Development of the toolkit the economic and organizational mechanism for managing the overhaul of the common property of apartment building

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Abstract. Nowadays, the most important task is maintenance and improving of the achieved level of development of the socio-economic living conditions of the population. In the implementation of which the housing policy plays a significant role. It is necessary to improve the management mechanism of the housing complex, the effective use of economic resources, ensuring the preservation and renewal of the housing stock to solve this task. The need for this is also due to the increase in negative processes in the apartment complex. With the development of market relations and the subsequent decline in public investment in the housing complex, the issues of attracting extra-budgetary sources of financing for the construction and reconstruction of housing, the optimal allocation of limited budget resources, and evaluating the effectiveness of the process of updating the housing stock, taking into account the interests of all participants in market relations, are becoming increasingly relevant. Based on this, the article considers the main provisions on capital repairs of the common property of apartment buildings based on the Housing Code of the Russian Federation, analyzes the ways of forming contributions for capital repairs with statistical data. This article contains a number of recommendations aimed at improving the implementation of projects and programs for major repairs of the country's housing stock. The implementation of the proposed actions will ensure the standard service life of the most important elements and subsystems in the life cycle of each building and the execution of a balanced policy of major repairs of the country's housing stock.

The creation of housing conditions that require modern society is one of the most important directions of the state's socio-economic policy. Thus, one of the main objectives of the National Project "Affordable and Comfortable Housing for Russian Citizens" is to bring the existing housing stock in line with quality standards that provide comfortable living conditions [1]. However, the implementation of these tasks is complicated as a result of violations of the deadlines and volumes of repair work of many residential facilities, which increases the discrepancy between the technical condition and functional and consumer qualities of the housing stock to the current standards for providing the necessary conditions for a comfortable and safe living of the population. Moreover, the management system of the repair process of residential apartment buildings is focused on carrying out emergency repair work, during which individual defects are removed and the task of systematic preservation and improvement of the technical and consumer qualities of residential buildings is not solved. This assumption is the insufficient level of the theoretical and methodological basis for forming an economically sound management system for capital repairs of the housing stock of apartment buildings,
taking into account the implementation of preventive repair. For this, it is necessary to identify the problem areas of the functioning of the existing system of capital repairs of Russian cities, which reduce the effectiveness of the housing complex management mechanism, the effective use of economic resources and do not allow for the preservation and renewal of the housing stock [2].

The works of many Russian scientists are devoted to the theoretical and methodological problems of urban housing management and research on the issues of capital repairs of the housing stock: Asaul A. N., Abramov S. I., Buzhnyy V. V., Vasilyeva N. V., Verstov V. V., Gorbunov A. A., Gumba H. M., Pasyady N. I., Platonov A.M., Tsapu L. I., Chekalina B. C., Chernyshev L. N., etc [3].

Despite the significant contribution of these scientists, the theoretical and methodological problems of capital repair management as the most important component of the housing stock reproduction cycle require other comprehensive research, taking into account the current socio-economic situation in our country, as well as state, regional and local policies in this area.

The housing stock is a defining part of the city's housing and construction sector, which is a complex system of creating, functioning, and replacing housing stock and includes a part of the production sector (construction, repair, reconstruction and modernization, demolition of housing stock objects). Major repairs of the housing stock are the replacement or restoration of building structures or elements of such structures, engineering, and technical support systems.

In Soviet times, there was no concept of "private property" in the planned distribution system of economic management. Citizens paid for the rental of residential premises, and funds were directed from the budget formed at the expense of these contributions for major repairs. In the post-Soviet state, in the era of privatization, the transition of the housing stock to the ownership of citizens began, and the former financing of major repairs became unacceptable. At the end of 2012, the Housing Code of the Russian Federation was updated by section IX "Organization of capital repairs of common property in apartment buildings", which provides for the mandatory transfer of funds by the owners of premises in apartment buildings to the capital repair fund. At the same time, the minimum amount of such contributions was to be set by each region independently [4]. In addition to Federal Law No. 271-FZ, the Housing Code of the Russian Federation, and the Urban Planning Code of the Russian Federation, Federal Laws No. 417-FZ and No. 176-FZ, as well as many other regulatory documents, became the basis for the legislative framework for capital repairs.

The action plan for the implementation of this law was approved by Order of the Government of the Russian Federation No. 720-r of April 30, 2013, and the corresponding methodological recommendations were introduced on July 10, 2013 (Order of the Ministry of Regional Development of the Russian Federation No. 288 of July 10, 2013 "On Approval of methodological recommendations for setting the minimum contribution for major Repairs") [5]. Then, the subjects of the Russian Federation were able to adopt the necessary regional laws. The first receipts demanding payment of a contribution to the capital repair fund began to come to the owners of apartments in 2014.

For today, according to the regulatory documents, the owners of premises in an apartment building have the right to choose one of the following ways to form a capital repair fund:

1) to transfer of contributions for major repairs to a special account to form a capital repair fund in the form of funds held in a special account;

2) to transfer contributions for major repairs to the account of the regional operator to form a capital repair fund in the form of binding rights of the owners of premises in an apartment building about the regional operator [6].

