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Sustainable development of Polish cities – case study of Wrocław

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Abstract

Aim: The aim of this paper is to assess the achievements of goal 11 of Agenda 2030 halfway through the time frame of the adopted resolution. Considerations are undertaken using, as an example, Wrocław, one of the most important Polish metropolises.

Methodology: The paper uses critical analysis of the literature and strategic documents, as well as statistical analysis. Sustainable development is considered from three aspects: economic, social and environmental. A review is also conducted of actions implemented by the Wrocław authorities that have contributed to achieving the city's sustainable development.

Results: Thanks to a high level of socio-economic development it is possible to implement a range of initiatives aimed at improving the natural environment and the rational use of resources, however, despite the actions taken, achieving sustainable development remains in the sphere of long-term strategic plans.

Implications and recommendations: In an era of increasing urbanization, ever more attention is focused on cities. By accumulating capital, population and cultural and art institutions within their territory, they become the driving force of socio-economic development. However, for many years this development was at the cost of the natural environment. In this context, goal 11 of the United Nations' Agenda for sustainable development to the year 2030 is of particular importance. This goal focuses on the sustainable development of cities, their safety and social inclusion. Polish cities also face the challenge of implementing the ideas of sustainable development.

Keywords: sustainable development, sustainable development goals, Agenda 2030, city, Wrocław

1. Introduction

Urbanization is one of the megatrends of modern times. Increasing numbers of people move to cities, creating dynamic centres of human activity. Cities, and metropolises in particular, are special drivers of development, not only in their own area but often for the entire region and even the country. These are centres characterised by a high level of economic and social development, well-networked, which are centres of culture and art, attracting people to their area. However, the rapid development of these areas often brings negative phenomena such as uncontrolled urban sprawl, disruption to the spatial order, social exclusion and environmental pollution. The coefficient of urbanization in Poland, calculated as the proportion of the population inhabiting cities of the total population, fluctuates around 60%. At the same time, cities occupy only about 7.2% of the total area of the country (Główny Urząd Statystyczny, n.d.). The high density of population has an impact on the environment and natural resources. This is a challenge for city authorities, who must include the protection of resources and the environment in their strategies. This aspect was noted by the United Nations in 2015, when Agenda 2030 for sustainable development was ratified (United Nations, 2015). Goal 7 of the agenda relates to the sustainable development of cities, their safety and social inclusion. This article focuses on the analysis of the most important challenges related to the sustainable development of cities, assessment of the implementation of sustainable development goals by the city of Wrocław at the halfway stage of action related to Agenda 2030, and the presentation of key elements, policies and actions that can contribute to creating more sustainable urban areas. Understanding the sustainable development of cities is not only a theoretical issue, but constitutes a central pillar in ensuring the well-being of future generations.

2. Literature review

2.1. Sustainable development

The concept of the sustainable development of cities is one of the key issues in the contemporary world, and emphasises the harmony between economic and social development and environmental protection. This idea is the response to numerous challenges, such as the degradation of the natural environment, air pollution and social inequalities, which often accompany the rapid development of cities. The concept of sustainable development appeared in the 1960s, however it only gained importance in 1987 after the UN World Commission for Environment and Development published its report (Gotowska, 2017).

At that time, sustainable development was defined as development that meets the needs of current generations in such a way that the ability of future generations to meet their needs is not jeopardised (World Commission on Environment and Development, 1987). The application of these principles should at least ensure that the condition of the natural environment does not worsen, and thanks to greater awareness among inhabitants and the implementation of appropriate action by city authorities, the population should strive to improve it. However, this understanding of sustainable development requires some clarification in relation to cities, and particularly metropolises, as they meet not only the needs of their inhabitants, but also the surrounding area. The uncontrolled spread of cities, accompanied by functional ties between the central city and the surroundings, deepens these relationships. The high population density of cities and their subordinate role regarding relation to the inhabitants of surrounding areas, makes sustainable development of urban units one of the key aspects of caring for the future. Mierzejewska (2025) noted that sustainable development concepts for cities can be divided into two principal groups, of which the first refers to issues related to the city space (e.g. Eco City, Green City, Multi-Functional and Intensive Land Use, New Urbanism, Smart Growth), whilst the second draws attention to the quality of life in the city and social justice in the context of the urban economy (e.g. Self-Reliant City, Community Garden, Just City). Selected models for the sustainable development of cities are presented in Table 1.

