Modern social housing

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Abstract. It is customary to consider social housing as housing provided to the citizens without sufficient financial ability to purchase or rent a house at market prices. The bulk of such housing is provided by the state, but there is subsidization and construction at the employer and non-profit organizations’ expense.

Introduction
The social housing building history in Russia has a long history. In the 19th century, the owners of factories often acted as the working camps’ developers. In the XX century with the change in the social system, social relations are changing, the main form of housing ownership becomes municipal. In the 20s new forms of social housing start being searched and developed. The construction of communal houses was proposed as the main form of resettlement.

Social housing in Russia
During the years of the first five-year plan, with the appearance of the first constructivist buildings on the streets, new residential communes began to grow. The Central Model Thesis of the House-commune was also provided by the Centerzhilsoyuz (1928) for the residential communes. This thesis instructed the communards to abandon furniture and household items accumulated by the previous generations and assumed collective raising of children, washing, cleaning, cooking and meeting cultural needs.

The main idea of the commune house was to connect housing and utilities in one building. The complex often included laundries, baths, food processing plants. Such examples include Moscow, the Commune House of Engineers and Writers, Baburinsky, Bateninsky and housing estates in Leningrad [1].
In the future, the social housing ideas were transformed in the USSR together with the official doctrine and the prevailing style. So, in 1930-50s Soviet neoclassicism was spread. There is a rejection of the constructivism style and communal houses. Simple architecture without decor, small apartments were not perceived positively by ordinary people and were strongly associated with barracks. The order architecture was more understandable for an ordinary person and was corresponded to the ideas of a good life, to which the common people aspired, overthrowing the autocracy. The desire to increase the construction volume leads to the decorative elements’ abandonment in favor of industrial production mass housing. From this moment until the USSR collapse, the vast majority of residential buildings are built according to the standard designs developed in series.

In modern Russia, the construction of social housing is not widespread. As a rule, state assistance is provided in the form of housing certificates or subsidized mortgages. In large cities, low-cost apartments will be allocated for social housing that correspond to the social norm of the area per person with the simplest decoration. Typically, such apartments are located on the ground floor. In small cities, social housing is built on the tenders’ basis. The competition priority is the manufacturing price. Therefore, such housing has a low quality of the materials used and plain design decisions. In rural areas, social housing is being built in free territories. As a rule, these are the single-storey single-family houses of the smallest area being built according to one project. It should be noted that the current system of tenders negatively affects the quality of life in social housing, increasing the sense of social inequality and contributes to the development of a negative image of this type of building.

Figure 1. a) House commune of the People’s Commissariat. Moscow. Architect M. Ya. Ginsburg, I.F. Milinis, S.L. Prokhorov. 1930 b) typical building series 1-335.

Figure 2. Social housing in the Nizhny Novgorod region. 2018
Social Housing in Singapore

One of the countries actively developing the construction of social housing is Singapore. The vast majority of housing sold and leased is built at the budget expense by the state organizations. The Real Estate Directorate “HDB flats” is engaged in the housing construction and management.

![Figure 3. Social housing. Singapore.](image)

Residential buildings organize the entire housing estates and neighborhoods with their schools, shops, markets, clinics, sports facilities. In general, housing construction is carried out on similar to the Russian types of buildings. Very often standard designs are used. Social housing in Singapore is not considered evidence of poverty or poor quality of life. In general, only a small percentage of consumers of this housing are below the poverty line. However, for the purchase of this type of housing, the maximum income level of the family members is established.

The situation starts changing in the 21st century. An example is the Pinnacle@Duxton residential complex in Singapore. Authors: Louis Tan, Kho Peng Bang, Belinda Huang, Sandy Ng, Lim Khim Guan and ARC Studio. The residential complex consists of seven 50-story houses, united at the 26th and 50th floors by the longest tall gardens in the world with a length of about 500 meters. A residential building has a high attractiveness not only among its residents, but also attracts a large number of tourists.

The concept for the residential complex construction belongs to the city authorities represented by the former Prime Minister Lee Kuan Yu. The buildings were constructed on the site of the old Tanjong Pagar residential quarter, and became a symbol of the city’s new housing policy aimed at building modern and high-quality housing affordable for most of the Singapore population [2].
Social housing in France
France has become another country with active social housing building. About 20% of apartments in France are social housing (HLM - Habitation a loyer modere).

Leaders of architecture are actively involved in the social housing creation. So, in 1945-1952, the world-famous Marseille residential unit (Unité d'Habitation), a seventeen-story residential complex in Marseille, was built according to the Le Corbusier project. The building is built according to the five principles of modern architecture as defined by the author. It consists of 337 apartments of 23 different types for different families. Two-level apartments are served by five corridors - “internal streets”, the middle of which, a commercial one, connects the apartment with various trade and service establishments located in the house. The Marseille unit is an experiment with a whole series of ideas in the field of standardization and modern methods of construction, the organization of architectural methods of a certain lifestyle with a given combination of individual and social features [3].

