem to the definition

2.1. Subject of the study

Łódź is located in Central Poland, in Central Europe (Figure 1A–B). It is currently the third city in Poland in terms of demographics and territorial size. Its spatial development is directed towards the renewal of the inner city, which has a large impact on the intensification of costs related to the revitalisation process in the city centre area. The city is currently experiencing significant problems with its de-urbanisation and the progressive suburbanisation of the outskirts, which motivates the search for solutions to build a compact city and for appropriate development planning. The research carried out provides an answer to the question of whether the planning of the city's peripheral areas located around the existing inner city is correct and consistent with the development directions of towns and municipalities located directly on Łódź's borders. Landscape elements were considered a priority while delimiting the borders of the area under study. For the first time, the study area was delimited by natural morphological spatial elements rather than administrative boundaries. Formal legal boundaries were of no importance in the analyses. For the purposes of the study, the concept of an urban landscape ring was defined in order to cover undeveloped areas located on the outskirts of the city and directly on the administrative borders of Łódź in the neighbouring municipalities. The characteristic feature of the area under study was an open landscape with high visual and natural values.

2.2. Purpose of the study

The main purpose of this study was to assess the spatial decisions adopted in the planning documents regarding cities and municipalities. The assessment focused on the Łódź landscape ring, namely the suburban areas surrounding the city (Figure 1C).

The hypothesis adopted was: **planning decisions contained in the documents defining the spatial planning policy in the studied area do not guarantee a mutually cohesive policy of spatial development and protection of open landscape.** The research also answered the following questions: 1) “Is the development of the area on the boundaries of Łódź and adjacent municipalities planned with respect to landscape values?”, 2) “Do spatial planning decisions adopted in planning documents contribute to the protection of open spaces and the preservation of their values?”, 3) “Are the activities carried out by neighbouring communities functionally and spatially coherent?”. Unfortunately, the study indicated an excess of building sites in the current planning documents and a lack of respect for landscape values in the city’s peripheral areas.



Figure 1. A – Poland’s location in Europe. B – Łódź’s location in Poland. C – Towns and municipalities with peripheral zones included in the urban landscape ring around Łódź

Source: own elaboration

2.3. Scope of the study

Three scopes of study were adopted: area, time and problem. The area scope covered non-urbanised areas within the city of Łódź, as well as areas located in the immediate vicinity, administratively located in the following towns and municipalities: the town of Pabianice, the town of Zgierz, the Aleksandrów Łódzki Municipality, the Andrespol Municipality, the Brójce Municipality, the Brzeziny Municipality, the Konstantynów Łódzki Municipality, the Ksawerów Municipality, the Nowosolna Municipality, the Pabianice Municipality, the Rzgów Municipality, the Stryków Municipality, and the Zgierz Municipality. In total, the area where the research was carried out covered 31,993.5 ha (Figure 2). The time scope covered the period of 2015–2018, in which the actual land use and spatial planning decisions adopted for individual administrative units were analysed in planning documents constituting local law or directions of spatial development. The documentation was

considered current as of March 2018. The scope of the problem covered two main issues: the first – the actual use of land in the study area used for the purpose of determining the urbanized zone; the second – the applicable planning documents determining the planned investment opportunities in the examined area (Study of the Rzgów Municipality 2007; Study of the City of Łódź 2010; Study of the Ksawerów Municipality 2010; Study of the Brójce Municipality 2011; Study of the Zgierz Municipality 2012; Study of the Nowosolna Municipality 2013; Study of the Stryków Municipality 2013; Study of the Aleksandrów Łódzki Municipality 2014; Study of the Brzeziny Municipality 2014; Study of the City of Konstantynów Łódzki 2014; Study of the Pabianice Municipality 2014; Study of the Andrespol Municipality 2015; Study of the City of Zgierz 2015).

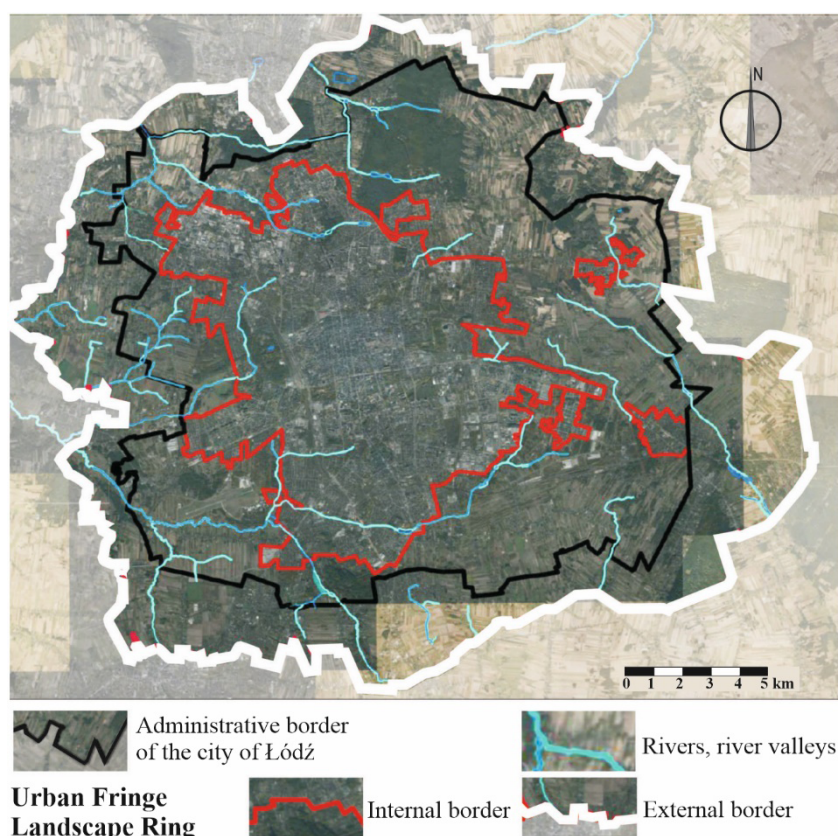


Figure 2. The area of the study carried out in the landscape ring, i.e. the non-urbanised zone in the city of Łódź and in the areas of municipalities directly adjacent to the administrative border of the city

