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CONCEPTUAL BASIS OF SUSTAINABLE SPATIAL DEVELOPMENT: THEORETICAL AND PRACTICAL FRAMEWORK

PODSTAWY KONCEPTUALNE ZRÓWNOWAŻONEGO ROZWOJU PRZESTRZENNEGO: RAMY TEORETYCZNE I PRAKTYCZNE

КОНЦЕПТУАЛЬНЫЕ ОСНОВЫ УСТОЙЧИВОГО ПРОСТРАНСТВЕННОГО РАЗВИТИЯ: ТЕОРЕТИЧЕСКИЕ И ПРАКТИЧЕСКИЕ АСПЕКТЫ


Abstract

Strategic governance of sustainable spatial development is characterized by fragmentation and lack of coordination. Therefore, issues of increasing the effectiveness of strategic governance of sustainable development of territories are becoming of particular relevance, which testifies the necessity of theoretical and methodological substantiation of the conceptual foundations for perfection of this process. Revealed that in the structure of available methodical approaches to assessing the level of sustainable city development and analyzing the efficiency of management of this process there are some differences, which indicates the need for their improvement for application in the process of diagnostics. It is proposed to apply a synergistic approach to studying the problems of managing sustainable development of a city, which makes it possible to identify interethnic integration patterns of self-organization of a city as a complex socio-economic and ecological system.

Keywords: *regional economy, spatial economy, sustainable development, urban development.*

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Streszczenie

Strategiczne zarządzanie zrównoważonym rozwojem przestrzennym charakteryzuje się fragmentacją i brakiem koordynacji. Dlatego szczególne znaczenie zyskują kwestie zwiększenia efektywności strategicznego zarządzania zrównoważonym rozwojem terytoriów, co świadczy o konieczności teoretycznego i metodologicznego uzasadnienia pojęciowych podstaw dla doskonałości tego procesu. Ujawniono, że w strukturze dostępnych podejść metodycznych do oceny poziomu zrównoważonego rozwoju miasta i analizowania efektywności zarządzania tym procesem istnieją pewne różnice, które wskazują na potrzebę ich poprawy do zastosowania w procesie diagnostyki. Proponuje zastosowanie synergetycznego podejścia do badania problemów zarządzania zrównoważonym rozwojem miasta, co pozwala na identyfikację międzysrodowiskowych wzorców integracji samoorganizacji miasta jako złożonego systemu społeczno-gospodarczego i ekologicznego.

Słowa kluczowe: gospodarka regionalna, gospodarka przestrzenna, zrównoważony rozwój, urbanistyka.

Аннотация

Стратегическое управление устойчивым пространственным развитием характеризуется фрагментацией и отсутствием координации. Поэтому вопросы повышения эффективности стратегического управления устойчивым развитием территорий приобретают особую актуальность, что свидетельствует о необходимости теоретического и методологического обоснования концептуальных основ для совершенствования этого процесса. Выявлено, что в структуре доступных методических подходов к оценке уровня устойчивого развития города и анализа эффективности управления этим процессом имеются некоторые отличия, что свидетельствует о необходимости их совершенствования для применения в процессе диагностики. Предложено применить синергетический подход к изучению проблем управления устойчивым развитием города, что позволяет выявить межнациональные интеграционные закономерности самоорганизации города как сложной социально-экономической и экологической системы.

Ключевые слова: региональная экономика, пространственная экономика, устойчивое развитие, градостроительство

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Statement of the problem in general outlook and its connection with important scientific and practical tasks.

Formation, development and consolidation of the sustainable development concept of mankind as a paradigm actually took place in the middle of the XX century at the beginning of the XXI century. However, it

should be assumed that the scientific foundations of the sustainable development theory were laid down much earlier, in particular, by V. I. Vernadsky in the works on the development of the biosphere. These scien-

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tific works had contributed to the consideration of humanity in the planetary aspect and identified the need to change the way of its existence. The merit of V. I. Vernadsky is that he first introduced in the analysis of the connections of the system “manner” – the center of which is humanity with a specific system of urgent, material, practical needs and interests of survival of

current and future generations – a new criterion dimension “humanity as a whole” and moved the social analysis into a global plane (Vernadskyi V. Y., 1991). However, the concept of “sustainable development” in its contemporary understanding and form was formed later. In particular, in our opinion, the process of its formation and consolidation should be considered in the context of several stages.

