Urban environment quality and its impact on socio-economic development

Abstract. An important indicator of life quality, the urban environment, largely determines the comfort of life for the population and business. The state of post-socialist European cities testifies to the problems of the urban environment which have economic and social nature. The authors identify two groups of factors that determine urban environment quality and analyze advantages and disadvantages inherent in various methods of assessing it. The object of the analysis was a group of large Russian cities - regional capitals with the population from 250 thousand to 1 million people (except cities with extreme climate). Various indicators of the urban environment quality (2018-2019) and a number of indicators of socio-economic development (2013-2015, 2018) were taken into account.

The research is aimed at identifying the relationship between the parameters of socio-economic development of the city and the region with the urban environment quality. The dependence between the urban environment quality and the level of the city budget income per capita has been determined, which allowed us to divide the analyzed cities into groups.

Based on the results of our study, the recommendations have been formulated to address current urban issues and improve the living standards of citizens. The authors propose to use in post-socialist European countries an integrated urban quality assessment methodology that includes both objective methods based on statistical data and subjective methods derived from expert evaluations and population surveys and involving citizens in the urban debate.

Keywords: City; Urban Environment Quality; Urbanization; Urban Sustainability Factors; Urban Environment Quality Index; City Budget; Municipal Budget

JEL Classification: R58

Acknowledgments and Funding: We are grateful to the university management and the Rector of The Southwest State University (SWSU) for assistance in preparing this article

Contribution: Tatyana Polyakova has analyzed the relationship between the urban environment quality and indicators of socio-economic development; Tatyana Tsurik has carried out the analysis of problems of urban development in the post-socialist urbanization and ways to improve urban environment quality.

DOI: https://doi.org/10.21003/ea.V180-17
різним методикам оцінки якості міського середовища. В якості об’єкта аналізу була обрана група великих міст Росії – регіональних столиць із населенням від 250 тисяч до 1 мільйона чоловік (окрім міст із екстремальним кліматом), для яких проаналізовано різні показники якості міського середовища (2018–2019 рр.) і ряд показників соціально-економічного розвитку (2013–2015, 2018 рр.). Проведене дослідження було спрямоване на виявлення взаємозв’язку параметрів соціально-економічного розвитку міста та регіону з якістю міського середовища. Визначено залежність якості міського середовища від рівня доходів міського бюджету на душу населення, що дозволило розділити аналізовані міста на групи.

За результатами дослідження сформульовано рекомендації для поліпшення життя населення міст, у тому числі використання комплексної методики оцінки якості міського середовища, що включає як об’єктивні методи, засновані на статистичних даних, так і суб’єктивні, отримані в результаті експертних оцінок і опитування населення, обов’язкова участь горожан в обговоренні питань формування міського середовища.

Ключові слова: місто; якість міського середовища; урбанізація; фактори сталого розвитку; індекс якості міського середовища; бюджет міста.

Полякова Т. Н.
kандидат економічних наук, доцент, кафедра фінансів і кредиту,
Юго-Западний державний університет, Курск, Російська Федерація

Цурик Т. О.
kандидат культурології, доцент, кафедра архітектури, градостроительства і графіки,
Юго-Западний державний університет, Курск, Російська Федерація

Качество городской среды и его влияние на социально-экономическое развитие

Аннотация. Важный показатель качества жизни, городская среда, во многом обусловливает комфортность для жизни населения и ведения бизнеса. Состояние городов постсоциалистической Европы свидетельствует о проблемах городской среды экономического и социального характера. Авторами выделены две группы факторов, определяющих качество среды проживания в городах, проанализированы преимущества и недостатки, присущие различным методикам оценки качества городской среды. Как объект анализа была выбрана группа крупных городов России – региональных столиц с населением от 250 тысяч до 1 миллиона человек (кроме городов с экстремальным климатом), по которым были проанализированы различные показатели качества городской среды (2018–2019 гг.) и ряд показателей социально-экономического развития (2013–2015, 2018 гг.). Проведенное исследование было направлено на выявление взаимосвязи параметров социально-экономического развития города и региона с качеством городской среды. Определена зависимость качества городской среды от уровня доходов городского бюджета на душу населения, что позволило разделить анализируемые города на группы.