Table 1. Characteristics of selected concepts for the sustainable development of cities

Model	Characteristics
Smart City	The city functions in a sustainable and intelligent way. Smart city ensures the optimal functioning of the city as a whole, thanks to cooperation between various entities and the integration of infrastructure solutions and services.
Green City	The central element of the concept is the environment and the application of environmentally friendly solutions on the path to the city's socio-economic development. This is based on striving to achieve a circular economy, the use of renewable sources of energy and a high proportion of green areas in the city.
Compact City	This model refers to urban spatial management and striving for its effective use. The main aspects of this concept are development of the city 'from the inside', sustainable transport and revitalization.
Self-Reliant City	An urban concept that refers to self-reliance in key areas of sustainable development: environmental, social and economic.
New Urbanism	This concept emerged in answer to the phenomenon of uncontrolled urban sprawl. It postulates, amongst others, the delineating of clear boundaries for urban areas, spatial planning, revitalization and the development of integrated public transport.

Source: own elaboration on the basis of (Broniewicz, 2017; Florida, 2002; Rzeńca, 2016; Trindade et al., 2017).

In sustainable development concepts for cities, several common actions supporting their achievement can be identified:

- striving to increase population and construction density,
- taking action to revitalize degraded areas,
- the development of sustainable transport, as well as the integration of various public means of transport,
- striving to increase the proportion of urban green areas in the public space,
- supporting the circular economy,
- the use of renewable sources of energy,
- shaping the public space and striving to achieve spatial order.

All actions should be preceded by an appropriate analysis of the current status of resources, and should be included in the development strategy so that they take the form of organized, targeted and long--term social, economic and environmental actions. A key factor necessary to achieve sustainable development is also the inclusion of all stakeholders in the process and achieving a consensus among all social groups with regard to meeting their needs.

Also, the resolution of the Agenda for sustainable development 2030, adopted by the General Assembly of the United Nations on the 25th of September 2015, examines the analysed phenomenon holistically. According to the provisions of the document, crucial in achieving sustainable development are simultaneous actions in many areas: society (people), the planet, well-being, peace and partnership (Cele Zrównoważonego Rozwoju, n.d.). This resolution replaced the Millennium Development Goals of Agenda 2021 developed by the United Nations in the first decade of the 20th century. The new goals are perceived as ambitious challenges, covering a considerably broader scope of action than the previous ones, and being also of a more universal nature in referring to all countries, not only developing countries (Blasi et al., 2022). With regard to the aims of this paper, the eleventh of the seventeen sustainable development goals is of greatest importance, as this aims to make cities and human settlements safe, resilient, sustainable and conducive to social inclusion (Cele Zrównoważonego Rozwoju, n.d.). As urbanisation continues, cities will become increasingly important and will play a key role in achieving the 2030 Agenda, beyond just Goal 11. Metropolises are characterized by a high level of economic development (goal 8 – decent work and economic growth), while generating significant challenges for the environment (goal 13 – climate action), which in turn translates into the health of the inhabitants (goal 3 – good health and well-being). Agenda 2030 is a system of interconnected vessels, in which goals are dependent on one another, and at the same time a synergy effect can be achieved. This makes the role of cities even more important, as in achieving goal 11 they will also have a positive impact on the remaining goals (Akuraju et al., 2020). In the middle of the 15-year period of implementing the adopted Agenda 2030 goals, it is worth attempting to assess the achievements so far and the methods of their implementation.