Analysis of latest research where the solution of the problem was initiated.

On the results of the study of sustainable development had a significant impact fundamental works of such as scholars like F. Berkes (Berkes F. et al, 2003), V. Vernadskyi (Vernadskyi V. Y., 1991), B. Burkin-skyi (Burkynskyi B. et al, 2012), B. Danylyshyn (Danylyshyn B., 1999), M. Dolishnii (Dolishnii M., 2002), V. Kravtsiv (Dolishnii M., 2002), N. Pavlikha

(Pavlikha N., 2006), V. Pavlov (Pavlov V., 2007), M. Khvesyk (Khvesyk M., 2012) and others. However, despite a significant amount of publications on the subject, the conceptual foundations for governance the sustainable spatial development remain underdeveloped. The significance of the above problem has determined the choice of the topic of the study.

Aims of paper. Methods.

The purpose of the study is to develop a methodology and provide theoretical and practical framework for analysis of the sustainable spatial development. In the research, the methods commonly used in economic science are applied: theoretical, comparative and retrospective analysis – to reveal the theoretical foundations of the

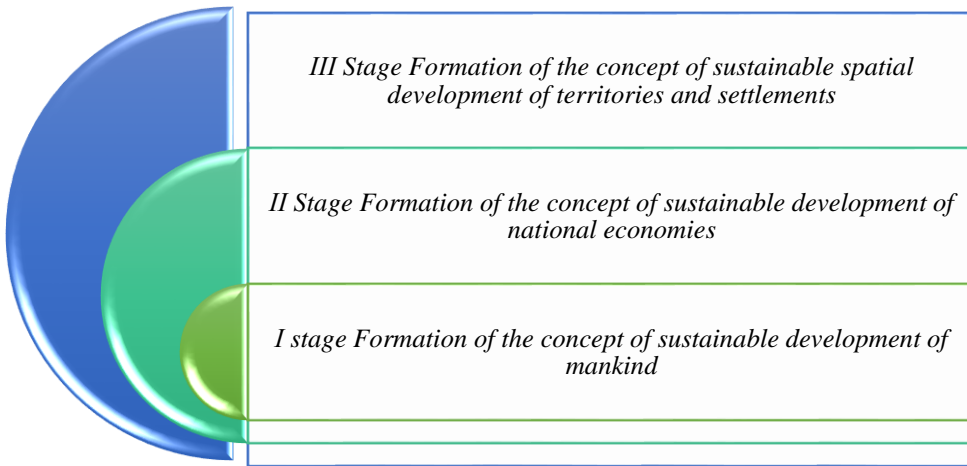
sustainable spatial development theory; statistical groupings, generalization – to improve methodological approaches to the analysis of the sustainable spatial development; economic and statistical, modeling, rating estimations, graphic – in the process of disclosing the sustainable urban development.

Exposition of main material of research with complete substantiation of obtained scientific results. Discussion.

It should be noted that there are different approaches to the periodization of the theory of “sustainable development”. Thus, the Swedish scholars of the Technical University of Chermels, Geden F., Pierson M. and Spree F. (Hedenus F. et al., 2016) tend to distinguish a number of dates and events, both international and local, and at the same time scientific, social and practical, which were the foundation, challenges and

litmus notes of human readiness to the transition to a fundamentally new stage in its development. Based on the plurality of periodization approaches, we consider it necessary to distinguish three main periods of the “sustainable development” concept development, in particular, based on the fact that the ideas of sustainable development were transferred from global to local levels (Fig. 1).

Fig. 1. Periods of the “sustainable development concept” development



Source: compiled by the authors.

Accordingly, the events that formed the basis of the formation, development and consolidation of this concept should be grouped as follows:

I Stage - Formation of the concept of sustainable human development

- 1962 Rachel Carson's “Silent Spring” is considered the first real challenge for an active discussion of the environment;
- 1970 the founding by the United States Senator the first “Day of Earth”, which is considered to be the birth of the modern ecological movement with broad support at a lower level;
- 1971 establishment of such organizations as “Greenpeace” and “Friends of the Earth»;
- 1972 The publication by the Roman Club of the report "The Limits to Growth", which tells about the scenarios of the continuation of economic and demographic growth, which lead to resource constraints, increased pollution and the collapse of the population;

Although at the first stage there was no clear definition of “sustainable development”, but the above-mentioned events were the basis for the formation of this concept. In this period, which can be called a search period, because at that time there was a search for a new benchmark for the development of the international community at the global level.

