

UDC 69.003

"GREEN BUILDING" AS AN ELEMENT OF GREENING THE ECONOMY**OLGA KAMECKO, SVETLANA KOSTUKOVA**

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The article describes "green" construction as an element of the ecologization of the world economy. The international experience in the field of ecological construction is considered; prospects of the development of this direction in the Republic of Belarus are estimated.

In the modern world, a person faces many different problems. However, there are a number of problems that are common to all people, regardless of race, state, national or social belonging: overcrowding, scarcity and quality of drinking water, air pollution and global warming, the spread of dangerous diseases, soil degradation and scarcity of food resources, acid rains and destruction of the ozone layer, loss of valuable species and mass reproduction of pests, reduction of forest area and occurrence of deserts, industrial radiation, the death of small rivers, the loss of nature in war zones. All these things reflect the problem of ecology. Ecology - in its widespread everyday understanding. A more rigorous designation of the above-mentioned list requires the addition of another name - the problems of the human environment.

Actually, ecology as a science was formed within the framework of biology. Its subject was the relationship of living organisms with each other and with the surrounding inanimate nature, patterns of distribution and organization of plant and animal communities, the dynamics of their numbers, factors of survival and productivity, energy flows and the cycles of substances in which organisms participate.

The current ecological and economic situation points to the need to replace the established technocentric image of the economy with a sustainable, ecologically balanced type of economic development. We need a review of priorities in both macro and microeconomics. At the same time, all macroeconomics should be included in macroecology. Their independence becomes more and more imaginary [1].

Ecologization of the economy is a necessary condition and at the same time the main component of ecologically balanced development. It is accompanied by a shift of the center of economic analysis from the costs and intermediate results to the final results of economic activity and further to the forecasted development trends. In essence, it means the ecologization of the entire social and economic structure and development of society.

Implementation of the sustainable development principles is possible while respecting the environmental requirements imposed on the economy. Hence, the practical significance of ecology is primarily that it can and must carry out scientific control of nature use. The use of nature is the main part of the resource base. However, environmental control over the use of natural resources and resource management is still extremely weak. Because of this, serious contradictions remain between economic interests and environmental requirements. These requirements are aimed at reducing the nature of the economy, the entire human economy [2].

Ecologization of the country's economy concerns all production spheres operating in the country. Including construction. Ecological construction is a new (post-industrial) stage in the development of the architectural and construction industry, which has begun to cross at the turn of the 20th and 21st centuries, and simultaneously - an important component of the notion of "sustainable development". This transition is a manifestation of the deep processes of awareness by the world community of the role that human civilization in general and urbanized territories - in particular, plays in destroying the stability of the ecosystem of our planet [3].

In the course of a long-term study of the problems of global warming, it became clear that modern cities, incl. the buildings and structures, represent one of the main sources of environmental pollution. These experts show that buildings around the world consume about 40% of all primary energy, 67% of all electricity, 40% of all raw materials and 14% of all drinking water supplies, and produce 35% of all carbon dioxide emissions and almost half of all solid household waste.

Today behind this concept there is a radical change in the approach to the entire construction and design process, which became possible due to the emergence of innovative (high) technologies. In order to understand at what stage and by which the optimization is possible, and where the real damage to the environment lies, it is necessary to take into account not only the qualitative characteristics inherent in the project itself, but the entire process of production of construction materials, their delivery system to the construction site, the approach of contractors to work, the completion of the facility, the features of its operation and disposal, and much more.

Economics

For the construction to be called "green", certain standards and norms must be observed at each of its stages. In order to adequately assess compliance with these principles, special market instruments have been developed in the implementation of real estate projects in the West, voluntary building certification systems, which at the moment there are several dozen in the world. A number of them are international systems that are used around the world, incl. our country [3].

The idea of "green" construction has many advantages for the environment, the welfare of society and the health of each individual. Its ubiquitous implementation can solve a number of global problems, such as climate change and resource scarcity.

The operation of eco-friendly buildings is more profitable from the economic point of view: this allows to significantly reduce the cost of water, heat and electricity.

The developers are also interested in this concept: the cost of eco-friendly buildings on the real estate market is constantly growing. At the level of the whole state, environmental construction is also a priority: it stimulates the development of new technologies and, together with the increase in economic indicators, increases the quality of life of the population.

"Green" projects support the national economy, create new jobs and improve the state's investment image [4].

Over the past 40 years, a real breakthrough has occurred in the field of green building. In the US and Europe, this direction is receiving increasing support from not only the companies-developers, but also the government. The concept of "green" construction significantly improves the ecological situation in cities in the era of urbanization and allows to reduce costs. Old buildings, built before the 1970s, annually require approximately 300-400 kWh / m² for heating. Houses that appeared at the turn of the millennium, when the "green" standards were just beginning to be actively used in the world, consume half the electricity. Finally, in the last decade, zero energy balance buildings are being actively built, which need only about 15 kWh / m² per year.

But even this progress did not stop: today it is increasingly possible to hear about "active" buildings, built and equipped in such a way that they produce more energy than they consume. This is achieved through the maximum thermal insulation of the building, as well as its equipping with solar panels, heat pumps and climate control system [5].

In recent years, the movement for "green" construction has become more and more large-scale. Proof of this can serve as projects for the creation of entire eco-cities, in which the surrounding nature, urban planning, buildings, communications and the very way of life of people harmoniously interact [4].

The concept of "green" construction in Belarus has not yet reached sufficient development. It has a negative impact on the industry, since the country has all the prerequisites for the successful development of this direction.

"Greening" of the Belarusian construction industry will allow [4]:

- improve the ecological situation;
- strengthen energy security;
- increase investment attractiveness;
- to stimulate the development of Russian science.

Taking into account the growing level of urbanization in the country, green building can significantly reduce the burden not only of the environment, but also of the energy sector.

Resource conservation, one of the main issues of "green" construction, is a priority area of the Belarusian energy sector. The Ministry of Architecture and Construction of the Republic of Belarus is actively involved in the implementation of energy efficient technologies in the process of construction. There is a regulation of the regulatory framework in order to comply with international environmental standards.

The complex program of design, construction and reconstruction of energy-efficient residential buildings in the Republic of Belarus for 2009-2010 and for the future until 2020 [6] has led to the fact that the last three years in the country only resource-saving residential houses are being designed. However, in the republic the definition of the energy efficiency level differs from the European parameters: while in Belarus only specific heat consumption is taken into account, a number of indicators are taken into account in Europe.

To solve this problem, technical regulations are being developed. Its entry into force will stimulate financing and concessional lending in the field of energy-efficient construction, ensure the development of alternative energy in the country and will increase the share of renewable energy sources in total energy consumption.

Thus, it is important to develop the sector of "green" construction in the Republic of Belarus. It will give a positive economic and environmental effect, which can change the entire construction industry in the country. This, in turn, opens wide opportunities for resource saving and solving many environmental problems.

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