Biosphere compatibility - a non-controlled paradigm of security of urbanized (city) environment

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Abstract. The analysis of development projects and reconstruction safe urban environment adopted in recent years, the General plans of the cities of Central Russia from the position of the biosphere compatible technologies. The analysis is based on the fundamental principles of transformation of the city into biosphere compatible and developing the person. It is shown that all the problems of the modern city are between the two extremes – the destruction of nature and degradation of human development level. The algorithm of analysis of master plans and development programs of the city with the quantitative assessment of conceptual bases of formation of safe and comfortable urban environment and approaches to the modelling and forecasting of socio-bio-technosphere in the context of modern challenges and the dynamics of changes in anthropogenic and natural landscapes. It is shown that identified in the draft master plans of the individual cities of Russia the reconstruction of the building of urban infrastructure are not backed by real programs of self-development of their territories. In the doctrine of urban renewal is not the main – the creation of conditions and mechanisms for symbiotic creative development of the city and of man is based on the duality of the problem "man and biosphere". Evidence-based principles for the transformation of the city in biospherically and development of man in the absence of mechanisms for their implementation in real life, in the most part manifests itself negatively. The principle of the symbiosis of city and nature "biosphere compatibility of the city" is uncontested for human survival, and the principle of satisfaction of human needs, including the enforcement of city application functions in any size city or settlement is a priority for human development as an intellectual community.

1. Introduction

«One of the most difficult tasks of our time is the slowing down of the destruction of wildlife ...»
Archie Carr

The resolution of the V International Scientific Conference" Globalistics 2017: Global Ecology and Sustainable Development "(Moscow, September 30, 2017) noted that "the most important task of ensuring global security is to achieve a biosphere compatibility of man and nature." This completely meets the fundamentally new postulates of the new doctrine of town planning developed by RAASN [1-4]. In accordance with this doctrine, the principles of town planning, based on the symbiosis of town-planning systems and their natural-natural environment, are being formulated to ensure security and comfortable living conditions for the population. The methodology for obtaining quantifiable
results [5] is proposed, with the aim of developing human potential along with the development of town planning technologies, taking into account environmental requirements for the environment.

2. Purpose and methods of research

The next step in the development of these studies is the use of available statistical data in a generalized form as indicators for the quantitative assessment and scientific justification of the long-term plans and projects for the reconstruction of a safe urban environment. The result of such studies can be the definition of standardized parameters and the development of a new generation of normative documents aimed at solving the problems of a modern city located between two extremes - the destruction of nature and the degradation of human potential.

In connection with the designated tasks, using the formulated principles as a tool for the management system for the formation and development of biosphere-compatible settlements, we will analyze the developed and approved master plans and urban development programs using the example of general plans of some cities of the Central Federal District of Russia [6-8].

3. The analysis of the developed and approved master plans and programs of development of the cities on the example of general plans of some cities of the Central Federal District of Russia

All the draft amendments to the adjustment of the general plans of these cities of Russia are made according to the template of similar documents that has been traditionally developed over the past decades. They are based on the traditionally established scheme for a comprehensive assessment of the state of the territory with an analysis of the options for the forecast development of the demographic situation, housing and social spheres, the current state and development of transport and engineering infrastructure, development of specially protected natural areas and cultural heritage sites. At the same time, there is some evidence of justification for the selected options for the development of the territory, which is not supported by due forecast calculations and, even more so, a quantitative assessment of such forecasts. In justifications there are no experimentally determined changes in the values of environmental parameters in comparison with those that existed before, which leads to increasing frequency of ecological and social crises and even catastrophes at the local and global scale [10, 11]. The transition to a new paradigm of town planning in a postindustrial society on the basis of the principles of symbiosis of urban development systems and their natural and natural environment requires a change in the overall strategic goal of strategic planning of the city's life and the development of time-tested city planning programs that go beyond the traditional adoption of specific engineering and technical measures and increasingly oriented towards socio-economic sounding, the formation of new standards of behavior, Morality, the relationship between man and nature, exclude the possibility of the destruction and degradation of environment. In such programs, emphasis should be placed on the self-organization of the city and the formation in it of a biosphere-compatible socio-natural safe environment, the core of which is the unity of the city, nature and human consciousness. Unfortunately in the town-planning activity of the officials of our cities there is no clear and clear understanding of indivisible and uncompetitive public interests. According to TLTulchinsky [12], one of the reasons for this in the historically developed way of managing, based on the use of natural rent. And the state, represented by the bureaucratic bureaucracy, considers all its resources, including the population, as rent. It is not interested in increasing the competitiveness of the economy, the growth of security and the quality of life of the population. In fact, it is a way of enriching the holders of power.

If we consider, as an example, the drafts of the general plans of the cities of Kursk [6], Orel [7], Bryansk [8], Smolensk [9] and other regional centers of the Central Federal District of Russia, they do not contain the basic principles of strategic development. According to these plans, the projects do not outline the strategic goal of the state policy of town planning and city planning aimed at overcoming negative trends and degradation processes in the life of urbanized territories and ensuring the development of human potential as a strategic condition for the country's existence. As a result of the proposed projects of adjusting general plans and, accordingly, the reconstruction of cities - the gradual transformation of these cities from the center of development of civilization into sources of destruction
of the surrounding nature and degradation of the population. Indeed, one of the principles of the paradigm of urban planning based on biosphere compatibility is the satisfaction of rational human needs through the functions of the city [1,2]. Considering the last adjustments of city master plans [6-9] through the prism of this principle, as a projection of a person on the functions of urban planning systems, it is easy to see that the events outlined in the future in cities do not cover all the main functions of a modern city. The main focus in them, at best, is the function of "life-support" - the availability of decent housing, jobs and their transport accessibility, provision of food, life and household items, affordable medical care, etc. More than 70-80% of the strategic development of cities.