2.2. Sustainable development in cities in Poland

Polish cities, which together have almost 60% of the total population within their boundaries, play a crucial role in the country's socio-economic development. This is reflected in strategic documents related to urban areas and their social, economic and environmental development, among which we can list: National Urban Policy 2030, Demographic Strategy 2040, State Ecological Policy 2030 and the Social Housing Initiative. Diagnosis of the challenges facing cities and the directions of their development are contained in the most important strategic document for cities – the National Urban Policy 2030 (Ministerstwo Funduszy i Polityki Regionalnej, n.d.). The goals for achieving sustainable development in urban areas include the construction of cities that are compact, green, accessible to the population, productive and digital. The document also underlines the importance of spatial planning and the preservation of spatial order, as well as its integration with action for the achievement of socio-economic growth. A key aspect is to increase the resilience of cities by taking actions to protect the environment, including the protecting of green areas, enhancing biodiversity, and striving to create a zero-emission public transport system.

The goals defined in the National Urban Policy 2030 also partly overlap with the goals of Agenda 2030, with both documents determining as an overarching goal the sustainable development of cities. According to the report *Realization of Sustainable Development Goals in Poland 2023*, adopted by the Council of Ministers on the 2nd of June 2023 (Ministerstwo Rozwoju i Technologii, 2023), national priorities related to goal 11 of Agenda 2030 include:

1) strengthening the capability of cities to achieve sustainable development through simultaneous action in the economic, social and environmental spheres,
2) support for cities in the case of sudden changes and crises in all three aspects, and above all guaranteeing inhabitants safety and a high standard of living,
3) support for sustainable territorial economic growth by maintaining the polycentric settlement structure in the country, as well as intensifying the networks of connections between cities,
4) building a sustainable, accessible public transport system,
5) creating a universal and accessible housing market,
6) improving air quality in cities.

The document also specifies the conditions created by central administration on the way to the sustainable development of cities. The proposed solutions are of a multi-aspect and long-term nature, and their scope is in line with current international policy in this area. Alongside strategic documents there are also projects at the national level that aim to support cities in achieving sustainable development. These include: 'Development of plans for adapting to climate change in cities above 100,000 inhabitants' which covered 44 cities in Poland, the 'City Partnership Initiative' supporting dialogue between local and central government, the development of Social Housing Initiatives to meet housing needs and the 'Climaton for cities' project, the aim of which is to popularize knowledge on the development of intelligent cities (Ministerstwo Rozwoju i Technologii, 2023).

The growing climate crisis is a challenge for all Polish cities, as its effects will be felt particularly strongly in these areas. For this reason, it is necessary to take action to improve the natural environment, support the resilience of cities and strive to achieve a circular economy. One of the serious problems that still exists is unmet housing needs, and it is estimated that in 2022 the housing gap amounted to about 2.3 million apartments. Another challenge is elimination of transport exclusion by taking action to integrate public transport systems, as well as expand pedestrian and bicycle infrastructure. These phenomena become even more important when combined with suburbanization. Research indicates that highly developed metropolises have greater chances of achieving sustainable development as they have financial resources that can be designated to pro-environmental investments. Meanwhile, small and medium-sized towns have limited financial resources, thus their possibilities for achieving sustainable development goals are limited (Niemets et al., 2021). It is crucial to integrate various layers of sustainable development planning, thanks to which it will be possible to achieve synergy between sustainable development actions.

3. Methodology

Local governments play a key role in shaping sustainable urban policy. Developing policies conducive to environmental protection, improving living conditions and social equality, and taking into account economic development, become a priority for local authorities. Creating strategies and spatial development plans requires taking into consideration the interests of all social groups. The key elements in realizing the strategy are ensuring the appropriate funding and creating incentives for the private sector to invest in sustainable urbanization. The sustainable development concept for the city of Wrocław constitutes a crucial element in strategic plans for the area. According to Strategy Wroclaw 2030, the city's vision has been defined as "sustainable development based on a high standard of living for current and Future inhabitants, as well as creativity, innovativeness and entrepreneurship" (*Strategia Wrocław*…, 2019). The city authorities strive to ensure inclusive development, while taking care of the natural environment. In the following part of this paper, analysis is conducted of the actual impact of actions undertaken by the authorities for the sustainable development of the city, taking into consideration a division into three dimensions: environmental, economic, and social. Political and systemic factors are only taken into account in the qualitative analysis, as they have an indirect impact on the ideas examined and only create the framework for action.