Source: own elaboration

2.4. Defining the terms

The definition of the **landscape ring** was created for the purposes of the study and set out the area designated in the city of Łódź and in the immediate vicinity of the city border, yet already within the administrative borders of neighbouring municipalities. It covered open, non-urbanised areas, often of high landscape value. In many places, the area of the landscape ring was treated as equal to the non-urbanised zone, presented as a natural zone with

the advantage of an open landscape, mainly naturally active, extensively used, mostly undeveloped or sparsely developed, without planned spatial organisation or technical infrastructure (Wiśniewski, 1996). It should be noted that the landscape ring also included areas where highly dispersed urbanisation had already begun. The **concept of urbanity** was also important in the study. It was defined as the feeling of the maximum continuity of clearly defined physical boundaries (Wiśniewski, 2002). Based on this concept, the range of existing, physically compact structures of the city was identified and the border between what was urban and what was not urbanised was determined. Urbanity was often accompanied by the cited definition of the **urbanised zone**, understood as an area with urban features in the spatial structure and urban standard, as well as a compact look and various functions (Wiśniewski, 2004). The appropriate adoption of **the starting criteria**, which allowed clear borders to be defined in the examined units between the urban land development and the non-urbanised open area, was important in determining the area of the landscape ring. These criteria included mainly elements of the land use structure, including in particular: development density, development intensity, land functionality and the type of land use, the borders of wasteland, including land valuable in terms of nature, the course of the main baulks in actual agricultural use, as well as determinants of historical development and cultural stratification (e.g. the borders of old rural systems visible in the space). After analysing the above-presented criteria, it can be seen that the landscape ring included areas with no urban features. The urbanisation process of these areas has not yet begun, or is only in its initial phase. A considerable area of 31,993.5 ha was covered by the ring zone, of which 17,355.5 ha or around 54% was land within the administrative borders of the city of Łódź and 14,638 ha or around 45% was land located in the neighbouring municipalities. The size of the area intended for research on both sides of the administrative border of the city of Łódź was similar.

3. Study method and data used

The study was carried out in areas located on both sides of the administrative border of the city of Łódź, including the border ring of areas in the city of Łódź and fragments of 14 municipalities directly adjacent to Łódź. The landscape ring covered a significant area and had a diverse spatial arrangement. Its individual components differed from one another, with some individual elements of the spatial structure having to be considered separately. Since there were a dozen or so administrative units in the study zone, a decision was made to divide the peripheral zone into smaller study fragments, thereby making the implementation of detailed spatial analyses and more detailed tabular summaries easier. The division of the area outside the administrative border of the city of Łódź was carried out in accordance with the existing borders between city units and municipal units, while taking into account deviations resulting from real landscape conditions. Spatial barriers (e.g. a section of a large forested area) as well as the area of fields and the course of the main baulks made it necessary to join small areas with the same structure located in various administrative units. Further research was carried out jointly on the areas

of: the Brzeziny and Nowosolna Municipalities (subzone no. 4), the Brójce and Rzgów Municipalities (subzone no. 6), and the city and Municipality of Pabianice (subzone no. 8). The peripheral area of the city of Łódź was divided adopting the starting criteria originally used to separate the landscape ring zone. In total, ten subzones were determined (Figure 3). A detailed inventory and subsequent assessment of the indicated resources were carried out in each area. It was performed by the empirical observational method. The areas with natural land cover were investigated, distinguishing between different forms of natural use and the percentage of developed areas. This allowed for a comparison of areas located on both sides of the administrative border of the city of Łódź, differently managed, but with similar, sometimes identical, landscape features. This allowed us to determine differences and common elements of spatial management in each of the designated subzones, showing the proportions between different forms of use in the landscape ring of the city of Łódź (Tables 1–2).

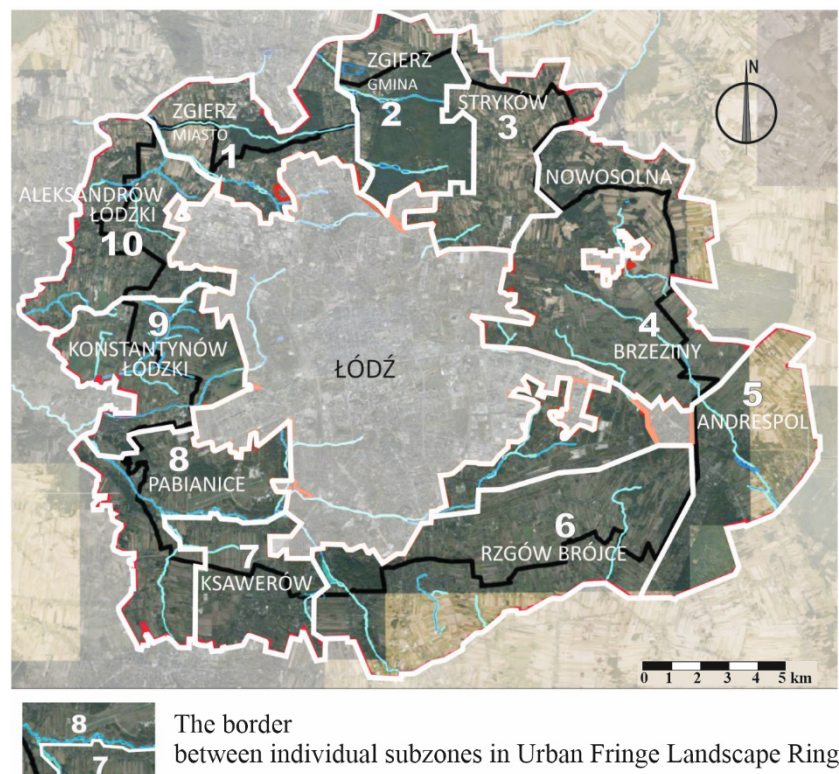


Figure 3. Breakdown of the landscape ring into subzones with marked administrative borders of the city of Łódź

Source: own elaboration.

Table 1. Quantitative breakdown of existing natural uses by subzones

Subzone	Subzone area	Natural forms of land use			Area of the land with natural forms of use	Share in the subzone area
		Forest area	Rivers, water courses	Agricultural areas, wastelands		
No.	[ha]	[ha]	[ha]	[ha]	[ha]	[%]
1	2,246.8	562.1	53.2	1,085.8	1,195.1	74
2	2,318.3	1,415.5	63.1	640.9	2,119.4	91
3	2,329.4	44.6	5.6	1,974.5	2,024.7	87
4	5,913.3	648.3	50.5	4,395.9	5,094.6	86
5	3,753.8	788.8	66.2	1,780.5	2,635.6	70
6	5,625.7	434.5	66.3	4,159.3	4,660.1	83
7	1,799.8	83.9	29.0	1,102.5	1,215.5	68
8	2,947.4	303.9	63.3	2,002.9	2,370.1	80
9	2,429.6	224.5	99.7	1,637.6	1,961.8	81
10	2,629.4	298.6	59.1	1,486.7	1,844.4	70
Σ	31,993.5	4,804.7	556.0	20,266.6	25,121.3	–