По результатам исследования сформулированы рекомендации, направленные на улучшение качества населения городов, в том числе использование комплексной методики оценки качества городской среды, включающей как объективные методы, основанные на статистических данных, так и субъективные, полученные в результате экспертных оценок и опроса населения; обязательное участие горожан в обсуждении вопросов формирования городской среды.

Ключевые слова: город; качество городской среды; урбанизация; факторы устойчивого развития; индекс качества городской среды; бюджет города; доходы.

1. Introduction

Under present-day conditions, the level and pace of socio-economic development of the region is determined by a set of various factors: geographical location, natural resources, human capital, fixed capital, and many others, and the influence of some characteristics is not obvious and even controversial. Urban environment quality is one of the most important indicators of the economic status of cities and factors of their development. The urban environment quality is a complex integral category expressed through various indicators. For example the residents percept it as a complex of available material values (Ilyina, 2015), while the city municipality - as a resource for economic development. The urban environment as one of the indicators of life quality is also a factor of competitiveness of the city (Budd, 1998). For newcomers, convenient cities are perceived as centers of attraction, «successful places». Cities with a high level of urban quality are attractive for people who want to return there again or settle down (Adams & Tiesdell, 2012), which indicates the tourism potential of the urban environment quality. Thus, the urban environment quality directly affects the quality of the citizens’ life and tourist attractiveness of the city.

Since the study of the urban environment is a fairly young field, the role of various factors in improving the quality of the living environment remains unclear. The issue of assessing the urban environment quality is also a subject of discussion. Foreign researchers have proposed a large number of methods and various indicators, such as the city prosperity index (CPI), sustainable...
urban development index by the McKinsey consulting company, and others. Russian specialists have developed an innovative method for assessing the quality of the urban environment based on statistical indicators, search engine data and social networks. Population surveys are regularly conducted to identify the «most comfortable cities» or to assess the quality of life in various cities. The existing variety of approaches requires their systematization and assessment of their applicability to the modern Russian situation.

2. Brief Literature Review
Assessing the urban environment quality has a wide range of research definitions and is one of the important indicators of the city inhabitants’ living standards. This area of research is promising from the point of view of the ongoing process of urbanization which has a global scope and specific manifestations in the countries of Eastern Europe (Taubenböck et al., 2019), as well as from the point of view of the problem of measuring indicators and clarifying the significance of the environmental component in the structure of living standards. The works of K. Lynch (1982), J. Jacobs (1961), Ch. Landry (2008) and others are devoted to understanding the relationship between urban planning tasks and socio-economic issues of regional planning. Problems of optimizing the use of territory in urban space are reflected in the research of V. A. Nefedov (2002) and T. Yu. Bystrova (2014). In recent years, it has become increasingly popular to study various aspects of the relationship between life quality and the level of the urban environment development (Polyakova & Tsurik, 2019).

The low quality of the urban environment in most Russian cities is caused by the consequences of the urbanization in the Soviet and post-Soviet periods of Russian society formation. These periods are related, but have a number of distinctive features. Urbanization of the Soviet period can be represented as a model of development that ensures the dynamics of industrial centres, while subordinating the interests and needs of an individual to economic tasks without taking into account the quality standards of the urban environment (Pivovarov, 2001). An obvious consequence of the urbanization of that period was some discrepancy between economic opportunities and social standards of life in the city, which is reflected in such indicators of the urban environment quality as the transport system congestion and environmental problems of urban space (Moscow Urban Forum, 2019).

The urbanization of the post-socialist period has different specificity. Its consequences in Eastern European cities can be reduced to three main blocks: institutional, social, and urban ones (Sýkora & Bouzarovski, 2012). Particularly painful transformations occur within the social block, which is caused by the economy restructuring and the social stratification of the urban population. Economic changes in the post-Soviet space have also increased the growth of socio-economic inequality and weakened the social cohesion of the urban population. With the transition to market economy, the system of apartment house management has collapsed. Destruction rate of many houses has increased. Without further incorporation of government support programs, it can lead, as witnessed by similar examples in European cities, to ghettoization of entire city districts and the relocation of the well-off residents. In contrary, changing the urban space in favour of new facilities aimed at the well-off segments of the population attracts investment to the city (Smith, 1996). However, increasing the prestige of the city centre and improving the urban environment quality do not extend beyond this area, because it is not economically feasible.