The period of active construction of social housing started in the postwar years. In 1956, Minister Pierre Kuran launched an ambitious plan involving the construction of at least 240,000 residential buildings per year, with a significant number of HLMs. Already in 1964, 95,000 new HLM apartments were built. Residences were often built in large complexes.
Gradually shifting the shift of priorities from quantity to quality of housing. So, in the 1970s, already 80% of the apartments had sanitary facilities and toilets, compared to 10% in 1954. The new HLM facilities were built in small towns and villages and the numerous programs to combat poverty, unemployment and crime in these complexes were launched. [4]

Now the average HLM is a 4-room apartment of about 80 square meters, in which 2-3 people live. Each house has about 30 such apartments. An example is the Mervau Housing in France from the Tetrarc architectural studio. This complex consists of four houses with 36 apartments. Unlike the previous multi-storey cubic houses, these houses are made in the form of broken lines separated by pedestrian streets. Such a composition also helps to obtain maximum building density. White walls are decorated with camouflage drawings of pine silhouettes, and the use of natural materials - wood and tile - complements the image [5].

Social housing in Sweden
In the 60s of the 20th century, the Social Democratic Party came to power in Sweden. The Millionth Program was proclaimed as the main housing doctrine. The goal of the program was to build a million new homes over 10 years. During the construction of new housing, the old one, which was not subjected to repair and reconstruction, was demolished in parallel.

The result of the program was the construction of 1,006,000 new dwellings. Massive social housing on one hand made it possible to increase the overall quality of housing, on the other hand, it had an extremely low aesthetic quality.

The approach of implementing this program sounded like the upbringing of “good citizens of a democratic society”. To achieve this goal, the complex construction of social housing and social infrastructure buildings was supposed: schools, hospitals, churches, libraries and clubs for various population groups. The authors of the project tried to unite various social groups by mixing them in one territory. The most common type of apartment was a three-room apartment for a family of 4 people with a total area of 75 m².

The program has been executed. Over a million new houses were built. However, its implementation has received extensive criticism. The most common reproaches are the claims for the appearance of “gloomy concrete buildings” that destroyed the historic attractiveness of the cities. In fact, only about 15% of the buildings were constructed of reinforced concrete structures. The bulk of the built housing in the program is represented by the single-family residential buildings. Despite this, the program is still associated in public opinion with the so-called “concrete outskirts” - the suburbs, which are mostly built up with monotonous panel blocks. The three most famous suburbs - Rinkeby, Hammarkullen and Rosengård, built during the implementation of the program, became the symbols of their time.
Numerous case studies show that the areas built within the Miljonprogrammet program serve as a place of social segregation where crime is growing. These manifestations are associated with the emergence of the cheap housing entire areas, populated by poor rural migrants. Currently, there is a refusal to build such housing in favor of the individual architectural solutions’ development [6].

**Social Housing in Chile**

The construction of social housing in Chile is not massive. However, there have appeared several interesting residential complexes recently. Project author Alejandro Aravena received the prestigious Pritzker Prize for the series of these projects in 2016. The idea, embodied in various projects and materials, is that the user is provided with a minimal residential unit with the possibility of its increase. Housing owners are gradually expanding it depending on their social needs and financial capabilities, thereby becoming co-authors of the project. In this way, a careful attitude to own housing and a decrease in social tension increase [7].

**Summary**

Social housing is being designed and built around the world. During the social housing large complexes’ construction, the prerequisites for the formation of socially disadvantaged areas are often created. Crime and sense of social injustice grow in these areas. The construction of low-
rise small complexes with high-quality architecture and the use of high-quality materials can solve this problem. To do this, it is necessary to hold the competitions of architectural and design solutions within the designated budget, where the quality of life in the constructed housing will be evaluated first.

References
[1] Khan-Magomedov S O 2004 One hundred masterpieces of the Russian avant-garde (Moscow, USSR) 456. — ISBN 5-354-00892-1.
[2] Information on http://www.pinnacleduxton.com.sg/
[3] Le Corbusier 1950 L’Unité d’habitation de Marseille.
[4] Abcd10 idées reçues sur les HLMArchived 2013-11-26 at the Wayback Machine, Union sociale pour l’habitat, February 2012.
[5] Information on https://www.dezeen.com/2012/12/18/mervau-housing-by-tetrarc/
[6] Information on https://nordiz.wordpress.com/2014/10/07/типовая-застройка-в-швеции-каждому-гр/.
[7] Information on https://www.archdaily.com/br/01-156685/habitacao-villa-verde-slash-elemental.