Source: own elaboration

Table 2. Quantitative breakdown of existing construction uses by subzones

Sub-zone	Subzone area	Development use				Area of the developed land	Share in the sub-zone area
		Residential development	Residential development	Industrial development	Service development		
No.	[ha]	[ha]	[ha]	[ha]	[ha]	[ha]	[%]
1	2,246.8	357.2	0.0	185.3	3.1	545.7	26
2	2,318.3	180.6	0.0	6.2	12.2	198.9	9
3	2,329.3	257.5	0.0	7.8	39.3	304.6	13
4	5,913.4	665.8	0.0	152.9	0.0	818.7	14
5	3,753.8	834.5	0.0	66.3	217.4	1,118.3	30
6	5,625.7	877.3	0.0	88.4	0.0	965.7	17
7	1,799.8	486.5	14.2	78.3	5.6	584.4	32
8	2,947.4	187.4	0.0	171.3	218.5	577.3	20
9	2,429.6	364.3	7.9	95.6	0.0	467.7	19
10	2,629.4	702.5	37.2	45.2	0.0	785.0	30
Σ	31,993.5	4,913.6	59.3	897.3	496.1	6,366.3	–

Source: own elaboration

Further research covered the planning and demographic aspects. The need to open new areas for development was analysed in relation to the demographic conditions of individual town units or municipal units, as well as the area development capacity of the subzones. Demographic surveys were performed using data from Statistics Poland, current as of the date of the survey for a particular subzone, indicating its population potential. The average household size ratio in 2016 was used for the Łódzkie Voivodeship (Główny Urząd Statystyczny, 2017) and the average number of people living within the area of 1 ha in the existing structure of dispersed development. This enabled the area development capacity to be determined and gave an indication of the number of people living in individual subzones. Then, as part of a detailed comparative analysis, the data on the development capacity of areas in the field were compared with the data determining the development capacity of the areas in the subzones adopted in strategic planning documents, i.e. studies of the examined town units and municipal units. The number of potential residents who could ultimately live in the suburbs of the city of Łódź and neighbouring municipalities was indicated. Development capacity was calculated with an analytical method utilising statistical data previously used to determine existing population data. This made it possible to compare actual territory reserves currently available in the development area with the potential capabilities resulting from urbanisation adopted in the planning decisions. Studying the guidance documents for the city of Łódź and individual municipalities also allowed a look at the subject from a landscape perspective. A number of issues were identified related to the reduction of landscape values due to inadequate spatial planning. The answer to the question was sought: is the space within the 'urban contact point' of various administrative units consciously designed in terms of development needs and landscape conditions?

4. Findings

4.1. Existing forms of land use

The result of the first part of the study was the examination and comparison of data on forms of land use in the investigated landscape ring. The percentages of land cover in the form of natural use and urbanised areas were compared with the breakdown into functions. Within the development use forms, the analysis showed that scattered residential housing should be considered the leading function – single-family and settlement development was identified in the area of 15.6% of the entire ring. The percentage of multi-family housing (0.2%) and service development (1.5%) was low. However, more areas were used for development with industrial functions. Buildings intended for this function, most often with large spatial volumes, covered 2.8% of the area among all the areas under construction pressure. Studies showed that **20%** of the area of the zone in the entire ring around Łódź was developed. In individual subzones, the rate of areas designed for housing or investment functions ranged from 9% to 32%. The largest investment was demonstrated in subzone no. 7, in an area near the border between the city of Łódź and the Ksawerów Municipality. The least developed area, only 9%, turned out to be the subzone covering the contact point between

Łódź and the Zgierz Municipality. The main conclusion from this part of the study was satisfactory because the vast majority of the analysed area had ground cover with features of open, natural landscape without elements of development transformation of the area. The share of these areas in the total area of individual subzones ranged from 68% to 91%. The total share of non-urbanised areas in the ring around the city of Łódź amounted to **80%**. This means that the peripheral areas in the entire ring were predominantly open and had the features of an extensive landscape. The largest areas with natural cover were agricultural areas or wasteland (63.3% of the entire ring area), with the smallest being valleys (only 1.7%). The table presenting the summary of proportions in the functional and spatial structure of the terrain in the studied subzones broken down into different forms of use (Table 2) also indicates the balance between the forest areas (15%) and loosely scattered residential areas (15.5%). It should be noted that the largest green complex – Łagiewnicki Forest – occupies nearly a third of all forested areas in the entire peripheral zone, and some of the areas considered as urbanised are to a large extent on the outside of the designated border of the ring and have centripetal tendencies directed towards the existing settlement units.

Individual comparisons allowed two groups of subzones to be distinguished: one with a higher percentage of preserved areas with a natural surface, unpaved and not subject to urban transformation; and the other in which development encroached on a more open landscape. More developed land plots were found in the areas in the zone near the border with the town of Zgierz (26%), the Aleksandrów Łódzki Municipality (30%), the Andrespol Municipality (30%), and the Ksawerów Municipality (32%). The conclusions of the field study showed greater development pressure from the north-west of the city of Łódź. The eastern section, bordering mainly municipal areas, showed less development pressure. All the subzones, however, had a common denominator: a large number of undeveloped land plots, open, not transformed for investment, most often with a natural form of use. In addition, the entire peripheral zone of the city had a lot of valuable open spaces in terms of nature and landscape. Dispersed forms of buildings with extensive development were found there. The common zone showed many positive values, such as: in terms of landscape and nature, river valleys constituting a common spatial element regardless of administrative borders (1.7%), forests functionally connecting different areas of municipalities (15%), and arable lands (63.3%), which, despite the administrative borders in the space, constituted the largest area of the ring and formed a legible system of land use characterised by a high viewing value. In addition, it was noted that the greatest development pressure was exerted on the areas located in the immediate vicinity of city entrances, i.e. places that have easy access and generate mostly service-oriented development.

4.2. Investment opportunities resulting from planning guidance documents

The second part of the study was an analysis of the planning documents in force at the time made for individual cities and municipalities covered by the study. Fourteen documents entitled ‘The study of conditions and directions of spatial development [...]’ were analysed, i.e. spatial decisions adopted in the Łódź landscape ring. The aim was a surface survey

of the quantity of areas that were allocated into the peripheral area of the city for investment functions, with the main indication of residential areas (Figures 4–5). The results of the research showed an increase in the areas designated for housing construction in the planning documents by as much as **127%** in relation to what was actually invested in the ring area. The built-up area in the city of Łódź increased by 37%, while the neighbouring municipalities increased their residential investment opportunities by more than half – as much as 63% of the currently existing construction. The areas with other functions increased in size by 17% in the entire ring. This demonstrates the huge pressure of individual municipalities to develop new housing estates and forms of residence outside the already existing, often peripheral, urban structures in their border areas. The city of Łódź has foreseen most of the new investment areas for its inhabitants in the zone near the border with the Aleksandrów Municipality (46% more than in the current state), with the city of Zgierz Municipality (39%), with the Stryków Municipality (33%) and the Ksawerów Municipality (32%). Among the neighbouring municipalities, the municipality of Aleksandrów turned out to be the leader in increasing new areas (74% of additional residential areas). The following municipalities intended to increase their resources by more than half: Zgierz (64%), Ksawerów (61%), Andrespol (52%), Nowosolna (51%), and Brzeziny (51%). The most conservative in the Study document is the Pabianice Municipality, increasing the reserve of residential areas on the border strip with Łódź by just 24%. It is worth emphasising that the area of land in the ring that was allocated for residential functions amounted to 11,310 ha (Table 3), which is the same as the current size of the area coverage of cities such as: Kielce (current area 10,965 ha), Białystok (10,213 ha), or double that of Kalisz (current area: 6,942 ha).