The problems of the urban environment of modern Russian cities are similar in many respects to those that are being solved in the Eastern European cities and are characterized by growing gentrification and uneven development of the urban space. In comparison with the largest European cities and the Russian capital, these processes are less intense and stressful in the regional centres. There is a risk that as the social advantages achieved by the cities during the Soviet period are lost, the processes of social segregation will increase in the future and be accompanied by the urban environment degradation (Makhrova & Golubchikov, 2012). Thus, it is obvious that improving the urban environment quality can be achieved only by overcoming the consequences of socialist and post-socialist urbanization and activating the levers of the central power and local self-government.

3. The purpose of the paper is to analyze existing methods for assessing the urban environment quality and identify the major factors that determine its level and the ability to solve current urban problems.
4. Results

The urban environment is being formed under the influence of a number of factors that ultimately determine its quality. The factors of the urban environment formation are summarized in Figure 1.

Taking into account the differences in the impact on the formation of the urban environment, it is advisable to divide them into 2 blocks: basic factors and urban sustainability factors.

Basic factors include those which determine the so-called «structure of the territory»: climatic zone, the natural landscape, historical and cultural features, and existing infrastructure. Moreover, similar territorial features can be used in different ways for their development. For example, the presence of natural features such as hills, ravines or water reservoirs on the territory of a city can become the basis of a unique urban environment, or cause problems in the development of the transport network.

The second block of elements of urban environment formation is a set of parameters of urban sustainability factors, which includes three groups:

- economic factors, both national and specific, related to the state of the production sector, the regional budget;
- social factors that characterize the well-being of city residents, their activity in matters of self-government, including landscaping;
- environmental factors related to the state of air, water infrastructure, soil, as well as light and noise pollution of the urban environment.

The block of urban sustainability factors assumes that economic progress, increasing the production of goods and services should serve the good of all people, providing for their needs, and at the same time, taking into account the state of the environment.

In contrast to the basic factors of urban environment formation, which go through a long period of creation and change, urban sustainability factors are relatively mobile and subject to impact when applying modern effective approaches in urban planning and management. Therefore, the strength and direction of these factors’ influence largely depends on the quality of city and regional authorities’ work.

Currently used methods for assessing the urban environment quality can be divided into three main groups: statistical, expert and sociological ones. Each group of methods claims to be objective, but even statistical methods are not free from subjectivity, which is manifested in the choice of certain indicators. A number of approaches combine methods belonging to different groups.

It should also be noted that a significant number of studies concern the development of techniques that comprehensively assess the quality of life. A detailed review of the calculated indicators shows that assessing the quality of life of the population, as a rule, intersects with the assessment of the urban environment quality, including it as an integral part.

We shall consider the first group of methods based on the use of statistical indicators.

So, for example the UN-Habitat City Prosperity Index (CPI) proposed by the United Nations takes into account such criteria as productivity (creation and distribution of wealth), social justice,
infrastructure development (access to community facilities, information and communication technologies), environmental sustainability (protection of the natural environment), quality of life (general well-being and life satisfaction of city residents), and urban governance (UN-Habitat, 2012).

It can be seen that the calculation of City Prosperity Index (CPI) takes into account income distribution and other parameters that characterize the level of social justice, which is most relevant for developing countries.

The methodology for assessing the quality of life in major cities around the world (Quality of living city racing) developed by the consulting company Mercer (2019) includes 39 indicators in 10 areas:
1) political and social environment;
2) economic environment;
3) socio-cultural environment;
4) medicine and health;
5) education and training;
6) communal services and transport;
7) recreation and entertainment;
8) availability of consumer goods;
9) housing and infrastructure;
10) natural environment and climate.

The calculated integrated indicator is intended for international companies that make their employees compensation for the costs connected with performing international tasks. In this regard, attention is paid to the political environment and climate which do not depend on the residents of the city and its management.

In 2011, McKinsey Global Institute proposed a methodology for calculating the Sustainable City Development Index in developing countries (Bouton, Lindsay, & Woetzel, 2012). The following main areas of evaluation were identified:
1) essential needs of the population;
2) efficient use of resources;
3) clean environment;
4) urban infrastructure;
5) focus on sustainable development in the future.

When forming the McKinsey Sustainable City Development Index, environmental indicators play a significant role (purity of environment, resource efficiency, and investment in environmental protection), while safety and social development indicators are almost not represented.