Table 2 presents the social factors of sustainable development that are taken into account in the analysis, together with a description of their impact on development and their effect category. The problems of social inequalities, safety and marginalization are the result of many factors, including a lack of access to housing, education and healthcare, but also the lack of inclusive social policies or the mismatch of social programmes to the actual needs of inhabitants.

Table 2. Social factors of sustainable development

Factor	Characteristics	Effect category
Natural population growth	High natural population growth has a positive effect on social development, e.g. by reducing the demographic dependency ratio.	Stimulant
Demographic dependency ratio	A large proportion of children and the elderly in relation to the number of people of working age has a negative impact on quality of life.	Destimulant
Balance of migration abroad	A high ratio indicates a high quality of life and a developed local economy. Through permanent migration, residents 'vote' for units with a high level of socio-economic development.	Stimulant
Long-term unemployed as a % of all unemployed	This has a negative impact both on society and on the economy. It can lead to marginalization and social exclusion.	Destimulant
Registered rate of unemployment	A high level of unemployment as a negative impact on the population's quality of life.	Destimulant
Average gross income in relation to national average	A high average income translates into a good quality of life for inhabitants and a high level of disposable income.	Stimulant
Number of cars per 1000 inhabitants	The number of cars per 1000 inhabitants reflects the standard of living of inhabitants, however in the context of sustainable development, it has been treated as a destimulant. Authorities should develop collective means of transport and encourage inhabitants to make use of them.	Destimulant
Crimes confirmed by the police	A high number of crimes negatively affects inhabitants, their health and safety.	Destimulant
Completed housing per 1000 inhabitants	A well-developed housing market offering new investments raises the standard of living for inhabitants, as well as evidencing a high level of economic development.	Stimulant
Number of students per 1000 inhabitants	A high number of students reflects both a high level of education as well as the cultural offer.	Stimulant

Source: own elaboration.

Table 3 contains the detailed characteristics of the economic factors examined in this paper. Indicators taken into account were those evidencing the level of economic development of cities: the number of economic entities entered into the official register (REGON), commune budgetary expenditure per inhabitant, sold industrial production per inhabitant, and the density of the road transport network.

Table 3. Economic factors of sustainable development

Factor	Characteristics	Effect category
Entities entered into the REGON register per 10,000 inhabitants	The number of economic entities reflects the entrepreneurship of inhabitants and has a positive impact on economic development.	Stimulant
Commune budgetary expenditure per inhabitant	A high level of expenditure from the commune budget translates into the number of investments realized within its boundaries, as well as raising the level of infrastructure management.	Stimulant
Investment outlays in enterprises per inhabitant	The level of investment outlays in enterprises reflects their good economic condition, which translates into the level of economic development of the city.	Stimulant
Foreign capital per inhabitant of working age	The interest of foreign investors in a given area is a derivative of its level of economic development and infrastructure.	Stimulant
Entities deregistered from the REGON register	The number of entities deregistered from the REGON register indicates the failure of such entities on the market, and may be linked to an unfavourable economic situation in the area and/or of its inhabitants.	Destimulant
Sold industrial production in total and per inhabitant	A high level of sales by industrial firms is evidence of the strength of this section of the economy and their good financial condition.	Stimulant
People in work per 1000 inhabitants	The number of those in employment per 1,000 people indicates the level of professional activity amongst inhabitants.	Stimulant
Hardtop commune and district roads per 100 km^2	Road transport infrastructure is a key factor in economic activity, and its high quality has a positive effect on conducting activity, and is an incentive for new investors.	Stimulant
Share of employees in the service sector in total working population	A well-developed service sector is characteristic of areas with strong economic development. A high proportion of those in work in the service sector is a derivative of a high level of economic development.	Stimulant
Commune budget income per inhabitant	A high level of municipal budget income is an evidence, on the one hand, of a well-developed economy in the area and high tax income, and on the other hand, it has an impact on the amount of funds used for investment.	Stimulant

Source: own elaboration.