A system building event at this stage should be considered the publication “Limits to Growth”, which initiated a discussion on the need to create a new model of growth on a global scale that would take into account resource constraints and the ability of the environment to absorb pollution.

Events that formed the concept of sustainable development of national economies and the sustainable spatial development of territories and settlements were partially taking place in parallel, but the clear formulation of this concept took place later.

II stage Formation of the concept of national economies sustainable development

- 1972 First International Conference on the Environment, which established the UN Environment Program (UNEP);
- 1983 Establishment of the World Commission on Environment and Development (WCED), headed by Norwegian Prime Minister Grom Harlem Brundtland;
- 1987 publication of the report “Our Common Future”, also known as Brundtland Report;
- 1992 United Nations Conference on Environment and Development;
- 1992 Signing of the Kyoto Protocol;
- 1992 Signing of the Paris Agreement;
- 2000 adopted by the UN Millennium Declaration,

Although the concept of sustainable development was used much earlier, it was the Brundtland Report that led to the main discourse. The most widespread definition of sustainable development stems from the content of the report, formulating the thesis that sustainable development requires taking into account the needs of both present and future generations. The report has identified links between a number of issues that have previously been considered separately, including development, global environmental issues, population, peace and security. The report also discussed two types of justice: generational equity (for example, distribution and growth), and equity between generations (for example, ecology and resources) (United Nations Environment Programme, 1972).

Consequently, sustainable development is seen as a compromise between two different movements – the ecological movement and the movement of development – and the recognition of the need for solving these problems. Although the balance between environmental issues and development is diverse, the concept of sustainable

development continues to direct international cooperation, especially within the UN system.

The second important and system-building event at this stage was the United Nations Millennium Summit, which adopted eight Millennium Development Goals, which were to be achieved by 2015.

The Millennium Development Goals showed more attention to development than previous discussions, only one objective (No. 7) had a direct link with environmental issues. Thus, development management is actually added as one of the constituent elements of the concept of “sustainable development”.

III stage Formation of the concept of sustainable spatial development of territories and settlements

- 1983 “European Charter for Spatial/Regional Development” or “Torremolin Charter”, developed and adopted by the Council of Europe;
- 1994 The Aalborg Charter “The Cities of Europe on the Way to Sustainable Development” was approved by the participants of the European Convention on the Sustainable Development of Large and Small Cities of Europe;
- 2007 Leipzig Charter for Sustainable Development of European Cities;
- 2012 UN Conference on Sustainable Development “Rio +20”;
- 2015 UN adoption of 17 goals of sustainable development.

Key events at this stage took place at the regional level, in particular, the European Union should be considered the first organization. The second important and system-building event at this stage was the adoption of sustainable development goals. Unlike the eight goals of the Millennium Summit, the new goals include specific targets for cities, sustainable consumption, climate

impact, marine resources and terrestrial ecosystems.

Thus, the general evolution of approaches to the definition of the sustainable development concept and the consolidation of the idea of urban sustainable development as one of its key priorities in the medium-term perspective are followed. The above-mentioned events gave impetus to the consolidation of a number of definitions of the category of “sustainable development”.

Achieving the goals of sustainable development requires the harmonization of social, economic and environmental interests. Expanding the principles of sustainable spatial development, we draw attention to the fact that the achievement of the prospects of sustainable development is an actual scientific problem, the study of which has a multidimensional character and represents a process of ensuring effective hierarchical interaction and changing the concentration of functions of social, economic, environmental, information, innovation elements of the environment of people's lives for the full and accessible to all layers of present and future generations of people to meet their diverse needs; provides for the creation of optimal conditions for the life of the population, the functioning of economic actors and their environmental safety.

Reinterpreting theories of sustainable development we propose to take from the perspective of the action of the spatial factor as a special resource. After all, all objects of the environment exist not only in time, but also in the space where the processes of human life, organization and development of the human community are taking place (Berkes, F. et al., 2003).

The space of human life is an integral set of various interconnected elements, the relationship and the reciprocal placement of which creates certain conditions for human life and activities (Burkynskiy B. et al.,).

