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Environmental-Legal Regulation Of Construction Activities In Cities In The Context Of Fast Urbanization

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ABSTRACT

Ensuring the right of citizens to favorable natural environment depends, first of all, on compliance with environmental standards in usage of land, water, subsoil and other natural resources in the areas of habitat - cities and other settlements, greening construction processes and rational zoning. Issues of legal protection of urban environment were considered at the UN Stockholm Conference on Human Environment (1972), the UN Habitat III Conference on Housing and Sustainable Urban Development (October 17-20, 2016, Kyoto, Ecuador). A new urban planning program was adopted as part of the Habitat-III conference [1]. This study considers main environmental problems in cities were in connection with construction processes. At the same time, we also studied organizational legal measures and scientific-theoretical bases of construction activities. In addition, legal assessment and review of zoning issues, greening of construction processes, benefits of developing “green economy”, introduction of waste-free technologies, as well as construction of energy-efficient buildings and housing was carried out. In the context of achieving goals set by the Concept of the Republic of Uzbekistan on environmental protection till 2030, introduction of environmentally friendly innovative technologies, prevention and reduction of negative impact on the environment, ensuring growth of environmentally oriented economy, “green” standards in construction sphere as well as application of scientific principles are considered essential.

KEYWORDS

Sustainable development, “green economy”, construction activities, settlements (cities), greening, scarce technology, energy-efficient construction.

INTRODUCTION

Concern of the world's population on environmental problems in recent years place the burden on relevant international organizations and individual states to take drastic measures to prevent these problems and eliminate their negative consequences.

According to the United Nations, world's population will reach 7.8 billion in 2020 and will increase to more than 2 billion by 2050 [2]. The population of Africa and Asia, in particular, is expected to grow significantly in the coming decades. With more than half of the world's population living in cities, the number of urban agglomerations is growing every year. The United Nations estimated that in the middle of XXI century population of cities will increase an average of 200 people a day[3].

Nowadays, such main environmental problems in cities as air, water, and soil pollution; noise (acoustic) effects; reduction of cities' adjacent "green" areas; desire to enlarge cities through creation of megacities, putting serious pressure on the environment and people; inadequacy of public administration functions aimed at ensuring environmental quality of cities in most countries; regional planning and urban zoning is ineffective or is not generally available, etc. can be displayed. Especially in today's pandemic environment, some of these problems are becoming particularly acute. [4]

However, humanity is maintaining a comfortable living environment by keeping the balance of natural and social system in the city. The process of ensuring sustainability of

“nature - man – city” is complex and multifaceted with the importance of urban planning, urban zoning, greening of construction processes.

Complexity of legal regulation in this area is necessity of bringing the actions of ecological relationships participants into a direction acceptable to the people of the city on the one hand, and forecast of socio-economic problems to be solved on the other hand.

It is impossible to meet diverse needs of people without taking into account environmental requirements in the city. At the same time, ecologically clean environment in the city creates opportunities for all-round human development. Man needs not only a psychologically healthy urban environment, but also an ecologically harmless one, meanwhile natural environment also requires careful treatment in order to create conditions to meet human needs.

The principle of environmentally sound planning for development and construction of urban areas is mainly reflected in environmental requirements for spatial planning, urban zoning, construction of areas, environmental expertise, examination of project documentation, environmental regulation. Environmental problems related to climate change are also affecting the quality of life of the population. [5]

Industrial sector plays a key role in economic development. In this regard, the main factor of environmental pollution today remains development of industrial production. In addition to traditional industries (chemical,

metallurgy, mining, etc.), new industries applying modern technologies are proliferating, causing these industries to pollute the environment with toxic wastes such as heavy metals.

Landscape planning should serve as an important tool in the protection of natural and anthropogenic landscapes in settlements and adjacent areas. In addition, an integral part of urban landscape is to protect the quality of actual environment because they serve the needs of cities' population (municipal thermometers, recreation zones, environmental protection, sanitary, urban, etc.) [6]

Noise exposure, which is one of actual problems of urban environment, is characterized by having a complex effect on natural and artificial objects, as well as the population. Atmosphere of scientific and technical development of the city is mostly impacted by the noise of different sources (road, rail, air transport, agriculture, construction and manufacturing activities of the people, etc.).

Noise exposure should be one of the priorities of state policy on environmental and urbanization, which requires a number of technical (technological), urban planning and sanitary-epidemiological measures to ensure "acoustic" stability of cities.

One of the positive experiences of the Republic of Uzbekistan in this area is that the Concept of Environmental Protection until 2030 adopted in our country sets out a set of measures aimed at protecting environment in cities. These measures set out priorities of the country's transition to "Green Growth" path. They include expanding the use of renewable

energy sources, recycling waste, and regulating generation of wastewater.