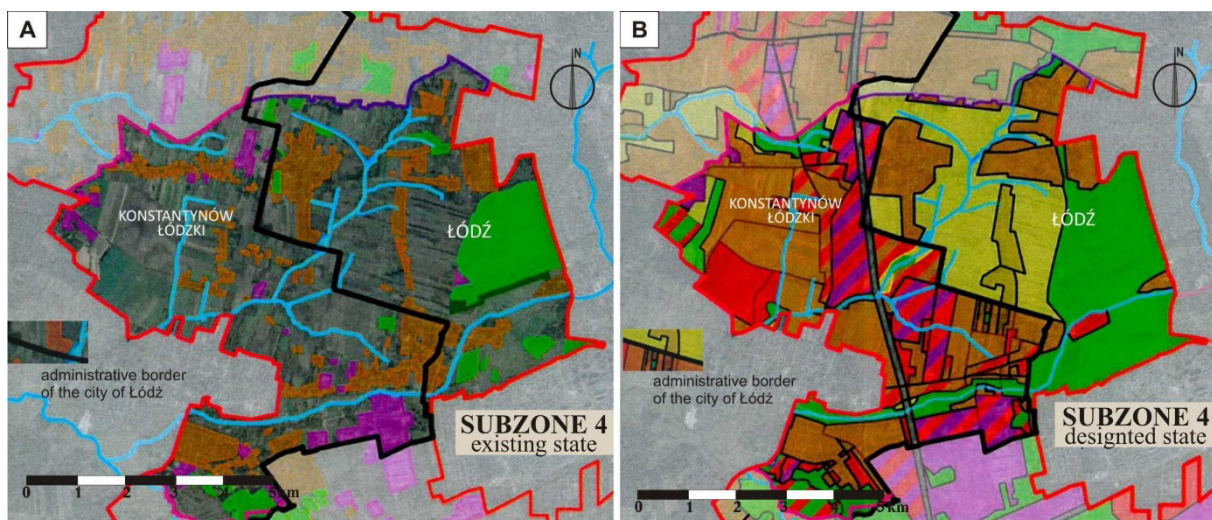


Figure 4. Subzone no. 4 – a graphic comparison of existing land use (A) and functional assumptions made in the study of the city of Łódź and in the study of the municipalities of Konstantynów Łódzki (B)

Source: own elaboration

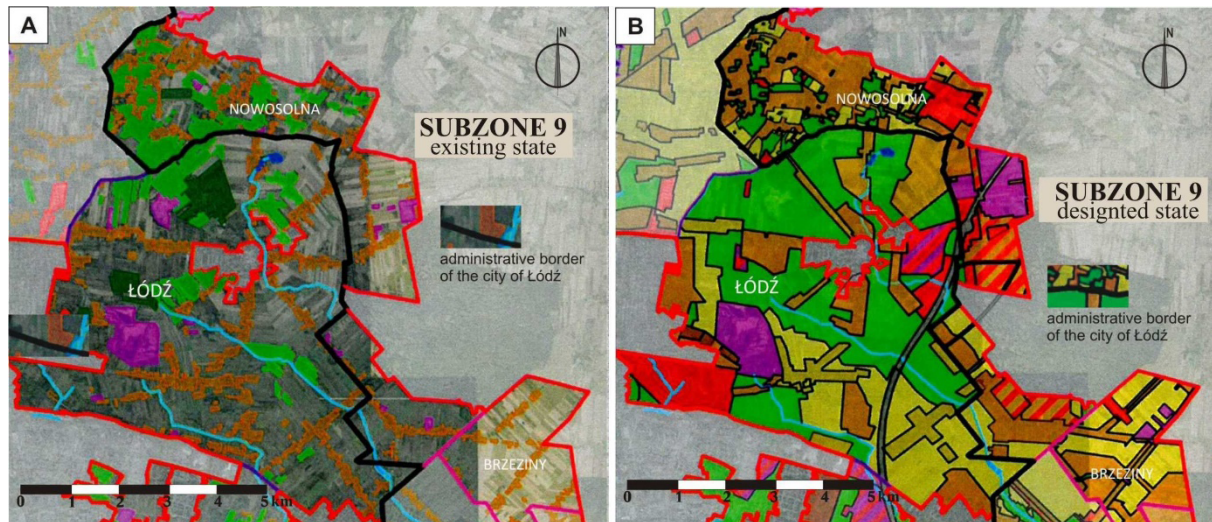


Figure 5. Subzone no. 9 – a graphic comparison of existing land use (A) and functional assumptions made in the study of the city of Łódź and the study of the municipalities of Nowosolna and Brzeziny (B)

Source: own elaboration

4.3. Development area capacity

The comparison of territorial area capabilities for housing development in the Łódź ring with the demographic capabilities of the city of Łódź and individual municipalities helped answer the question asked at the beginning regarding the correctness of conducting spatial policy taking into account development needs. It helped establish how many new residents will be able to settle in the future areas intended for housing development. The scope of new areas with a residential function was adopted for the study as follows: the current average household size ratio for the Łódzkie Voivodship amounts to 2.61 (Główny Urząd Statystyczny, 2017) and the average number of people living in an area of 1 ha in the existing structure of dispersed buildings is in this case 18 people. Indicators of the minimum value were adopted assuming the extensive development of open areas. The research results were compared with the demographic capabilities of the city of Łódź and poviats in the Łódź agglomeration, which allowed an analysis of the relevance of the adopted planning assumptions. The studies have provided alarming quantitative results (Table 4). Demographic reserves that have been introduced in planning documents have repeatedly exceeded the capabilities of actually filling potential areas with future residents. In the peripheral area, in the studied landscape ring, 181,193 inhabitants could live in the city of Łódź (currently 41,474 inhabitants in Łódź), which means that Łódź has increased its planning housing potential by **229%** compared to the current state. On the other side of the administrative border of Łódź, in the neighbouring municipalities in the ring in question, another 126,576 more people could live, which increases investment opportunities in these municipalities by **232%**. The municipality of Zgierz turned out to be the leader in ‘inviting’ new residents to its area, increasing the possible population of its own peripheral zone by 594% in relation

to the potential of people currently living in this area. An equally large increase in target capacity assumed in planning was recorded in: the city and municipality of Pabianice (502%), as well as in the Brzeziny Municipality (465%), and the Nowosolna Municipality (465%). Almost the same relative rise in new residents was found in the city of Konstantynów Łódzki (increase of 383%) as well as in the Brójce Municipality and the Rzgów Municipality (increase of 374%). The smallest number of new people able to settle in the ring zone was in the Ksawerów Municipality – only 114% more in relation to the current population. When translating these numbers into the location of individual administrative units, no explicit rule of distribution of these capacity values in the studied area was observed. The conclusion may therefore indicate that, both in the city of Łódź and on the other side of the border, the desire to repeatedly increase the number of target inhabitants is noticeable throughout the entire landscape ring, although with a different scale of multiplying terrain capacity.