The concept of space:

- Geographic;
- Economic;
- Geopolitical;
- Social;
- Cultural;
- Educational;
- Scientific;
- Informational;
- Biological.

Sustainable spatial development is a dynamic process of ensuring effective hierarchical interaction and changing the concentration of functions of social, economic, ecological, innovative, informational elements of the living space of people for the full and accessible for all layers of present and future generations of people to meet their diverse needs within a certain format of space. Its varieties include:

Micro space - administrative areas, cities, metropolitan areas, urban settlements;

Meso space - administrative and territorial regions of individual countries (regions, provinces, federal states, states);

Macro space - individual countries and/or groups of countries.

A distinctive feature of sustainable development is complexity and interdisciplinarity (Fig. 2). The contribution of specialists to the development of the sustainable development concept consists in the development of research areas, which eventually turned into separate areas of knowledge: ecology, economics of natural resources, regional economics, spatial economy, innovative economy, social economy, geography, geoeconomics, urban planning and geoplanetation. The application of the synergetic approach to the study of sustainable development issues can reveal the inter-environment integration patterns of the self-organization of the development of the spatial system as a complex socio-economic and ecological system (Palikha N., 2006a)

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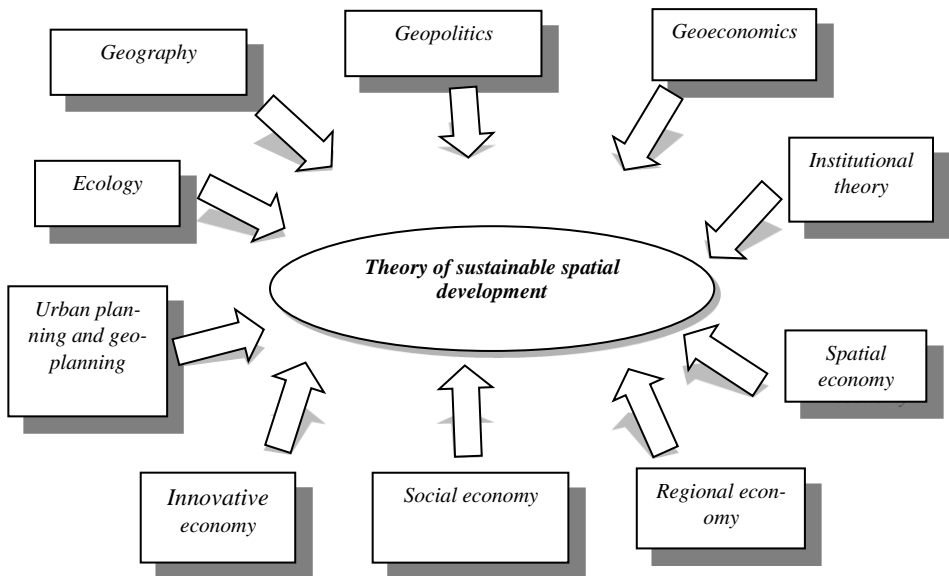
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Fig. 2. The interdisciplinary nature of the problems of sustainable spatial development



Source: compiled by the authors.

The governance of sustainable spatial development is the activity of the subjects of management regarding spatial concretization and implementation of the strategy of balanced socio-economic and environmentally sustainable development of the spatial system.

Targets:

- Raising the living standards of the population;
- Rational use of space;
- Regulation of nature use;
- Environment protection;
- Protection of the integrity of the spatial system (city, region, country, group of countries, world)
- Overcoming regional differentiation and ensuring a high level of quality of life for people
- Activation of urbanization processes and development of rural areas