The Organization for Economic Cooperation and Development has elaborated recommendations for assessing the quality of life in cities (OECD, 2014). According to the document, life quality is determined by living circumstances (income, employment, housing conditions) and non-material factors (health, education, environmental quality, personal safety, citizen activism, work-life balance). The OECD member countries adjust the methodology according to their own goals and special features. For example, Switzerland has expanded the list of main areas of assessment and includes the level of infrastructure development, population mobility, culture and leisure (Swiss Federal Statistical Office, 2016). Poland calculates indicators that characterize the population’s leisure time, transport infrastructure and Internet access (Polityka.pl, 2018). The use of additional indicators shows the interest of countries in a more in-depth analysis of the urban environment quality.

The Russian Federation has now adopted a methodology for forming an urban environment quality index, which includes indicators that characterize the state of 6 elements of the urban environment (housing, public business, social and leisure infrastructure, green spaces, the street and road network, and citywide space) according to 6 criteria (Ministry of Construction, Housing and Utilities of the Russian Federation, 2019). The index is calculated by the Ministry of Construction, Housing and Utilities of the Russian Federation and is used for the implementation of the national project «Housing and urban environment». The index also helps to determine the amount of subsidies going from the federal budget to the budgets of the Russian Federation constituent entities to support programs for the formation of modern urban environment.

The difference between the Russian methodology for assessing the urban environment quality is that for the correct preparation of assessment scales, cities are divided into ten groups, depending on the climate zone and the number of inhabitants. In addition, the indicators are calculated using not only statistical data, but also search and information mapping systems (for example,
to assess the index of pedestrian accessibility or the number of streets with developed services),
social networks (for example, to assess the attractiveness of green areas, there was used an in-
dicator of the number of photos taken within green areas per unit area of these territories), Earth
remote sensing data (to assess the state of green spaces). The lack of environmental pollution and
social interaction indicators calls attention to itself, which can be explained by the developers’ goal
to create a «tool for assessing the quality of the material urban environment and the conditions for
its formation».

Since the social component of the urban environment and its perception by the population
is difficult to assess based on statistical indicators, a number of researchers have focused on
sociological methods. For example, in one of such studies, an indicator was chosen such as the
«friendliness» of the environment in relation to the least protected segments of the population, i.e.,
the elderly and families with children under 18 y. o. (Gorina & Burdyak, 2015).

M. Bonaiuto et al. (1999) analyze the satisfaction with the living environment. It consists of three
main components: cognition (cognitive assessments of the environment), emotion (emotional re-
sponse to the environment) and behaviour (actions related to the living environment, including the
decision to leave it). Two ways of collecting information about satisfaction with the living environ-
ment are identified: «an inductive one», based on spontaneous assessments and statements of
residents, which is conducted in the form of a semi-structured interview, and «a deductive one»,
which involves conducting a survey of a large number of residents based on a developed ques-
tionnaire. The authors propose to use perceived residential environment quality indices (PREQIs),
namely: «residential» quality and «attachment to the area» (Bonaiuto et al., 1999).

The absolute advantage of the proposed method is the assessment of not only material objects,
but also the nature of social interaction among citizens, and the aesthetic perception of urban fa-
cilities.

In the Russian Federation, one of the methods for assessing the quality of life in cities was de-
veloped at the Financial University under the Government of the Russian Federation (Financial
University under the Government of the Russian Federation, 2019). It is based on the opinions of
residents about various aspects of urban life:
• work of services engaged in maintenance and repair of roads, public transport and traffic police,
• development of education and cultural infrastructure;
• state of the housing stock and provision of urban amenities;
• work of local authorities;
• quality of health care;
• overall assessment of the situation in the city.

One should note that most of the abovementioned aspects (with the exception of health care
quality) characterize the urban environment.

The approach of Domofond.ru portal to form the quality of life rating of the Russian cities in-
volved a survey of the population, during which respondents were asked to evaluate a number of
statements that characterize their city by the following parameters:
1) safety;
2) cleanliness;
3) ecology;
4) silence;
5) public transport;
6) roads/parking spaces;
7) stores and markets;
8) sports and recreation;
9) infrastructure for children;
10) neighbours;
11) work of communal services;
12) ratio of income and cost of living (Domofond.ru, 2018).

Out of the twelve parameters, the first eleven characterize the urban environment quality, only
the ratio of income and cost of living determines the price affordability of goods and services for
the city’s population.