As part of subsequent research activities, the capacity results obtained from the discussed area were compared with the demographic capabilities of the development of the Łódzkie Voivodeship and individual poviats, cities and municipalities, parts of which were included in the analysed area. Data were obtained confirming the thesis that the introduction of new housing areas without covering demographic needs is unjustified. The Łódzkie Voivodeship is one of the areas where the number of inhabitants has been steadily falling for many years. The decrease in value showing the population loss over the last 20 years (between 1995 and 2015) is on average 7.2% (Śleszyński, 2014; Janiszewska, 2015).

Table 3. Planned increase in the number of areas with housing functions divided into subzones

Sub-zone	Subzone area	Urbanised residential areas – existing state	Areas with a residential function planned state in city and municipality studies				
			Jointly in the sub-zone	In the city of Łódź	In neighbouring cities/municipalities	Share in the sub-zone – cities of Łódź	Share in the sub-zone of neighbouring municipalities
No.	[ha]	[ha]	[ha]	[ha]	[ha]	[%]	[%]
1	2,246.8	357.2	715.0	377.2	337.8	39	27
2	2,318.3	180.6	534.2	155.6	378.6	9	64
3	2,329.3	257.5	747.1	611.9	135.5	33	28
4	5,913.4	665.8	2,040.1	845.9	1 194.3	24	51
5	3,753.8	834.5	1,497.5	280.6	1 217.1	20	52
6	5,625.7	877.3	2,037.5	846.9	1 190.6	27	47
7	1,799.8	500.9	845.6	271.9	573.7	32	61
8	2,947.4	187.3	394.5	57.2	337.2	4	26
9	2,429.6	372.1	884.9	239.9	645.5	21	44
10	2,629.4	739.7	1,613.7	529.5	1,084.2	46	74

Sub-zone	Subzone area	Urbanised residential areas – existing state	Areas with a residential function planned state in city and municipality studies				
			Jointly in the sub-zone	In the city of Łódź	In neighbouring cities/municipalities	Share in the sub-zone – cities of Łódź	Share in the sub-zone of neighbouring municipalities
No.	[ha]	[ha]	[ha]	[ha]	[ha]	[%]	[%]
Σ	31,993.5	4,972.9	11,310.1	4,215.6	7,094.5	–	–

Source: own elaboration

Table 4. Planned increase in housing capacity by subzones

Sub-zone	Subzone area	Urbanised residential areas – current state	Planned state of housing capacity			
			Total in the landscape ring	In the city of Łódź	In neighbouring cities/municipalities	Increase in the subzone
No.	[ha]	[ha]	[ppl]	[ppl]	[ppl]	[%]
1	2,246.8	357.3	18,851	8,801	10,051	158
2	2,318.3	180.6	15,082	4,320	10,762	594
3	2,329.3	257.5	14,907	11,802	3,106	292
4	5,913.4	665.8	58,755	29,939	28,816	465
5	3,753.8	834.5	51,326	20,208	31,118	148
6	5,625.7	877.3	56,604	27,060	29,544	374
7	1,799.8	500.6	24,215	8,989	15,226	114
8	2,947.4	187.4	12,229	3,120	9,110	502
9	2,429.6	372.2	25,779	8,441	17,338	383
10	2,629.4	739.7	39,783	13,658	26,122	131
Σ	31,993.5	49,72.9	317,531	136,338	181,193	–

Source: own elaboration

This results in depopulation, a negative birth rate and negative migrations. Each of the poviats, with one exception, will also undergo further depopulation, according to the Statistics Poland data, although it does not occur and will not be occurring evenly across territories. In the area of the examined ring around Łódź, the only powiat where population growth is recorded and assumed until 2035 is the Łódź-Eastern powiat, i.e. the areas of the Andrespol Municipality, the Brójce Municipality and the Rzgów Municipality (Główny Urząd Statystyczny, 2018). Only in these areas can increasing the housing capacity be justified, although detailed research would require an indication of exact numbers of additional inhabitants and the identification of development areas in these municipalities. However, the areas designated for development do not have to encroach on peripheral areas, most often open ones with significant landscape

values. According to Statistics Poland data, depopulation will also take place in the leading city, i.e. in Łódź. In addition, the norm is the suburbanisation process, noticeable around the compact urban zone and spreading further from downtown to non-urbanised areas. With negative demographics, including negative migrations, the consent to the development of peripheral urban zones is completely unjustified.

Table 5. Change in the size of various forms of land use divided into subzones

Landscape ring	Existing land use				
	Area of the whole landscape ring	Total urbanised areas	Urbanised residential areas	Urbanised areas with other functions	Open areas
Existing state [ha]	31,993	6,366	4,973	1,393	25,627
Proportional share [%]	100	20	16	4	80
Planned form of land use					
Planned state [ha]	31,993	16,351	11,310	5,041	15,642
Proportional share [%]	100	51	35	16	49

Source: own elaboration

4.4. Landscape values

By granting consent to create new housing enclaves in the Łódź landscape ring, the documents also have a negative impact on the suburban landscape. This is particularly noticeable when completely different functions and forms of land development and use are designed on two sides of the common administrative border. This is spatially harmful, especially in situations where agricultural land, valley areas or open areas are preserved on one side of the border (Figure 6), and while new investment areas with industrial and logistic functions are created on the other. This generates a significant landscape conflict because the new development forms ultimately located there, such as large handling warehouses, the cubature of industrial facilities or extensive surfaces of paved parking spaces, are a significant interference in the open landscape both in terms of nature and space. During the study, locations of adverse planning ‘contact points’ were diagnosed on both sides of the administrative border of Łódź, in areas where the adopted directions of functional development differed significantly (Figure 7). For example, in the area of the city of Zgierz, an industrial area of several hundred hectares was designed along the existing Wrząca River, whose extensive valley landscape, along with the inflow to the Bzura River, was protected in the city of Łódź (subzone no. 1). A similar situation was also planned in the Nowosolna Municipality (subzone no. 4) and the Pabianice Municipality (subzone no. 8). Similar contradictions, although of a smaller cubature, exist near the borders of the Andrespol Municipality, the Konstantynów Łódzki Municipality, the Nowosolna Municipality, and the Zgierz Municipality. Extremely different ways of land development were noted there – most often

a function of agricultural use and landscape open area on the city side of Łódź with a construction and service function on the side of neighbouring municipalities. The border, which appears only 'on paper' as a line of units managed by various local governments, has been treated as a future boundary for spatial development, despite the fact that it has never been legible in the field, and the two areas of the city of Łódź and individual municipalities opposite it are still uniformly homogeneous in space. Unfortunately, only until the implementation of the directional 'ideas' for new use.

