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UDC 332.2:711; 711.581-168

PROBLEMS OF IMPLEMENTATION OF THE PROGRAM FOR THE COMPLEX RECONSTRUCTION OF OUTDATED HOUSING STOCK

Relevance of the study. The long process of the city's existence is always accompanied by a wave-like increase in the volume of construction [1]. The rapid increase in the number of residential and public buildings in a short time leads to the same wave-like aging of stock and the need for their mass reconstruction. The problem of reconstruction of outdated housing stock is common for every country in the world. In addition, another common feature for the countries of Eastern Europe and the former Soviet Union is the presence of houses of the first period of industrial housing, which became a characteristic type of construction during the recovery period after World War II. European countries have accumulated quite a wide experience in the reconstruction of the multiapartment housing stock of the first period of mass industrial construction, but in Ukraine, where such a stock is about 18 %, the solution to this problem, has not been properly implemented.

As any other country, Ukraine has certain specific features in solving of the problem of the complex reconstruction of mass residential buildings. The legal basis for the implementation of such a reconstruction is the Law of Ukraine “On the complex reconstruction of blocks (neighbourhoods) of outdated housing stock” [2].

Aim of the study. This study is a part of a researchers group project on the development of the research and analytical phase of the draft Program for the Complex Reconstruction of Blocks (Neighbourhoods) of Outdated Housing Stock in the City of Kyiv. The draft Program was carried out on the basis of the Institute of Urban Planning in Kyiv with the support and funding of the Department of Construction and Housing of the executive body of the Kyiv City Council (Kyiv City State Administration). The purpose of this publication was to summarize the problems associated with the delay in the implementation of the Program for the Complex Reconstruction and possible directions for their solution.

Results and Discussion. According to the State Statistics Service of Ukraine, as of 01.01.2019, the total area of the country's housing stock, excluding the area of buildings within the temporarily occupied territories of Ukraine, amounted to 993.3 million m². At the same time, the housing stock of urban settlements is 60.9% (599.4 million m²) of the total amount [3]. The vast majority of this housing stock – 62.4% or 374.0 million m² – was built before 1980 or more than 40 years ago: before the 1920s – 6.2%; in the 1950s – 8.9%; in the 1960s – 19.6%; in the 1970s – 27.7% [4]. In fact, every fourth residential building – 28.5% or 105.6 million m² of the housing stock of urban settlements – was built in the period of the 50-60s of the 20th century, known as the period of the first industrial housing construction, with a maximum service life up to 70 years. Unfortunately, over the past forty years, this housing stock has not undergone any massive reconstruction or even major repairs, which has led to an extremely poor technical condition with high rates of physical deterioration and moral aging of houses. The construction of a quarter of the country's housing stock for a rather short period of 15-20 years and the failure to carry

out planned repairs have led to an extremely acute situation with the technical condition of these buildings, the threat of their avalanche-like collapsing. In Ukraine, mass construction of post-war period was carried out in Kyiv (9.2 million m²) and in cities with highly developed industrial production, in regions, as follows: Donetsk (15.7 million m²), Lugansk (10.06 million m²), Odessa (6.22 million m²), Kharkiv (5.19 million m²) and Autonomous Republic of Crimea (3.03 million m²). The total number of houses was about 25,000 units [5].

In 2006, Ukraine adopted the law “On the complex reconstruction of the blocks (neighbourhoods) of outdated housing stock” [2]. Ideologically, it was mainly based on the implementation model of Program for the complex reconstruction of the five-storey buildings of the first period of industrial housing construction areas realized in Moscow (1999) and other Russian cities, on the so-called “wave” method. In order to test the validity of this Law, a pilot project was implemented – “Urban planning concept for the renovation of buildings of the territory along Marshal Grechko street in the Podilsky district of the city of Kyiv (from No. 2 to No. 26-a)” developed by the Institute of Urban Planning, Kyiv, 2007.