METHODOLOGY

This article includes analysis of legislation and scientific-theoretical sources as a doctrinal study. It examines scientific concepts related to the sphere, notions views, conclusions and opinions of theoretical scholars, as well as the legislation in the field of construction. The article starts with a study of basic concepts of the subject, continues with the development of these concepts and ends with conclusion suggesting improvement of existing mechanisms and ways to solve problems. Implementation of these conclusions will serve to clarify the role of zoning and greening construction industry in ensuring sustainable human development, to achieve ensuring the right of citizens to favorable natural environment through improvement of the environment in settlements.

DISCUSSION

Integration of environmental, economic and social aspects is one of the most important conditions for sustainable development of cities. This principle forms the basis of environmental protection in cities. Introduced by the United Nations Commission on International Environment and Development in 1987, the term "sustainable development" (balanced, sustainable, self-sustaining, sustainable development) does not endanger the ability of future generations to meet their own needs.

It is an environmentally sound economic and social development based on the idea of mutual benefit of present and future

generations. At the same time, many scientists associate the emergence of sustainable development concept with the UN environment conference in Stockholm (1972). Socio-economic and environmental problems of cities and growing urbanization were also discussed by the participants of the UN Habitat III Conference on Housing and Sustainable Urban Development (October 17-20, 2016, Kyoto, Ecuador). As part of the agenda (ensuring openness, security, integrity and environmental sustainability of cities and towns), a new urban development program (Kyoto Declaration on Environmentally Sustainable Cities and Settlements for All) was adopted [7].

In accordance with implementation plan of the new UN Urban Development Program (Habitat III), it is necessary to create a comprehensive system of specific environmental and legal measures to be applied in planning development and construction of urban areas in individual countries within the concept of sustainable development. In particular, a number of factors must be taken into account:

the state of the environment (pressure on the environment in terms of physical, chemical, biological and natural components; accumulated damage in the environment and other factors);

health status of the urban population (able-bodied and disabled; by age groups) and the level of education of the population;

type of cities and population; specialization of the city (priority sectors of economy, science, technology or possession of unique historical, cultural, etc. monuments in its territory);

natural and geographical factors (ambient temperature, availability of water bodies, number of sunny or rainy days, the most common natural phenomena, including predictable, seismic activity of the area, flood zones, etc.);

urban planning factors (nature of existing construction, characteristics of priority capital construction projects in the city, development of public places, street and road network system, etc.).

Within sustainable development of cities, it is very important to carry out construction activities in accordance with environmental, urban planning, seismic and other requirements, which can be used in such areas as removal of “soil” from the earth's surface as process of construction activities takes place on the land, not on the soil. In this regard, claims of Yu.G.Jarikov that independent concept of “soil” may be separate but this does not legal characteristics of legal relations [8], especially for construction of buildings and structures. Unfortunately, in recent legal literature, only land use for construction work has been generally accepted as a type of work, and this does not adequately reflect ecological (in a broad sense) content and importance of such activity. However, in legal literature on land relations, the issues of state control over construction lands are regularly studied [9]. Some sources also justify the need to adapt legislation to climate change. [10].

Construction planning usually determines presence or absence of minerals in the subsoil under the construction site, quality of atmospheric air and level of radiation. According to the Law of the Republic of Uzbekistan “On Sanitary and Epidemiological

Surveillance of the Population” No. ZRU-393 of August 26, 2015 [11], officials of the state sanitary control (Article 12):

- 1) Inform government on any complication of the sanitary-epidemiological situation or incompliance with sanitary rules and hygienic norms;
- 2) Detect and analyze causes and conditions of occupational poisoning and diseases, infectious and parasitic diseases;
- 3) Warn natural and juridical persons about the consequences of any incompliance with sanitary rules and hygienic norms;
- 4) Enforce actions intended to ensure population immunity;
- 5) Consider any applications of natural and juridical persons related to sanitary-epidemiological welfare and take appropriate actions;
- 6) Keep medical secret in relation to the information they learned when fulfilling their service duties.

Exercise or non-use of the right provided by law depends on the will of the user of nature, but the state not only gives the subject the right to build, but also determines the limit of his freedom, including obligations related to the right to use natural object wisely and protect the environment.

Social relations arising from construction or reconstruction of buildings and structures are regulated by various branches of law [12]. Obtaining a permit for construction works creates administrative-legal relation, performance of construction works – civil-legal (business-legal) and labor-legal relations are formed by use of hired labor. There are also social relations in the field of “society – nature” between subjects of legal relations.