Expert assessment methods are not so common, which is due to their relative complexity and
labour intensity, on the one hand, and the uniqueness of each object on the other hand. This ap-
proach is applied by the specialists of the Institute of Spatial Planning «Urbanica», who recommend
conducting an audit of the urban environment to compile a database on its current state (Institute of Territorial Planning «Urbanika», 2017).

To implement the comparability of various methods for assessing the urban environment quality, we have compared their results. For that purpose, we have used correlation analysis. We have selected a group of major cities in Russia - regional capitals with the population of 250,000 to 1 million people, except for cities with extreme climates, as the object of our analysis. Indicators of the quality of the urban environment (the urban environmental quality index, 2019), the quality of life rating of the Russian cities (Domofond.ru, 2018), the quality of life index of the Russian cities (Financial University under the Government of the Russian Federation, 2018) were compared.

The average positive relationship between the indicators of the urban environment quality index and the Domofond.ru portal’s life quality index has been revealed. There has also been revealed a weak negative relationship between the urban environment quality index and the Financial University’s life quality rating. This allows us to conclude that the results of research largely depend on the methodology used, however, the quality of life of Domofond.ru portal index is more consistent with statistical data.

To assess the significance of various factors in the formation of the urban environment, we have conducted a correlation analysis using a number of socio-economic indicators (gross regional product per capita, city budget revenues per capita, crime rate, migration growth) (Federal State Statistics Service, 2018). In all cases, the analysis showed a weak relationship between the urban environment quality index and other parameters.

It is interesting to say that the «wealth» of the region does not affect the urban environment quality of its capital: the correlation coefficient between the urban environment quality index and the level of gross regional product per each resident was 0.063623. A greater influence, although being still weak, is exercised by the level of city budget revenues per resident, since a significant part of the city budget revenues is associated with the formation of a safe and comfortable urban environment.

Figure 2 shows the cities analyzed within the coordinates «urban environment quality index» - «city budget revenues per 1 resident».

The median value of budget revenues is USD 323.6 per person. We have called cities with a lower value of this indicator «poor», and cities with a higher value - «rich». The average value of the urban environment quality index for the «rich» cities is 190.4, while for the «poor» ones - 180.3.

Figure 2 shows that cities can be divided into 4 categories:

a) «poor» with unfavourable urban environment (for example, Chita, Ulan-Ude, Kurgan, Kursk);
b) «rich» with unfavourable urban environment (such as Kemerovo, Khabarovsk, Syktyvkar, Tomsk);
c) «rich» with favourable urban environment (Tyumen, Kaliningrad, Krasnodar, Belgorod, Grozny, Kaluga);
d) «poor» with favourable urban environment (Cheboksary, Vladikavkaz, Kostroma, Saratov).

We can conclude that the latter category of cities spends budget funds more effectively on creating comfortable urban environment.

At the same time, creating comfortable, safe and aesthetic urban environment is impossible without the participation of the city’s population. The inclusion of urban communities in planning processes in the 2000s in the United States and Europe has led to the formulation of participatory design principles. The consolidation of urban communities allows one to influence decision-making on various issues of improving the urban environment: from improving the yard area to prohibiting the construction of architectural buildings that violate the historical appearance of cities. Many problems of development and formation of the urban environment can be solved at the initial stage of emergence and do not require large economic investments.

5. Conclusions

The urban environment is a complex phenomenon that includes the material objects of urban space and the nature of social interaction of the city’s population in the perception of both citizens and visitors. We have identified two groups of factors that determine the urban environment the quality. The basic factors are the natural landscape and historical features of cities, which cannot be changed. The second group of factors was called urban sustainability factors, since they cover three main directions of modern society development, intended to ensure the well-being of both present and future generations. The economic, social and environmental features of urban life can be adjusted through targeted policies on the part of government agencies and local governments.
Figure 2: The ratio of urban budget revenue per capita (average 2013-2015) and urban environmental quality index (2019) of the cities - regional capitals with the population of 250 thousand to 1 million people.
Source: Compiled by the authors based on data of Ministry of Construction, Housing and Utilities of the Russian Federation, 2019 and the Centre for Urban Economics «KB Strelka» (2017)
The conducted analysis has shown that there is a weak link between the urban environment quality and the socio-economic indicators of the city and the region. The highest value of the correlation coefficient (0.36) was obtained when evaluating the relationship between the urban environment quality index and the level of city budget income per capita. When dividing cities by the amount of budget revenues, the average value of the urban environment quality index was 180.3 points for the «rich» cities and 190.4 points for «poor» ones. This allows us to conclude that the major factor determining the comfort and safety of living in the city is the professionalism and desire of cities and regions’ leadership. The practice of the citizens’ participation in solving the most important urban issues is also a significant tool for improving the quality of life, which, in turn, contributes to the consolidation of the population in a particular city and potentiates the inflow of investment.