When forming contributions on a special account, the owners of residential premises independently organize major repairs, including choosing a contractor that will carry out major repairs and conclude a contract with it. The owner of a special account can be a management organization, a homeowners ' association, a housing cooperative, or a regional operator. With this method, major repairs are carried out within the time limits set by the regional program, or ahead of schedule, if there are sufficient funds in the account.

In the second case, the formation of contributions is carried out on the account of the regional operator, while the regional operator takes over the organization of major repairs of an apartment
building in the terms established by the regional program. It is important to know that the funds received from the owners of one house, the regional operator has the right to use to finance major repairs in another house, provided that these houses form capital repair funds in the account of one regional operator.

According to data for 2019, the owners most often collected funds on the account of the regional operator – 88.35%, which is 409,606 residential apartment buildings (Fig. 1) [7].

![Graph showing distribution of funds](image)

**Figure 1.** Methods of forming capital repair funds.

The unpopularity of special accounts can be explained by two factors. Firstly, the owners do not want to participate in the management of apartment buildings. Secondly, the owners do not trust the capital repair system, because the capital repair program provides long repair work. A residential apartment building can be included in the queue for major repairs, which will come in 10-30 years, that is, at the time when the owner of the premises may lose ownership of the apartment.

The amount of contributions for major repairs varies across the country, as each region independently determines the amount of such a contribution. The fee for major repairs increases, as the amount of the contribution, is indexed upward every year. Each region of the Russian Federation has approved its own regional capital repair program. It has a plan for 30 years, which contains information about the address of buildings [8].

Following the Order of the Ministry of Construction of the Russian Federation No. 41/pr of February 7, 2014, methodological recommendations were approved for the establishment by the subject of the Russian Federation of the minimum contribution amount for major repairs of common property in apartment buildings. Based on these recommendations, the minimum contribution amount for major repairs of common property in the MCD is recommended to be established based on the following principles:

1) determination of the minimum contribution amount based on the assessment of the total need for funds to finance major repairs in apartment buildings;

2) the availability of this contribution amount for the owners of residential premises, taking into account the costs of paying for residential premises and housing and communal services;
3) the sufficiency of funds, which is determined taking into account the planned measures of financial support at the expense of the federal budget, local budgets by Article 191 of the Housing Code of the Russian Federation to ensure the implementation of the regional capital repair program [9].

Also, when restoring the working capacity of the housing stock, the collection of contributions for major repairs, which form the necessary amount for the organization of work, plays an important role. Collection of contributions is the degree to which contributions are collected for the major repairs of the common property of an apartment building, relative to the number of contributions required to carry out this repair. Contributions for major repairs of the housing stock in 2020 on the territory of the Russian Federation in comparison with 2019, practically did not change and also remained at a high level – 93.49%. (fig. 2). This indicator demonstrates a high level of confidence of the owners of the housing stock in regional programs for major repairs of the common property of houses, which should be justified by the high-quality work of regional systems [10]. A sufficiently high payment discipline of the population may be associated not only with the perceived value of housing and communal services but also in general with their total cost availability for most households, as evidenced by a small share of housing and communal services in household consumer spending of no more than 10-11%. Also, the existing system of targeted support in the payment of housing and communal services (subsidies) helps to pay those whose income level does not allow them to fully pay for housing and communal services on their own.

![Figure 2. The level of planned and actual collection of owners funds in Russia from 2014 to 2019.](image-url)

The amount of accruals at the reporting date, billion rubles.
- The amount of fees at the reporting date, billion rubles.

The level of collection of payments for housing and communal services has a regional differentiation. In a significant part of the regions, this indicator is higher than the all-Russian one. According to data for 2020, more than 98% are collected in St. Petersburg, Astrakhan, Belgorod, Rostov regions, Stavropol, Krasnodar Territories, and the Republic of Tatarstan [11]. The decrease in the national average is influenced by a significantly lower level of collection of payments for housing and communal services, including those caused by the COVID-19 pandemic, in the republics of the North Caucasus Federal District (31.7-80.1%). Also if we trace the dynamics of the total debt as a cumulative total then at the end of 2020 the total debt was 18220.42 million rubles. In this regard, it is advisable to activate the organizational functions of the capital repair fund of the Kaliningrad Region, including:

- organize events to better familiarize citizens with the opportunities provided by the capital repair system;
- ensure the organization and holding of a general meeting of owners of premises, including in specially organized premises of regional operators;
- conduct informational work with the homeowners association and members of the housing cooperative, explaining the advantages of working with special accounts. Another problem with major repairs is the complexity.

The collection of contributions for major repairs directly affects the order of inclusion of apartment buildings in the short-term capital repair plan. Since when repairing houses with the same year of construction and the same degree of physical wear and tear in the first place, priority is given to an apartment building, the collection of contributions in which is higher. Also, the number of houses included in the capital repair plan depends not only on the level of collection of contributions but also on the amount of the contribution. In other words, the less money accumulated, the fewer houses will be repaired [12]. The more transparent and understandable the scheme of organizing and carrying out major repairs of the common property of apartment buildings is, the higher and more active the collection of funds by the owners of residential premises will be, therefore, the faster the restoration of the housing stock will take place.