The last aspect of sustainable development, although equally important, is the environmental factor described in Table 4. This category includes action taken to promote clean air, the creation of green public spaces, promotion of low- or zero-emission public transport, and investments in the water supply and sewage infrastructure network.

Table 4. Environmental factors of sustainable development

Factor	Characteristics	Effect category
Length of sewage network for rainwater (km)	It has an effect on the condition of the natural environment and inhabitants' standard of living.	Stimulant
Gas pollution retained or neutralized in devices for reducing pollution, as a percentage of total pollution generated	A high amount of retained or neutralized gas pollution has a positive impact on air quality and the natural environment.	Stimulant
Share of legally protected areas in total area	Areas under legal protection include national and landscape parks, nature reserves, areas with protected landscape and ecological areas. Protection is essential due to their environmental value.	Stimulant
Population using sewage treatment plants as a percentage of total population	The possibility of connecting to sewage systems impacts the condition of the environment and improves inhabitants' quality of life.	Stimulant

Segregated waste in relation to total waste.	The share of segregated waste in relation to total waste indicates high social awareness and translates into waste recycling.	Stimulant
Area used for waste landfill (ha)	A large area used for landfill indicates poor waste management and has a negative impact on the environment and inhabitants' quality of life.	Destimulant
Water consumption per inhabitant	Low water consumption is the result of ecological awareness of inhabitants and entrepreneurs.	Destimulant
Share of parks, green areas and green suburban spaces in total area	The presence of green areas improves air quality and provides possibilities for recreation, which translates into a better quality of life for inhabitants.	Stimulant
Forested areas	The share of forested areas impacts air quality and inhabitants' standard of living.	Stimulant
Mixed waste collected annually from households, calculated per 1 apartment	The amount of mixed waste collected over one year should be constantly reduced. This indicator reflects the level of awareness of inhabitants and their activities to protect the environment.	Destimulant

Source: own elaboration.

All the indicated factors were subjected to quantitative analysis, comparing the years 2015 and 2022. The year 2015 was chosen as the starting point for the period of validity of the Agenda 2030, while 2022 provided the latest data on sustainable development in Wrocław and can be treated as a date at the midpoint of the time horizon of the implemented strategy.

4. Research results

The results show that Wrocław develops best in economic terms, with only investment outlays in enterprises calculated per inhabitant noting a drop in 2022 in relation to 2015, although this was only slight (about 0.5%). Meanwhile, municipal budget revenues and expenditures per inhabitant rose considerably (about 60%), as did sold industrial production in total and per inhabitant (almost 40%).

Analysis of environmental factors gave ambiguous results. On the one hand, the majority of indicators noted a positive change in the last 7 years, however there are also negative changes: a drop in protected areas in the total area of Wrocław (–62%) and an increase in the amount of mixed waste from households (+1%). In the case of the last factor, there was a slight change, however its importance should be underlined, because in the analysed period legal regulations were introduced obliging inhabitants to segregate waste, and social campaigns on recycling were carried out. Another positive change that stands out is the length of sewage network for rainwater, however a starting value of this indicator was close to zero. A positive aspect is the drop in air pollution (by almost 220%), the decrease in the area used for waste landfill (around 90%), and an increase in the share of green areas (about 30%).