The basis for implementing policies to improve the urban environment quality shall be a set of methods for assessing it which must include both objective methods based on statistical data, and subjective methods obtained as a result of expert assessments and surveys of the population. The main drawback of statistical indicators is that only the presence of certain material objects (monuments, parks, pedestrian crossings) is taken into account, while it is impossible to assess their demand by citizens. This problem is partially solved in the urban environment quality index proposed by the Russian experts, but its use must be supplemented by sociological methods and expert opinions.

References

1. Adams, D., & Tiesdell, S. (2012). Shaping Places: Urban Planning, Design and Development (1st edition). London: Routledge. doi: https://doi.org/10.4324/9780203105665
2. Bonaiuto, M., Aiello, A., Perugini, M., Bonnes, M., & Ercolani, A. P. (1999). Multidimensional perception of residential environment quality and neighbourhood attachment in the urban environment. *Journal of Environmental Psychology*, 19(4), 331-352. Retrieved from https://doi.org/10.1006/jevp.1999.0138
3. Bouton, S., Lindsay, M., & Woetzell, J. (2012). New models for sustainable growth in emerging-market cities. *McKinsey on Sustainability & Resource Productivity*, 1, 54-63. Retrieved from https://www.mckinsey.com/~/media/McKinsey/dotcom/client_service/Sustainability/PDFs/McK%20on%20SRP/SRP_07_Cities ashx
4. Budd, L. (1998). Territorial Competition and Globalization: Scylla and Charybdis of European Cities. *Urban Studies*, 35(4), 663-685. doi: https://doi.org/10.1080/0042098984691
5. Bystrova, T. Yu. (2014). Park Emscher: principles and techniques for the rehabilitation of industrial territories. *Akademicheskii Vestnik UralNIIproekt (Academic Bulletin UralNIIproekt)*, 2, 9-14 Retrieved from https://cyberleninka.ru/article/n/park-emsher-printsiy-i-priemny-reabilitatsii-promyshlennyy-territoriy (in Russ.)
6. Center for Urban Economics «KB Streika» (2017). Wealth and independence: what makes the city budget sustainable. Retrieved from http://citybudget.streika-kg.com (in Russ.)
7. Domofond.ru (2018). Full rating of Russian cities by quality of life in 2018. Retrieved from https://www.domofond.ru/statyia/polnyy_reyting_gorodov Rossi po_kachestvu_zhizni_v_2018_godu/7679 (in Russ.)
8. Federal State Statistics Service (2018). Regions of Russia. Socio-economic indicators. Retrieved from https://gks.ru/bgd/reg/B18_14p/Main.htm (in Russ.)
9. Financial University under the Government of the Russian Federation (2019). Research on the Quality of Life in the Russian Cities. Retrieved from http://www.fa.ru/News/2019-11-27-research.aspx (in Russ.)
10. Gorina, E. A., & Burdyak, A. Ya. (2015). Quality of life in big city through the urban environment perceptions. *Sotsiologiya Goroda (Sociology of the City)*, 2, 11-31. Retrieved from https://www.elibrary.ru/item.asp?id=23602274 (in Russ.)
11. Ilyina, I. N. (2015). Quality of the urban environment as a factor of sustainable development of municipalities. *Imushchestvennye otnosheniya v Rossiyskoi Federatsii (Property Relations in the Russian Federation)* 164(5), 69-82. Retrieved from https://cyberleninka.ru/article/n/kachestvo-gorodskoy-sredy-kak-faktor-ustoychivogo-razvitiya-munitsipsalnyh- obrazovanii/viewer (in Russ.)
12. Institute of Territorial Planning «Urbanika» (2017, July 20). The spatial development strategy of the modern Russian city. Retrieved from http://urbanica.spb.ru/wp-content/uploads/2017/07/Buklet_Po_Strategiam_20_07_Szhaty_2.pdf (in Russ.)
13. Jacobs, J. (1961). *The Death and Life of Great American Cities.* doi: https://doi.org/10.2307/794509f
14. Landry, Ch. (2008). The art of creating cities: quality of life and urban environment (Trans. from Eng.). Moscow: Art-Manager (in Russ.).
15. Lynch, K. (1982). *The image of the city* (Trans. from Eng.). Moscow: Stroyizdat. Retrieved from http://books.totalarch.com/image_of_the_city_kevin_lynn (in Russ.)
16. Makhrova, A. G., & Golubchikov, O. Yu. (2012). Russian city under capitalism: the social transformation of intracity. *Vestnik Moskovskogo Universiteta. Ser. 5. Geografiya (Bulletin of Moscow University. Series 5. Geography)*, 2, 26-31 Retrieved from https://publications.hse.ru/minute/pubs/share/folder/0017fhsnu/direct/193317029.pdf (in Russ.)
17. Mercer (2019). Retrieved from https://mobilityexchange.mercer.com/Insights/quality-of-living-rankings
18. Ministry of Construction, Housing and Utilities of the Russian Federation (2019). The urban environment quality index is a tool for evaluating the quality of the material urban environment and the conditions for its formation. *The Quality Index of the Urban Environment*. Retrieved from https://xn----dtbcccdtsypabxk.xn--p1al/ (in Russ.)
19. Moscow Urban Forum (2019). Official web-site. Retrieved from https://mosurbanforum.com/library
20. Nefedov, V. A. (2002). Landscaping and sustainability. St. Petersburg. Retrieved from http://books.totalarch.com/landscape_design_and_environmental_sustainability (in Russ.)