Construction activity in settlements is the activity of individuals and (or) legal entities on use of natural objects as a result of which relevant part of land surface and natural objects located on it (or under it) are turned into real estate (buildings, structures, unfinished constructions, unauthorized constructions). As a result of construction or reconstruction, it is transformed from natural and to an anthropogenic object. Land construction can be assessed as an environmentally significant activity [13], as it is also characterized as a method of intensive impact on natural resources and requires environmental protection in the interests of present and future generations.

As it can be seen, construction has significantly changed land and natural objects. Nevertheless, environmental legislation allows to add lands that have retained their natural properties to the list of exactly natural objects because land surface becomes natural-anthropogenic object as a result of construction.

Land under buildings can be legally classified as ones with legally constructed buildings and structures and occupied lands with unauthorized buildings. Also, buildings can be functionally divided into two groups: residential and non-residential buildings

The need for rational use of land, especially in megacities, revealed the need to build underground facilities for trade and public catering, production, storage and other purposes. Therefore, in the modern world, construction of buildings with the same number of underground and aboveground floors is common. Social relations associated with the construction of underground

structures located below ground level are also regulated by special laws on subsoil resources.

Today, almost all settlements can be zoned according to the form and purpose of use. There is no single approach to the concept of “ecological zoning of territories” in legal literature. In particular, some authors define ecological zoning as a system of measures provided by law to clearly and unambiguously define boundaries of territories, water zones, airspace, natural objects and sources in order to ensure their rational use and adequate protection [14].

Local zoning is zoning of the territory of settlements and definition of their legal status in urban planning documents and construction regulations, activities of the relevant state bodies in the field of urban planning to coordinate use of land, organization and use of buildings and structures as a single complex [15].

Zoning implies restrictions on the use of certain zones for urban planning activities. In particular, Article 41 of the Town Planning Code of the Republic of Uzbekistan provides for restrictions on the use of territories of 9 zones:

Protection zones of cultural heritage sites, protected areas;

Zones of protected natural areas;

Sanitary zones;

Protected areas;

Sanitary protection zones;

Areas where minerals are located;

Areas affected by natural and man-made emergencies;

Ecological emergency and ecological disaster zones;

Natural-climatic conditions in extreme zones.

Based on the above, depending on the goals and objectives, zoning in settlements can be divided into three types:

- 1) “Permissive-restrictive” zoning - main purpose of which is to identify possible types of land use and other facilities located within the boundaries of the allocated zone.
- 2) Ecological zoning – with provision of certain types of protected natural areas. In particular, Law of the Republic of Uzbekistan dated December 3, 2004, No.710-II "On Protected Natural Areas" water protection zones, sanitary protection zones, recreational areas, recreational areas, agricultural zones, zones of protected areas, natural parks.[16] In addition, agricultural areas and ecological zoning plays an important role in enforcing the above mentioned law.[17]
- 3) Organizational and management zoning are designed to solve problems within the framework of coordination and management of environment protection. Functional zoning, as a type of organizational zoning, is carried out to determine prospects of an area with detailed legal regime in the rules of land use and construction.

When talking about implementation of construction work in settlements, it is necessary to address the issue of greening construction process. Today's global environmental problems determine more active use of "green" terminology in science

and practice in relation to various objects and processes of life and reflect their environmentally safe characteristics [18]. For example, the United Nations Environment Program, the International Labor Organization, the International Organization of Employers, and the International Trade Union Conference are co-hosting an event called Green Jobs. At the same time, greening of the construction industry in recent years has led to emergence of a new direction in science and practice, providing high quality of new buildings and structures - "green" constructions [19]. Emergence of the concept of "green" construction is inextricably linked with general trend of the world economy towards transition to a "green" economy, which primarily aims to promote energy efficiency, energy efficiency strategies, widespread use of alternative energy sources. The concept of green economy was used by international community as a tool to address the financial crisis of 2008 and was one of the topics in 2012 UN Conference on Sustainable Development "Rio+20" in the field of sustainable development and poverty reduction. In 2011, the United Nations Development Program released a report on the "green" economy describing it as one focused on improving human well-being and ensuring social equality by reducing threats posed by environmental change and environmental resource scarcity.

"Green" construction is an integrated concept that involves the use of environmentally friendly materials in construction of buildings and structures, increasing energy efficiency of them and minimizing their negative impact on the environment. Introduction of "green" construction requirements will ensure "greening" of construction industry and is the

most important condition for reducing harmful effects on the environment, reducing consumption of natural resources (including energy) and their rational use.