The least favourable results for Wrocław were found in the analysis of social factors, which included an increase in the demographic dependency ratio (+2.5%), the share of the long-term unemployed in total number of unemployed (+0.3%), and an increase in the number of cars per 1,000 inhabitants (+25%). Despite implementation of an integrated transport system, the authorities were not able to convince inhabitants to give up their own means of transport. Meanwhile, positive changes were noted in population growth (although this still remains negative), the rate of unemployment (–50%), average incomes, and safety (–6.5%).

Table 5 presents data for Wrocław according to the analysed development categories – economic, social and environmental – in the years 2015 and 2022, and the change in these indicators was also assessed. Depending on the nature of the variable, whether it was a stimulant or a destimulant, green was used to indicate a positive change towards sustainability, while red means a negative change.

Table 5. Implementation of the idea of sustainable development in Wrocław from social, economic and environmental perspectives

Social dimension	Social dimension			Economic dimension	Economic dimension			Environmental dimension	Environmental dimension		
	2015	2022	Change		2015	2022	Change		2015	2022	Change
Natural population growth	–439	–909	107.06	Entities entered into the REGON register per 10,000 inhabitants	1781	2101	17.97	Length of sewage network for rainwater (km)	0.2	16.6	8200.00
Demographic dependency ratio	36.7	37.6	2.45	Municipal budgetary expenditure per inhabitant (PLN)	6128.2	9723.35	58.67	Gas pollution retained or neutralized in devices for reducing pollution, as a percentage of total pollution generated	25.2	80.6	219.84
Balance of migration abroad	425	138	–67.53	Investment outlays in enterprises per inhabitant	7339	7303	–0.49	Share of legally protected areas in total area	6.3	2.4	–61.90
Long–term unemployed as a % of all unemployed	38.5	38.6	0.26	Foreign capital per inhabitant of working age	22699	25272	11.34	Population using sewage treatment plants as a percentage of the total population	94.8	98.3	3.69
Registered rate of unemployment	3.3	1.6	–51.52	Entities deregistered from the REGON register	6867	5611	–18.29	Segregated waste in relation to total waste	29.5	39.1	32.54
Average gross income in relation to national average	110.1	110.2	0.09	Sold industrial production in total and per inhabitant (entities with more than 9 employees) (PLN)	28645	39738	38.73	Area used for waste landfill (ha)	14.9	1.3	–91.28
Number of cars per 1000 inhabitants	600.6	751.9	25.19	People in work per 1000 inhabitants	408	434	6.37	Water consumption per inhabitant (m^3).	115.3	107.7	–6.59
Crimes confirmed by the police in completed preparatory proceedings	25207	23516	–6.71	Hardtop commune and district roads per 100 km^2	286.3	312.5	9.15	Share of parks, green areas and green suburban spaces in total area	4.9	6.4	30.61
Completed housing per 1000 inhabitants	10.5	13.4	27.62	Proportion of employees in the service sector to total working population	80.5	82	1.86	Forested areas (ha)	948.1	1043.29	10.04
Number of students per 1000 inhabitants	188.8	156	–17.37	Income per inhabitant (PLN)	5696.68	9121.87	60.13	Mixed waste collected annually from households, calculated per 1 apartment	292.3	295.5	1.09

Source: own elaboration on the basis of (Główny Urząd Statystyczny, n.d.).

The above analysis illustrates the complexity of the sustainable development of cities, which is influenced by many factors. It is necessary to underline the fact that metropolises such as Wrocław are characterized by a high level of socio-economic development. However, for many years their development took place at the expense of the natural environment, hence the pressure for dynamic development in the area of environment protection. Environmental factors should be treated as a priority in order to ensure good air quality, preserve the biodiversity, proper use of resources, and prevent further climate changes.