In 2020, major repairs were carried out in 37.5 thousand apartment buildings for a total of 146,000 million rubles, which is 18% more than in 2019 (Fig.3). The largest volume of work is observed in Moscow, Voronezh, Sakhalin, Omsk Regions, Krasnoyarsk Territory, Khanty-Mansi Autonomous Okrug-Yugra.

![Figure 3. The degree of completion of major repairs of apartment buildings in 2020 in Russia.](image)

The failure to implement the plan for major repairs is caused by many reasons. Let's look at the most significant factors that led to the failure to meet the targets. A serious problem for major repairs is the presence of high physical wear and tear of more than 70% of apartment buildings [13]. At the same time, many houses are not recognized as an emergency, subject to demolition or reconstruction due to the lack of applications from the owners of residential premises. Another problem with major repairs is the difficulty in carrying out it about the number of houses. Thus, on the territory of Russia, there are a predominant number of residential buildings that are objects of the cultural heritage of municipal, regional or federal significance, which limits or does not make it possible to carry out major repairs.

The system of capital repairs in Russia today is not perfect due to the presence of many organizational, economic and technical problems that significantly hinder the effective functioning of the system. The main problems and ways to solve them are presented in the Table. (Table.1)
Table 1. List of problem areas for the implementation of programs for major repairs of apartment buildings.

| List of problems                                      | Possible solutions                                                                                                                                 |
|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Poor quality of repair work                           | Organization of effective control during major repairs at all stages: from the development of design and estimate documentation to the acceptance of completed works; Increase the number of parties accepting these works, involve public organizations, owners of renovated premises, as well as strengthen control by the relevant authorities |
| Unreliable construction contractors                   | When entering into contracts with contractors, it is necessary to condition the fulfillment of warranty obligations with a deposit of 5%; Unreliable contractors who perform their obligations poorly or fail to meet deadlines should not be allowed to carry out work |
| Low energy efficiency of major repairs                | Attracting private investment and providing government support for the use of energy-efficient technologies during major repairs |
| Low level of utilization of capital repair contributions| Development of a unified and transparent methodology for planning major repairs, coordinated with the owners and the regional authorities |
| Misuse of borrowed funds and funds (contributions) owners of premises on a special account | Determine the decision of the general meeting: for what purposes (performing what types of work) are the borrowed funds used; borrowed funds are credited to a special account; repayment of the loan (payments in repayment of debts for the construction works) shall be made directly to the lender's (contractor's) account, bypassing the UO (HOA/DHSC) current accounts; the obligation of the special account holder to regularly submit a report on the expenditure of funds on the special account, on the repayment of the loan [14] Before the decision of the general meeting, make sure that the works on the CR, for the implementation of which it is proposed to borrow funds, are included in the list of services and works on the CR, which can be paid from the funds formed based on the established minimum amount of the contribution for MR |
| Insufficiency of funds on the special account for loan repayment payments (repayment of debt for the MR) due to incomplete and untimely payments of capital repair contributions to the special account | Evaluate payment discipline for the previous period Evaluate the system of collecting contributions to the MR (issuance of payment documents, monitoring the completeness of payments) [15] Check that the decision of the general meeting determines the person authorized to apply the statutory measures to the debtor for payment of contributions to the special account Evaluate the effectiveness of work with debtors Determine the amount of repayment of the loan (repayment of debt for the MR), based on the actual collection rate of contributions (including after the establishment of additional contribution) as a proportion of the average monthly receipt of funds in the special account Determine by resolution of the general meeting the procedure for repayment of the outstanding loan (e.g., by making an additional contribution) |

Summarizing the above problems of implementation of capital repair of apartment buildings we can conclude that regulatory bodies and citizens do not consider capital repair of housing stock as an integrative concept that combines technical, organizational, economic, and social factors, processes, and
measures of political, economic, social importance in ensuring the sustainability of functioning of housing sphere and city as a whole, as well as in determining the prospects of socio-economic development [16]. In this connection, to improve the management system of the capital repair of residential buildings it seems appropriate:

- to strengthen organizational and representative functions of the Fund of capital repair of the common property in the apartment buildings for greater involvement of the owners of the premises of the apartment buildings into the system of capital repair;
- to introduce amendments to the current legislation facilitating the conditions of capital repair in the buildings being the objects of cultural heritage;
- to abolish the declarative procedure of categorizing buildings as emergency and subject to demolition to apply the capital repair legislation;
- to work out an option of investing capital repair fund funds not only by placing them on special deposits in banks, but also in more profitable financial instruments with strict regulation of the list of such instruments by the Central Bank of Russia;
- to improve the mechanism of lending for capital repair works and services to reduce credit risks and increase the availability of credible sources;
- to use energy-efficient technologies when carrying out the capital repair, which will allow reducing utility payments of residents for heat and electricity by 22% on average.

The analysis showed that many theoretical and practical problems of capital repair management are still unresolved. Implementation of the measures described in the article will significantly increase the efficiency of the capital repair system, improve the condition of the housing stock, solve some social problems, as well as ensure economic growth and development of the region.

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