"Green" standards have been developed in foreign countries to assess environmental performance of buildings and structures under construction and for various purposes. There are several international systems for assessing environmental performance of buildings. Among international "green" standards in construction, the most popular systems include BREEAM (UK), LEED (USA), DGNB (Germany). Each of these systems provides different levels of certification based on developed rating indicators. These systems have an international status and are used to evaluate buildings regardless of their territorial location and "national" affiliation [20]. For example, in 2018, 43% buildings certified according to the LEED were outside of the US territory. Also, 122 in the Russian Federation, 44 projects in Kazakhstan were covered by BREEAM standards, though there no building covered by "green" standard in Uzbekistan. At the same time, it was announced that Tashkent City complex will be certified according to the BREEAM standard.

Development of "green" construction in the world will be ensured by popularizing this concept and increasing the overall level of environmental culture and environmental activity of citizens. Consumer attitudes towards natural resources lead to their inefficient use and negative impact on the environment. Economic advantage of using buildings built on the basis of "green" standards is reflected in the operational phase of such a building (reduction of water

consumption, energy consumption, increase in rent, etc.).

At the initial stage of construction use of "green" standards in the design of building does not lead to a significant increase in their cost. For example, according to international experts, the average increase in the cost of constructing an environmentally friendly office building is 4-8%, for more complex projects - up to 18%.

In addition to intangible benefits, such a building will reduce the cost of connection to engineering networks, reduce energy and resource charges, reduce maintenance costs, increase rents and reduce share of vacancies. As a result, environmental construction is always preferable given entire life cycle of a building [21]. In particular, Greg Katz's study (2010) noted that the difference between the cost of ordinary and "green" construction is not high and data on 170 "green" buildings in the United States showed that they are more expensive than ordinary buildings on average 1,5% [22]. The UNDP report (2011) noted that "green modernization" after construction is more financially and environmentally costly than combining sustainable development principles in the early stages of design [23].

RESULTS

Based on the above, it is expedient to establish effective requirements for promotion and implementation of "green" standards in construction process in the Republic of Uzbekistan at the expense of the state budget - requirements of tender documents for purchase of goods, works and services to meet state and public needs. It should be noted that similar suggestions have

been made by other experts [24]. This is also in line with the experience of the United States and the European Union in the field of environmental certification and implementation of "green" standards. For example, the United States has introduced a system of mandatory environmental certification of social and municipal facilities [25]. It is also worth noting legal rule of giving preference to the bidder who offers to carry out construction in accordance with "green" standards in the allocation of land for construction on the basis of auction (tender).

It should be noted that encouraging development of "green" construction in legislation, informing public about its benefits and implementing relevant requirements can create a basis for sustainable development of society.

In general, "green" construction is aimed at reducing and optimizing consumption of natural resources. At the same time, it is necessary to develop a legal framework for future energy saving and energy efficiency of buildings and structures.

CONCLUSION

Today, when the process of urbanization is intensifying in the world, the need for environmental and legal support of construction activities in cities is based on the following:

First, change in the appearance of natural objects during implementation of construction work leads to a change in their quality characteristics. Ecological-legal significance of construction work in settlements is determined by transformation

of natural objects (land, forests, subsoil, water bodies), and is characterized by emergence (change) of an anthropogenic object - a real estate object.

Second, despite the fact that construction of buildings and structures at the expense of citizens and legal entities, which serve their personal interests, is quite common, public interest in this construction plays an important role in the fulfillment of the obligation to create conditions for the exercise of their rights to ecology, education, science, culture, medicine and health, physical culture and sports and housing.

Thirdly, zoning is important in designing settlements and approval of their master plans, followed by implementation of these projects. Proper organization of zoning contributes to the favorable environment for the population of this settlement.

Fourthly, existing need for a favorable environment that ensures rational use of natural resources in accordance with the interests of present and future generations and the concept of sustainable development requires consistent and systematic implementation of greening the construction industry as one of the priorities of development. In particular, despite partial use of "green" standards in the design, construction and reconstruction of real estate in the Republic of Uzbekistan and certification of buildings based on them, "green" construction is a unique and promising way to green the industry.

Fifthly, legal regulation of "green" construction has been proven to reduce the impact of building materials and structures on the environment, reduce waste during

construction, save energy, increase energy efficiency of buildings and structures, rational use of water. Therefore, another way of greening construction industry is the rational use of natural objects (forests, land, water bodies, subsoil resources) for construction purposes, taking into account the requirements of protection of the environment and its components.

Sixthly, economic incentives by the state are important in the system of public-legal instruments which can cause the acceleration of "Green" construction growth. Among the main types of government incentives are tax benefits for real estate market participants for "green" projects, subsidies for "green" projects, the use of special benefits for individuals in the purchase of environmentally friendly housing.

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