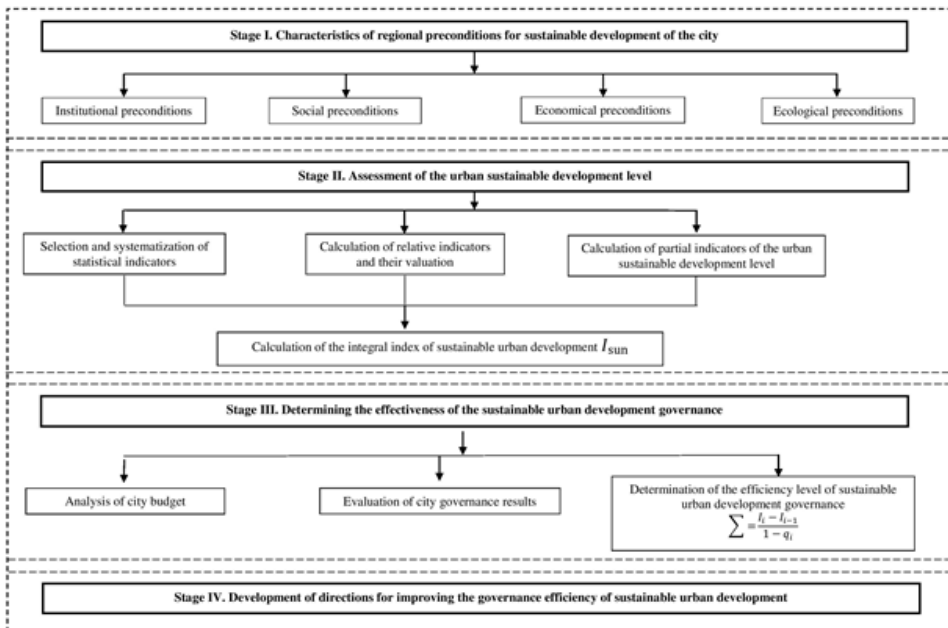
- Principle of spatial availability
- Ensuring the safe operation of the border area
- Rational use of natural resources and environmental protection
- Compliance with energy security
- Preservation of the national cultural heritage
- Enhancing access to information and knowledge (Pavlikha N., 2006b).

The study of existing methodological approaches to assessing the level of sustainable urban development and analysis of the effectiveness of management of this process has allowed to reveal certain differences, which indicates the need for their improvement for use in the process of diagnosis of sustainable development of the city. We propose a methodological approach to the diagnostics of sustainable ur-

ban development by means of the identification of successive stages, which, unlike the existing ones, include analysis of regional preconditions for sustainable development of the city, assessment of the level

of sustainable development of the city, which makes it possible to objectively analyze the efficiency of management of this process and develop directions. increase its efficiency (Fig. 3).

Fig. 3. Methodology of urban sustainable development governance diagnostics



Source: compiled by the authors.

It is revealed that the regional preconditions that have a direct impact on the sustainable development of the city are: institutional, social, economic, environmental conditions.

Institutional prerequisites of the sustainable urban development are a complex of regulatory, organizational and government and structural conditions for the development of the city, which are formed at the national, regional and local level. These should include the normative and legal foundations of sustainable development, in

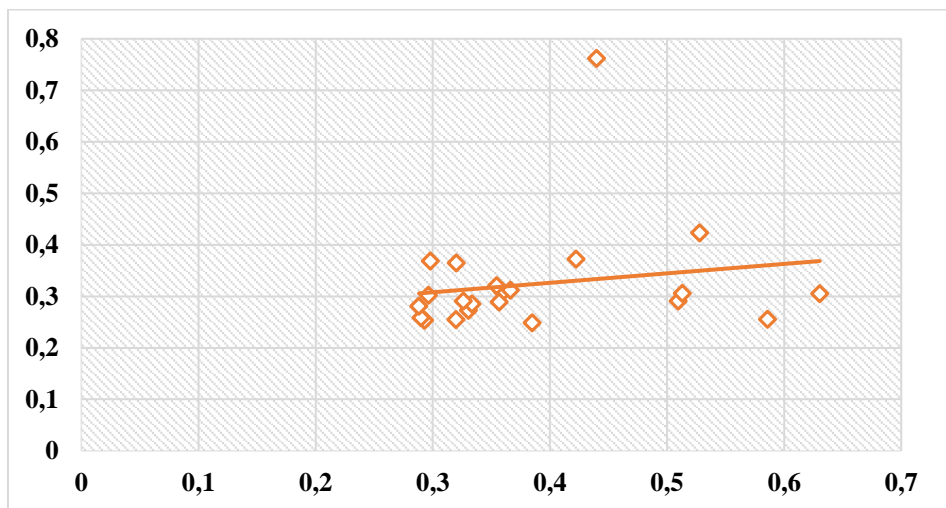
particular, laws, acts, resolutions and orders of the authorities at all levels, in fact the system of power institutions of all levels and branches (legislative, executive and judicial), non-governmental public education. The institutional prerequisites for the sustainable urban development at the regional level are formed by a system of government institutions, in particular, which should include regional state administrations and regional councils. In turn, the regional social preconditions for the sustainable urban development are the status, in-