An overwhelming 80% of the area in the existing ring has natural land cover, and although the process of suburbanisation has been progressing around the city of Łódź continuously for many years, it is still a considerable area with a range guaranteeing free space around the city. In the documents, this area was intended to a large extent for development. The assumed range of urbanisation areas is as much as **51%** of the entire analysed ring, of which 35% of the entire peripheral zone is designated for the location of housing functions with various forms of development (Table 5). This means that open landscape areas are being reduced by 39% compared to existing ones. This is an astonishing amount, especially in light of the negative demographics and development needs of Łódź and the neighbouring municipalities. The planning decisions adopted in this way may, in the future, significantly reduce the natural values of open landscape and degrade its spatial values.



Figure 6. Existing spatial boundaries between the city of Łódź and the neighbouring municipalities: A – subzone 1, B – subzone 3, C – subzone 6, D – subzone 9

Source: Badełek, 2016:96–98



Figure 7. Existing land use and planned forms of land use in the open landscape resulting from applicable development studies (collage): A, B – subzone 8, C, D – subzone 9

Source: Badełek, 2016:107–108

5. Discussion – conducted research and the results of other studies and analyses

Research on the landscape ring around the city of Łódź is part of a number of analyses that have been conducted over several years at the Institute of Geography and Spatial Organisation State Academy of Sciences (PAS). Since 2004, data have been available for the entire country regarding the use of land for residential functions in both the studies of conditions and directions of spatial development and the local zoning plans, along with statistics on land use in planning documents since 2009. This provides the basis for calculating the potential demographic capacity in individual units of cities and municipalities. The exact structure on a national scale is illustrated by an examination of studies concerning the structure of land use (Śleszyński et al., 2021), carried out on the basis of data from the MliB/Statistics Poland. It is often the case that the size of the planned population exceeds the current number of inhabitants many times over, and the size of the areas shows a significant oversupply in the peripheral zones of cities and municipalities. This problem has been noticed at the statutory level. In 2015, the national law was amended by the government. Since the 2015 amendment to the law on spatial planning and development, there has been an obligation to examine the needs and development opportunities of the municipality, especially in terms of economic, environmental and social analyses. Currently, there is a so-called balance of areas, i.e. the capacity of areas located

in the municipality that have a fully developed compact functional and spatial structure has to be estimated and the capacity of areas designated in the local plans for buildings, broken down by function, is measured. Then the sum of the usable space of the buildings is compared against the maximum demand for it resulting from demographic conditions. The results obtained determine the possibility of allowing new buildings. For many cities and municipalities, at the stage of changing the study, this results in the need to adopt a completely different direction of spatial development and to limit the earlier borders of urbanisation.

After 2015, Łódź verified its own spatial policy. The implementation of the slogan 'Inward development' resulted in adopting another direction of spatial development. In 2015, a city inventory was carried out, revealing the need to significantly minimise new areas of investment, in particular to reduce the range of new residential areas. Various city development models were created, including one that prioritised maximising housing and service investments in the city centre. In 2016, the city carried out a land balance that showed similar results as the study cited above. The new Study of the city of Łódź was adopted in March in 2018. This document clearly limited construction areas, in particular prohibiting new developments on the city outskirts. Construction was focused mainly in the inner city. The new spatial policy, defined by the slogan 'Return to the Inner City,' started to be consciously implemented.

The research carried out within the Łódź landscape ring had a significant positive value – it was not limited, like most planning studies, only to the administrative boundaries of individual cities and municipalities, but covered the entire area of the landscape ring around the city, basing the study boundaries on the physical elements of its morphology. The existing border separating Łódź administratively was only a reference point for spatial analyses of the entire area surrounding the city. The landscape was the most important.

6. Conclusions

The results of the research carried out in the area of the landscape ring proved a significant oversupply of residential areas adopted in the spatial policy of the city of Łódź and the neighbouring municipalities around the city (Table 5). In the analysed planning documents determining the directions of spatial development developed until 2018, the share of residential development areas increased many times in relation to existing demographic needs. The proportions of construction areas relative to areas with natural coverage have been completely changed. Forests, agricultural land, valleys and other areas of natural use currently occupy 80% of the ring area, and in planning documents only 49%. The adjective 'landscape' is appropriate for the current form of ring development, though it ceases to fit into the planned spatial decisions. The proportions of construction areas are completely different, with the current 20% share in land being increased to 51% of the area coverage of the entire ring. Of this, 35% are areas with a leading residential function in the form of dispersed development, which translates into a potential of over 317 thousand inhabitants living in the ring. It should be noted that these are open areas with landscape values that should be largely protected in terms of nature and views. Such high values of planned

housing capacity are also not justified by demographic indicators which assume a decrease in population in Łódź and the surrounding poviats in the future. The reason for the incorrect planning decisions may be the law, binding until 2015, which did not require that the planning process should include any real demographic processes and economic indicators in urban development. The effect of a deliberate spillover is visible in the space: dispersed, infinite settlement structures, morphological and functional chaos, economically unprepared construction areas without technical infrastructure and with poor road service, smaller agricultural land resources, an oversupply of construction land with low location potential, and as a result low settlement efficiency. Spatial degradation and the blurring of readability of morphological landscape forms are also visible.

The research presented proved a need for a direct link between the three issues of demographics, landscape and development in urban planning. The conclusions indicated a need for a proper balance between non-building and building areas in the peripheries, as well as the protection of open spaces. It was also considered important to adopt consistent planning decisions in the peripheral areas of neighbouring towns and municipalities, and to take into account landscape priorities in the design process. Spatial planning should also consider the social factor, namely the target number of inhabitants and the quality of space ensuring an appropriate standard of living.

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References

- Angel S., Parent J., Civco D. (2007), *Urban sprawl metrics: An analysis of global urban expansion using GIS*, [in:] *Identifying Geospatial Solutions. Proceedings of the ASPRS 2007 Annual Conference*, American Society for Photogrammetry and Remote Sensing, Tampa, pp. 7–11.
- Arribas-Bel D., Nijkamp P., Scholten H. (2011), *Multidimensional urban sprawl in Europe: A self-organizing map approach*, "Computers, Environment and Urban Systems", vol. 35(4), pp. 263–275, <https://doi.org/10.1016/j.compenvurbsys.2010.10.002>
- Badełek D. (2016), *Common zone of the city of Łódź and neighboring communes – protection and spatial creation*, typescript, Łódź University of Technology, Faculty of Civil and Environmental Engineering and Architecture, Łódź.
- Bhatta B. (2010), *Analysis of Urban Growth and Sprawl from Remote Sensing Data*, Springer-Verlag, Berlin–Heidelberg 2010.
- Bhatta B., Saraswati S., Bandyopadhyay D. (2010), *Urban sprawl measurement from remote sensing data*, "Applied Geography", vol. 30(4), pp. 731–740, <https://doi.org/10.1016/j.apgeog.2010.02.002>
- Boone C.G., Fragkakis M. (2013), *Urbanization and Sustainability, Linking Urban Ecology, Environmental Justice and Global Environmental Change*, Springer, New York.
- Böhm A. (2008), *Skuteczność istniejących w Polsce instrumentów prawnych*, "Czasopismo Techniczne", nr 1–A, pp. 137–146.
- Chmielewski T., Śleszyński P., Chmielewski Sz., Kułak A. (2018), *Ekologiczne i fizjonomiczne koszty bezładu przestrzennego*, Instytut Geografii i Przestrzennego Zagospodarowania PAN, Warszawa.