Other functions, such as "knowledge of the world and creativity", "obtaining knowledge," are devoted unduly little attention in the general layout of urban development. And such functions as "charity" and "connection with nature" are almost not represented. For example, if we compare the drafts of the general plan of the city of Kursk that have been in effect for the last 30 years and adopted in 2016 for the next 20 years [5], it can be seen that for the last 30 years recreational areas have significantly decreased. The green plantations of the central part of the city are mostly of artificial origin (Fig. 1). The provision of public with green areas of public use (parks, squares, boulevards) is 5.8 m² per person and does not even reach a very modest normative indicator of 6 m² per person. However, the "life-support" function is often planned in a strange way. For example, in the long-term plan for the development of the city of Kursk [6], where the population's need for trade objects already exceeds the value of the standard indicator by 6 times !, it is planned to increase the excess of this indicator by 2035 up to 8 times. At the same time, the existing indicator for the city's provision of preschool educational institutions, polyclinics, sports facilities and especially swimming pools according to the strategic plan will change little by 2035, even on paper. Planned in the master plan of the city, which was in effect for almost 30 years, the introduction of objects of indicators of green construction (the function of "connection with nature" is not fulfilled, and the existing indicators of green plantations have even been reduced (see Figure 1).
In the past two decades, such examples are numerous, for example, at a recent press conference of the country's president with representatives of the media, the question was raised about cutting down relict urban forests and building their palaces in a protected area — not the city of Vladivostok [13]. Similar examples were given in the all-Russian program "Vesti" (airtime 07/01/2018 (20:00), where the proven scheme of seizing especially protected on paper was shown, but in practice the scheme of the specially developed territories of the Irkutsk (Pribaikalsky National Park), Smolensk (National Park " Smolensk Lake District ") and the Moscow Region (" Ozerno-swamp complex near the Novinki village ") of the regions, there are 103 reserves in Russia, 51 national nature parks and several thousand reserves. More than one third of them do not have clear state borders. t of local administration by their decisions to exclude these lands from the borders of specially protected territories, as a result private elite buildings appear 50 meters from Lake Baikal, in a 20-meter zone with piers leaving in the mirror of lakes in the park "Smolenskoe Lake District" (Figure 2).
In the new general plans of the cities of Kursk, Orel, Smolensk and other cities, the increase in recreational areas is also planned not through new green construction, but as in the famous IA. Krylov "Trishkin Kafan" - for the purpose of changing the purpose of land parcels and transferring forests to specially protected natural areas, and increasing the areas of forest park areas and urban forests, also by changing the functional purpose of the territories by the relevant decisions of the authorities. And thus on paper new recreational areas are formed that provide and even exceed the standards of urban planning. At the same time, the overall picture of the green landscape on the city's master plan in the next 20 years will not only not increase, but following the continuing trend of retrospective of this picture over the past 30 years, even shrink. This will especially affect the central part of the city territory (Figure 3) after the so-called "point" reconstruction of the neighborhoods, when all green plantations of the previously constructed nearby houses of the block are included in the yard of the greenery of the projected building, and public gardens are classified as public gardens whether not the entire district of the city. The resulted picture and ways of formation of an ecological skeleton of interaction of town-planning systems and natural-natural environment are characteristic for many, if not the majority, regional centers of the CFD of Russia, see, for example, [6-9]. Meanwhile, all the above-mentioned functions of the modern city, including the functions of "connection with nature" are the main ones for improving the safety and comfort of the urbanized environment and, ultimately, the level of human potential. Without the scientific substantiation of the city development options, supported by the corresponding estimates of the triple balance of the socio-bio-technosphere of the symbiotic development of the territories [1,2] and, accordingly, without legislative and regulatory consolidation of such a balance or gradual transition to it, it is impossible to implement the model of symbiotic development of the Society and Nature and accordingly the non-alternative paradigm of the degrading town planning in a post-industrial society [11, 15-18].

4. Conclusions
For the transition to the design of a safe, eco-friendly and comfortable urban environment on the principles of balanced natural-anthropogenic compatibility, R & D and other scientific organizations of the country of architectural and construction orientation need to conduct research and development.
in order to solve a number of primary tasks to create a new generation regulatory framework. To such problems it is possible to carry the following:
- construction of the concept of town-planning image of settlements of the nearest decades and principles of their town planning;
- development of methods for calculating quantitative indicators for assessing the level of implementation of city functions that meet human needs and develop human capacity levels;
- development and justification of indicators for assessing the effectiveness of town-planning solutions and the effectiveness of town planning;
- development of indicators of city functions for the low-mobility population groups [13];
- development of general rules and algorithms for the quantitative assessment of master plans for cities and settlements and land-use planning projects in terms of principles of balanced natural-anthropogenic compatibility;
- development and justification of integrated and standardized indicators of symbiotic development of developed territories and proposals for programs for their reconstruction and modernization, including the reconstruction of recreational spaces, public areas.

The result of these R & D activities should be the compilation of a set of rules for a new generation of JV "Creation and reconstruction of town-planning systems of cities and settlements. General provisions. "The unresolved problems of our cities are proposed to be solved with application of program-targeted methods, the creation of a new generation regulatory framework and effective mechanisms for the implementation of innovations and development programs. The considered program of symbiosis of the city and the natural-natural environment is considered by many scientists [1-4, 9-11, 15, 16, 18, etc.] to be uncontested for the safety and survival of man, and the target principle is the creation of a safe environment for life and development man through the implementation of the functions of the city in any size settlement - is a priority for the development of mankind as an intellectual community. Architecture and town planning - the fruit of many people's efforts can not be an object of exclusion and a way of enriching bureaucrat bureaucrats.

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