5. Good practices on the path to sustainable development – Wrocław case study

Despite some setbacks on the way to achieving the city's sustainable development, Wrocław undertakes a number of actions that can be considered good practice in this regard. In addition to areas analysed in Table 6 – social, economic and environmental – it is necessary to emphasise the importance of the political and institutional dimension, as it creates the framework for achieving the sustainable development goals. Without appropriate legal regulations, their achievement would be complicated, and in some cases even impossible. The Wrocław authorities have ratified strategic documents such as Strategy Wrocław 2030 and the plan for adapting the city of Wrocław to climate change to the year 2030, which underlined the importance of the idea of the city's sustainable development. These documents are systematically supplemented with resolutions, plans, guidelines and standards which are intended to help local government and inhabitants in joint efforts to achieve the goals (e.g. the anti-smog resolution and standards for the accessibility of public space).

The social dimension of development concerns the residents and their needs, the level of education, healthcare, safety and poverty, as well as social inclusion and their activity. With the ageing population and the increasing proportion of people of retirement age in the population as a whole, cities should adapt their space and infrastructure to the changing age structure. In Wrocław, a catalogue of standards has been developed regarding the accessibility of public spaces, which includes guidelines on their inclusive design taking into account all groups of residents. Another innovative solution for public space, related to the catalogue of standards, are so-called green bus/tram stops. The aim is to reduce the burden of climate change on residents by lowering temperature and limiting air pollution. The authorities have also joined the international Network of Age-friendly Cities and Municipalities, the aim of which is to exchange experiences regarding actions for the benefit of the elderly. Wrocław is also an important academic centre that attracts young people, some of whom settle in the city permanently, which affects the demographic structure, natural population growth and the level of education of the inhabitants. It should be underlined that the high level of social development and initiatives implemented in this regard are a derivative of the well-developed economy in Wrocław. Without appropriate financial resources, many of the initiatives could not be implemented.

The economic dimension indicates the city's level of development and its attractiveness for business, however, in this regard action can also be taken for the achievement of sustainable development. Wrocław can boast an integrated transport system that includes various forms of road transport and an intelligent transport system that gives priority to public transport. In one of the Wrocław quarters, a GrowGreen pilot project is being implemented, the aim of which is to analyse the impact of blue--green infrastructure on atmospheric conditions in a highly urbanized space. Equally innovative is the FoodSHIFT project which promotes local farmers and short supply chains, as well as the creation of community gardens and vegetable gardens in educational institutions.

Table 6. Examples of good practices of sustainable development in Wrocław

Social dimension	Economic dimension	Environmental dimension
• standards for the accessibility of urban spaces • Membership of the Network of Age-friendly Cities and Municipalities • green stops and trackways • high level of social activity • academic centre, a high level of education among inhabitants and higher natural population growth	• the FoodSHIFT 2030 project – promoting sustainable agriculture and short supply chains • a well-developed and managed transport system, including an intelligent transport system (ITS) • the GrowGreen project in the Ołbin quarter, assessing the impact of blue-green infrastructure on highly urbanised areas	• water-saving initiative • climate alarm • increased proportion of parks and green spaces, #EKOszenie initiative • resolution on introducing limitations and restrictions on the use of installations burning fuel in Wrocław Communes, the so-called anti-smog resolution • European Sustainable Development Week, European Sustainable Transport Week

Source: own elaboration on the basis of (Arcadis 2021; *Wrocławskie Standardy*…, 2019).

The environmental dimension concerns fighting against climate change, maintaining biodiversity, air quality, and waste management. In Wrocław, the Department for Sustainable Development at Wrocław City Hall, also known as the green department, is responsible for activities related to environmental and climate protection. The most important achievements in this area include the adoption of a resolution on the introduction of restrictions on the use of coal- and wood-burning devices in Wrocław, the so-called anti-smog resolution, the aim of which is to improve air quality. Meanwhile, through the so-called climate alarm, the Wrocław authorities have committed to fighting the negative effects of climate change and achieving climate neutrality by 2050. A number of actions related to urban green spaces have also been implemented. On the initiative of both the authorities and residents (including through the Wrocław Citizens Budget), new parks, green areas and recreational areas are being created, and the position of city gardener has been created for the maintaining of these places. Actions have also been taken to reduce water consumption, such as the

Water-saving initiative which aims to apply a circular water system, as well as the Catchwater programme popularizing devices for storing rainwater. In addition, it is worth mentioning activities aimed directly at the inhabitants meant to raise their awareness and promote actions in support of sustainable development, including 'No Waste Wrocław', 'Love Rain', 'Grey to Green', and 'Stove Change'.