- Commission of the European Communities (2007), *Fourth Report on Economic and Social Cohesion*, COM (2007) 273 final, Brussels.
- Degórska B. (2012), *Problemy planowania struktur przyrodniczych Obszaru Metropolitalnego Warszawy związane z żywiołową urbanizacją przestrzeni*, "Mazowsze Studia Regionalne", vol. 10, pp. 89–106.
- Dmochowska-Dudek K. (2010), *Konflikty społeczne wokół inwestycji w Łódzkim Obszarze Metropolitalnym*, [in:] Z. Suliborski, Z. Przygodzki (eds.), *Problemy integracji społecznej i przestrzennej*, "Space – Society – Economy", vol. 10, pp. 29–56.
- Galster G., Hanson R., Ratcliffe M.R., Wolman H., Coleman S., Freihage J. (2001), *Wrestling Sprawl to the Ground: Defining and measuring an elusive concept*, "Housing Policy Debate", vol. 12(4), pp. 681–717, <https://doi.org/10.1080/10511482.2001.9521426>
- Główny Urząd Statystyczny (2017), *Gospodarka mieszkaniowa w Polsce w 2016*, https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5492/13/12/1/gospodarka_mieszkaniowa_w_2016.pdf [dostęp: 30.06.2018].
- Główny Urząd Statystyczny (2018), *Rocznik Demograficzny 2018*, <https://stat.gov.pl/obszary-tematyczne/roczniki-statystyczne/roczniki-statystyczne/rocznik-demograficzny-2018,3,12.html> [dostęp: 27.10.2022].
- Harvey R.O., Clark W. (1965), *The nature and economics of urban sprawl*, "Land Economics", vol. 41(1), pp. 1–9.
- Janiak M. (2013), *Strategia przestrzennego rozwoju Łodzi*, Uchwała Rady Miejskiej w Łodzi Nr LV/1146/13 z dnia 16 stycznia 2013 roku, Urząd Miasta Łodzi, Łódź.
- Janiszewska A. (2015), *Depopulacja ludności w województwie łódzkim*, [in:] P. Szukalski (ed.), *Procesy demograficzne w województwie łódzkim w XXI wieku*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź, pp. 11–32.
- Kaczmarek T. (2020), *Różne oblicza suburbanizacji. Od przedmieść w cieniu miasta do post-suburbiiów*, "Prace i Studia Geograficzne", vol. 65, no. 3, pp. 103–113.
- Kajdanek K. (2012), *Suburbanizacja po polsku*, Zakład Wydawniczy Nomos. Kraków.
- Kowalewski A., Markowski T., Śleszyński P. (2019a), *Studia nad chaosem przestrzennym. Koszty chaosu przestrzennego*, "Studia KPZK PAN", vol. 183(2).
- Kowalewski A., Markowski T., Śleszyński P. (2019b), *Studia nad chaosem przestrzennym. Synteza, uwarunkowania, skutki i propozycje naprawy chaosu przestrzennego*, "Studia KPZK PAN", vol. 183(3).
- Lityński P. (2021), *The Intensity of Urban Sprawl in Poland*, "International Journal of Geo-Information", vol. 10(2), 95, <https://doi.org/10.3390/ijgi10020095>
- Lityński P., Hołuj A. (2017), *Urban Sprawl Costs: The Valuation of Households' Losses in Poland*, "Journal of Settlements and Spatial Planning", vol. 8(1), pp. 11–35, <https://doi.org/10.24193/JSSP.2017.1.02>
- Lityński P., Hołuj A. (2020), *Urban Sprawl Risk Delimitation: The Concept for Spatial Planning Policy in Poland*, "Sustainability", vol. 12(7), 2637, <https://doi.org/10.3390/su12072637>
- Lorens P. (ed.) (2005), *Problemy suburbanizacji*, "Biblioteka Urbanisty", vol. 7, Urbanista, Warszawa.
- Lorens P. (ed.) (2018), *Urbanistyczne aspekty transformacji miast*, "Studia KPZK PAN", vol. 192.
- Malisz B. (1963), *Ekonomika kształtowania miast*, "Studia KPZK PAN", vol. 4.
- Markowski T. (2014), *Ekonomiczny wymiar procesów urbanizacji*, [in:] J. Sepioł (ed.), *Przestrzeń życia Polaków*, SARP, Warszawa, pp. 122–145.
- Markowski T. (ed.) (2015), *Powrót do centrum miasta – wyzwanie dla krajowej polityki podmiejskiej*, "Studia KPZK PAN", vol. 168.
- Mumford L. (1961), *The City in History*, Penguin Book Group, London.
- Oswalt P. (2016), *Shrinking Cities*, vol. 2, Interventions, Hatje Cantz, Berlin.