The next step was the development of the draft City program for the complex reconstruction of the blocks (neighbourhoods) of outdated housing stock in the city of Kyiv. The development of such a program was started in 2008. However, unfortunately, the economic crisis of 2008-2009 prevented the completion of its development and the start of its implementation

As a part of the study, carried out in 2020, the authors analysed the materials of the address list of residential buildings built before 1980 and intended for the complex reconstruction. The list contained information on 5068 houses. In terms of outdated housing stock reconstruction for the conditions of Ukraine, considering the construction period of residential buildings, their basic design schemes, technical condition and minimum necessary engineering equipment supply, the entire analysed housing stock can be divided into four typological groups [6].

- 1) Historical type buildings – 2.58 million m² of total area. They were of historical buildings, built before 1914 (of the First World War and the Civil War period), which can be divided into two subtypes: a) cultural heritage monuments listed in the State Register of Cultural Heritage Sites; b) objects that do not have the status of a cultural heritage monument, but those that belong to the so-called “background historical buildings” of the city.
- 2) Barrack type buildings. The construction of such housing took place mainly after the Second World War of improvised materials as temporary housing, but even now, there are up to 0.27 million m² of total area of such houses in Kyiv.
- 3) “Stalinka” type buildings. Buildings of this type were built in the 30s and 50s of the twentieth century and totals about 0,73 million m² in Kiev. Houses are divided into two subtype – ordinary and “nomenklatura”-intended.
- 4) Houses of the first mass series of the period of industrial housing construction (“khrushchevka” type). The total area of these houses in Kyiv is almost 9.23 million m². Of these, 47% are panel houses, 50% are brick houses, 3% are large-block ones.

Existing outdated buildings have practically reached the end of their standard operational life. But, unlike other countries, in Ukraine there is almost no practical experience of mass complex reconstruction of outdated housing stock. An analysis of the existing legislative, design and operational practice revealed that the main problems causing a delay in implementation of complex reconstruction programs and projects, include:

- *methodological* – the need to clarify the terminological apparatus of the reconstruction processes, in particular, the concept of “outdated housing stock”, and the formulation and parameterization of criteria for classifying residential and non-residential buildings as outdated; substantiation of possible reconstruction methods and options for providing compensation measures to owners of an outdated stock in the case of its demolition;
- *legislative and regulatory* – imperfection of the existing legislative and regulatory framework for regulating the reconstruction process, namely: the need to change the legislatively stated requirement

regarding the proportion of residents who must agree to possible options for reconstruction, modernization and possible demolition of outdated buildings; the lack of final clarity of the mechanisms for compensation to the owners of real estate objects in the case of a decision on the need for their demolition, the lack of a procedure for resolving legal disputes in court if some of the apartment owners refuse the proposed reconstruction measures; the absence of a specific regulatory framework that allows the development of reconstruction projects with a temporary (for the period of the reconstruction implementation process) violation of regulatory requirements;

- *property* – a high percentage of housing privately owned by residents (up to 92 %), which complicates the organizational issues of reconciling city-wide and private interests; disorder of property rights to real estate objects (land plots are not assigned to each residential building, land plots are randomly located);
- *technical (technical condition of outdated buildings)* – too poor technical condition of buildings requiring reconstruction (dilapidated, or approaching dilapidated). Ukraine, in comparison with other countries, came too late to a practical solution to the problem of reconstruction of outdated housing stock, which often makes modernization of outdated buildings economically inexpedient and creates prerequisites for their complete demolition;
- *town-planning* – the lack of free plots for the construction of starting residential buildings in order to develop programs and projects for complex reconstruction using the “wave” method, due to chaotic selective construction on free plots, which has been observed over the past 15-20 years;
- *financial* – the lack of sufficient budget funding, low income of outdated houses residents for the development of the reconstruction process; the need for legislative determination of new flexible financial mechanisms to ensure the implementation of programs and projects of complex reconstruction;
- *organizational* – the lack of an updated database on the technical condition and property rights to real estate objects; the lack of a sufficient volume of mobile houses for temporary residence of inhabitants of houses subject to major repairs and reconstruction.

Conclusions. Forming of a comfortable living environment through complex reconstruction and renovation of residential and non-residential stock is the main mission of urban development and the stable existence of Ukrainian cities. The creation of a modern labile legislative and regulatory framework in combination with flexible financial mechanisms should become the basis for the successful implementation of programs and projects for the complex reconstruction of blocks (neighbourhoods) of outdated stock.

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