dicators and regularities of the development of the social system of the region and the city. This group of preconditions is shaped by indicators such as the number and natural population growth, the situation in the labor market, the level of incomes and living conditions of the population, the state and level of development of social infrastructure, the health care system and social protection of the population. Regional economic conditions for sustainable urban development are the state of the economic system, which is determined by such indicators as finances and accounts, entrepreneurial activity, investments and innovations, trade, industry. The regional environmental conditions for sustainable development of the city are the state of the environment and the system of use of natural

resources. In particular, key indicators include the level of air pollution, the level of accumulation and the system of waste management, the cost of environmental protection. Thus, for an integrated assessment of the sustainable development of Ukrainian cities, we propose the use of such partial indicators as the development of the social sphere, the economic and environmental situation.

Based on the results of the calculations we can see high correlation dependence between integrated indexes of sustainable development of regions and cities in Ukraine (Fig. 4). As we see some of the cities have really strong connections with the regions, what also can prove influence of them into regions.

Fig. 4. Field of correlation dependence between integrated indexes of sustainable development of regions and cities in Ukraine

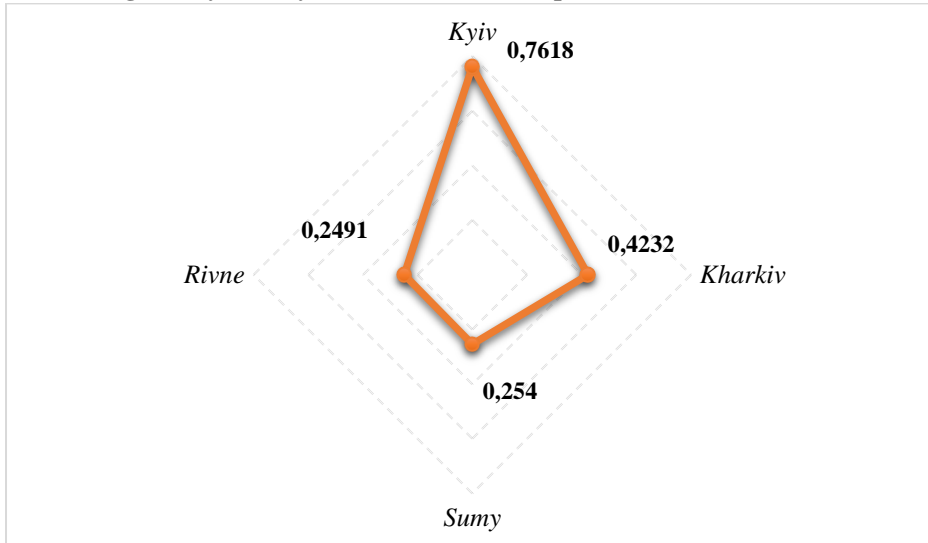


Source: compiled by the authors.

Due to calculated indexes of sustainable urban development (based on data collected from State Statistics Service of Ukraine, 2018) we can talk about high level of asymmetry within Ukrainian cities in their level

of sustainable development, what also show, unfortunately, low level of efficiency of the governance of this process.

Fig. 5. Asymmetry of sustainable development of Ukrainian cities



Source: compiled by the authors.

Conclusions.

The governance of sustainable urban development in the context of decentralization reform envisages the definition of strategic goals, objectives and target priorities aimed at socio-economic growth and the achievement of the ecological balance, and improvement of the quality of life of the population, possibly with the concentration of power at the basic level. In this case, it is expedient to use an integrated approach that allows to increase the efficiency of strategic management of sustainable urban development by integrating the efforts of the subjects of management in the process of implementing mutually agreed goals and actions, using available resources and obtaining a synergistic effect from this. We consider the effective direction of improvement of the activities of local self-government bodies through the involvement of the community in the implementation of the sustainable development strategy of the city as the management of the sustainable development projects of the city as one of

the effective tools of strategic management.

Thus, the theoretical and methodological synthesis and development of conceptual bases of sustainable development governance allow to develop the directions of its organizational and economic provision in the current conditions of reforming the national economy, the formation of competitive territorial communities, processes of Ukraine's integration into the European Union.

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