- Salvati L., Morelli V.G. (2014), *Unveiling Urban Sprawl in the Mediterranean Region: Towards a Latent Urban Transformation?*, "International Journal of Urban and Regional Research", vol. 38(6), pp. 1935–1953, <https://doi.org/10.1111/1468-2427.12135>
- Simon D. (2008), *Urban environments: Issues on the peri-urban fringe*, "Annual Review of Environment and Resources", vol. 33, pp. 167–185.
- Solarek K. (2013), *Struktura przestrzenna strefy podmiejskiej Warszawy. Determinanty współczesnych przekształceń*, "Prace Naukowe Politechniki Warszawskiej. Seria Architektura", no. 13, pp. 7–283.
- Study of the Aleksandrów Łódzki Municipality (2014), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Aleksandrów Łódzki*, https://mapa.inspire-hub.pl/#/gmina_aleksandrow_lodzki [dostęp: 27.10.2022].
- Study of the Andrespol Municipality (2015), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Andrespol*, <https://www.bip.andrespol.pl/87,plany-i-programy-lokalne> [dostęp: 15.10.2022].
- Study of the Brójce Municipality (2011), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Brójce*, <https://bip.brojce.pl/articles/295/studium-uwarunkowan-i-kierunkow-zagospodarowania-przestrzennego-gminy-brojce?m=295> [dostęp: 12.04.2021].
- Study of the Brzeziny Municipality (2014), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Brzeziny*, <https://sip.gison.pl/brzezinybrzezinski> [dostęp: 2.04.2024].
- Study of the City of Konstantynów Łódzki (2014), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Miasta Konstantynów Łódzki*, <https://bip.konstantynow.pl/indexb739.html?bip=2&cid=143&id=1200> [dostęp: 27.10.2022].
- Study of the City of Łódź (2010), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Miasta Łodzi*, <https://mpu.lodz.pl/opracowania/studium/studium-uwarunkowan-i-kierunkow-zagospodarowania-przestrzennego-miasta-lodzi-z-roku-2010-250/> [dostęp: 10.04.2021].
- Study of the City of Łódź (2018), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Miasta Łodzi*, <https://mpu.lodz.pl/opracowania/studium/studium-uwarunkowan-i-kierunkow-zagospodarowania-przestrzennego-miasta-lodzi-2018-39/> [dostęp: 12.04.2021].
- Study of the City of Pabianice (2014), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Miasta Pabianice*, <https://bip.pabianice.gmina.pl/3812/uchwala-nr-xliii2902021-rady-gminy-pabianice-z-dnia-30-03-2021-w-sprawie-przyjecia-zmiany-studium-uwarunkowan-i-kierunkow-zagospodarowania-przestrzennego-gminy-pabianice.html> [dostęp: 30.04.2021].
- Study of the Ksawerów Municipality (2010), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Ksawerów*, https://mapa.inspire-hub.pl/#/gmina_ksawerow [dostęp: 12.04.2021].
- Study of the Nowosolna Municipality (2013), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Nowosolna*, <https://bip.gminanowosolna.pl/146/studium-uwarunkowan-i-kierunkow-zagospodarowania-przestrzennego-gminy-nowosolna.html?searchKey=studium> [dostęp: 12.04.2021].
- Study of the Rzgów Municipality (2007), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Rzgów (zmiana: VIII/62/2024 z dnia 27.11.2024 r.)*, https://mapa.inspire-hub.pl/#/gmina_rzgow_powiat_lodzki_wschodni [dostęp: 15.12.2021].
- Study of the Stryków Municipality (2012), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Stryków*, <https://strykow.bip.net.pl/?a=14501> [dostęp: 2.04.2024].
- Study of the Zgierz Municipality (2012), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Gminy Zgierz*, <https://bip.gminazgierz.pl/m,1853,obowiazujace-studium.html> [dostęp: 27.10.2022].

- Study of the City of Zgierz (2015), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego Miasta Zgierz*, <https://mapa.inspire-hub.pl/#/zgierz> [dostęp: 27.10.2022].
- Śleszyński P. (2014), *Distribution of population density in Polish towns and cities*, "Geographia Polonica", vol. 87(1), pp. 61–75, <http://doi.org/10.7163/GPol.2014.4>
- Śleszyński P., Nowak M., Legutko-Kobus P., Hołuj A., Lityński P., Jadach-Sepioło A., Młazke M. (2021), *Suburbanizacja w Polsce jako wyzwanie dla polityki rozwoju*, „Studia KPZK PAN”, vol. 11/203.
- Tomczak A. (2011), *Utopia ochrony krajobrazu codziennego w polskiej przestrzeni prawnej na poziomie lokalnym*, [in:] M. Górski (ed.), *Prawo ochrony przyrody a wolność gospodarcza*, Wydawnictwo Polskiego Zrzeszenia Inżynierów i Techników Sanitarnych, Łódź–Poznań, pp. 419–434.
- Tomczak A. (2018), *Otwarty krajobraz kulturowy z zabytkiem w tle. Formy ochrony na przykładach z ziemi łódzkiej*, Wydawnictwo Politechniki Łódzkiej, Łódź.
- Tomczak A. (2019), *Urban Food i Guerrilla Gardens – czy miasto przyszłości nas wyżywi?*, [in:] I. Mironowicz (ed.), *VI Kongres Urbanistyki Polskiej*, Wydawnictwo Biblioteka Urbanisty, TUP, Warszawa, pp. 149–154.
- Warsza R. (2012), *Urbanizacja strefy podmiejskiej na przykładzie wybranych gmin Łódzkiego Obszaru Metropolitalnego po roku 1990*, typescript, Łódź University of Technology, Faculty of Civil and Environmental Engineering and Architecture, Łódź.
- Wiśniewska W. (2002), *Krajobrazy codzienne*, Wydawnictwo Politechniki Łódzkiej, Łódź.
- Wiśniewski M. (1996), *Wiedzieć, gdzie nie należy budować – czy to wystarczy?*, „Międzyuczelniane Zeszyty Naukowe”, Białystok–Gdańsk–Kraków–Łódź–Szczecin–Warszawa 1996.
- Wiśniewski M. (2002), *Studium uwarunkowań i kierunków zagospodarowania przestrzennego miasta Łodzi. Cele i zadania polityki przestrzennej*, vol. 2, typescript, Urząd Miasta Łodzi, Łódź.
- Wiśniewski M. (2004), *Zawartość studium uwarunkowań i kierunków zagospodarowania przestrzennego w świetle potrzeb planistycznych*, [in:] K. Pawłowski (ed.), *Gospodarka przestrzenna w gminach województwa łódzkiego*, Wydawnictwo Politechniki Łódzkiej, Łódź, pp. 33–45.
- Zuziak Z. (2005), *Strefa podmiejska w architekturze miasta. W stronę nowej architektoniki regionu miejskiego*, [in:] P. Lorens (ed.), *Problem suburbanizacji*, Biblioteka Urbanisty, vol. 7, Urbanista, Warszawa, pp. 17–32.

Ocena miejskiego pierścienia krajobrazowego: przypadek Łodzi, Polska



Streszczenie:

W artykule opisano politykę przestrzenną prowadzoną na obszarach podmiejskich jeszcze niepoddanych urbanizacji, w granicach administracyjnych miasta Łodzi oraz w strefach zlokalizowanych tuż za jego granicą administracyjną. Badaniom poddano tereny otwarte nazwane pierścieniem krajobrazowym. Przestrzeń pierścienia podzielono na podstrefy, na których prowadzono badania szczegółowe. Porównano obecne formy użytkowania gruntów z planowanymi kierunkami rozwoju przyjętymi w dokumentach planistycznych. Wykonano zestawienia obrazujące wzrost procentowy terenów przeznaczonych obecnie i w przyszłości pod zabudowę oraz terenów przewidzianych do zachowania w postaci przestrzeni otwartych. Przeanalizowano potrzeby zabudowywania nowych terenów w odniesieniu do uwarunkowań demograficznych oraz do chłonności

terenowej. Wnioski z badań wykazały znaczną nadpodaż planowanych terenów inwestycyjnych, świadome zawłaszczanie krajobrazów otwartych oraz miejscowy brak spójności planistycznej.

Słowa kluczowe: krajobraz otwarty, miasto Łódź, suburbanizacja, planowanie przestrzenne, studium uwarunkowań i kierunków rozwoju

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