21. OECD (2014). How's Life in Your Region? Measuring Regional and Local Well-being for Policy Making. Paris: OECD Publishing. doi: https://doi.org/10.1787/9789264217416-en

22. Pivovarov, Yu. L. (2001). Urbanization of Russia in the 20th Century: Representations and Reality. Obshchestvennye Nauki i Sovremennost (Social Sciences and the Present), 6, 101-113. Retrieved from http://ecsocman.hse.ru/data/777/303/1218/008pIWOVAROWx20x60.l..pdf (in Russ.)

23. Polityka.pl (2018). Quality of Life Index. Retrieved from https://rankingmiast.polityka.pl (in Pol.)

24. Polyakova, T. N., & Tsurik, T. O. (2019). Socio-cultural aspects of industrial areas rehabilitation in urban environment. Izvestiya Yugo-zapadnogo gosudarstvennogo universiteta. Seriya: Ekonomika. Sotsiologiya. Menedzhment (Southwest State University Bulletin. Series of Works: Economy. Sociology. Management), 32(3), 226-235. Retrieved from https://www.elibrary.ru/item.asp?id=39289897 (in Russ.)

25. Smith, N. (1996). The new urban frontier: Gentrification and the revanchist city. New-York: Routledge. Retrieved from http://rohcavamaintenant.free.fr/USB%20KEY%20Fahriye/k%C4%B1tap%20Neil%20Smith__The_New_Urban_Frontier__Gentrification_and_the_Revanchist_City.pdf

26. Swiss Federal Statistical Office (2016). City Statistics (Urban Audit): Quality of life in the cities 2016. Neuchâtel: Federal Statistical Office (FSO). Retrieved from https://www.bfs.admin.ch/bfs/en/home/statistics/cross-sectional-topics/city-statistics.assetdetail.1401994.html

27. Sýkora, L., & Bouzarovski, S. (2012). Multiple transformations: Conceptualising the post-communist urban transition. Urban Studies, 49(1), 43-60. Retrieved from https://www.unipo.sk/public/media/16170/SykoraBouzarovski_2012_UrbanStudies_49_1_MultipleTransitions.pdf

28. Taubenböck, H., Gerten, C., Rusche K., Siedentop, S., & Wurm, M. (2019). Patterns of Eastern European urbanisation in the mirror of Western trends - Convergent, unique or hybrid. Environment and Planning B: Urban Analytics and City Science, 46(7), 1206-1225. doi: https://doi.org/10.1177/2399808319846902

29. UN-Habitat (2012). The Six Dimensions of Urban Prosperity. Retrieved from https://cpi.unhabitat.org/six-dimensions-urban-prosperity

Received 10.11.2019
Received in revised form 20.11.2019
Accepted 27.11.2019
Available online 30.12.2019