6. Conclusions

Striving for sustainable urban development became a necessary condition for preventing further climate change and guaranteeing future generations a higher standard of living. The current political and institutional conditions in Poland support this action, however, as a country we are at the beginning of the road to implementing these ideas. In an era of increasing urbanization, a key role in this regard is played by cities. Their importance is underlined in Agenda 2030, in which goal 11 relates to sustainable urban development: to "make cities and human settlements inclusive, safe, resilient and sustainable". Urban policies must take into account such phenomena as suburbanization, the ageing of population, transport problems and climate change. The effectiveness of the actions taken in the social, economic and environmental fields in the middle of the time horizon of Agenda 2030 is limited. Wrocław has legal and institutional structures conducive to the ideas of sustainable development. Initiatives are implemented in the city aimed directly at inhabitants encouraging the inclusion of the local community, as well as advanced infrastructure investments and actions to protect the environment. However, despite the positive social, economic and environmental transformations, the dynamics of change remains insufficient. In addition, the sustainable development of the metropolis should not be limited only to the city itself, but the inhabitants of areas linked functionally to the central hub should also be included in such initiatives. This is because spatial planning and improving air quality do not end at the city's administrative boundaries. The diversity of the challenges facing cities require a holistic approach, as well as continuous assessment of strategies and adaptation to the rapidly changing socio-economic reality. Of crucial importance is also the involvement of all local actors. Thanks to cooperation between all sectors and the engagement of the local community, it will be possible to obtain a synergy effect and achieve sustainable development for the city.

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Zrównoważony rozwój polskich miast na przykładzie Wrocławia

Streszczenie

Cel: Celem niniejszego opracowania jest ocena realizacji celu 11 Agendy 2030 w połowie horyzontu czasowego obowiązywania rezolucji. Rozważania podjęto na przykładzie Wrocławia, jednej z najważniejszych polskich metropolii.

Metodyka: W pracy wykorzystano krytyczną analizę literatury i dokumentów strategicznych oraz analizę statystyczną. Zrównoważony rozwój rozpatrywany był w trzech aspektach: gospodarczym, społecznym oraz środowiskowym. Dokonano również przeglądu działań realizowanych przez władze Wrocławia, przyczyniających się do osiągnięcia zrównoważonego rozwoju miasta.

Wyniki: Dzięki wysokiemu poziomowi rozwoju społeczno-gospodarczego, możliwa jest realizacja szeregu inicjatyw mających na celu poprawę środowiska naturalnego i racjonalne wykorzystanie zasobów, jednak mimo podejmowanych działań, osiągnięcie zrównoważonego rozwoju pozostaje w sferze długoterminowych planów strategicznych

Implikacje i rekomendacje: W dobie postępującej urbanizacji coraz większa uwaga koncentrowana jest na miastach. Kumulując na swoim obszarze kapitał, ludność, instytucje kultury i sztuki, stanowią one motory napędowe rozwoju społeczno-gospodarczego. Jednak przez wiele lat rozwój odbywał się kosztem środowiska naturalnego. W tym kontekście znaczenia nabiera cel 11 Agendy na rzecz zrównoważonego rozwoju do roku 2030 Organizacji Narodów Zjednoczonych, który koncentruje się na zrównoważonym rozwoju miast, ich bezpieczeństwie i włączeniu społecznym. Również polskie miasta stoją przed wyzwaniem wdrożenia idei zrównoważonego rozwoju.

Słowa kluczowe: zrównoważony rozwój, cele zrównoważonego rozwoju, Agenda 2030, miasto, Wrocław