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REPORT

INCREASING ENERGY STANDARDS AND UNFIT HOUSING: CASES, SOLUTIONS AND DILEMMAS



FEANTSA

European Federation of National Organisations Working with the Homeless

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This paper was commissioned by FEANTSA to discuss the problem of energy poverty in the unfit housing sector in Central and Eastern European (CEE) countries. Carrying out the assignment we chose one country, which was Hungary, as an example through which we examined the nature of the problem and assessed several related but still mainly smaller scale projects. However, despite some differences and specificities, the nature of unfit housing and energy poverty are similar in these countries. As for the methodology of the paper, we primarily relied on desk research, which was supplemented by a few interviews.

The paper is structured as follows. The first chapter defines the notion of energy poverty, the second chapter presents the context of unfit housing in Hungary, while the third chapter shortly summarises the nature of the Hungarian housing policy. The fourth chapter discusses the examples of programmes renovating urban and rural unfit housing. Finally, the last chapter draws the conclusions and presents dilemmas for future programme planning.

1. THE CONTEXT

In general, the households considered to be energy poor correspond to households who spend too high a proportion of their income on paying energy bills and/ or unable to heat and/or cool their homes properly. [1] Energy poverty is a multidimensional problem and the result of several factors such as low-income, high energy prices, buildings with low energy efficiency, and lack of adequate energy infrastructures.

Unfit housing refers to buildings that are physically not adequate for human habitation because they are in dilapidated condition, lack basic infrastructures for sanitation, adequate lighting, heating and pose a risk to human health such as dampness, moulds. Unfit housing often means over-crowdedness as well, as larger households cannot afford a dwelling of sufficient size. Furthermore, unfit housing has a spatial/geographical dimension as such housing is often located in deprived urban areas, or peripheral regions, in smaller localities with heavily decreasing population.

Unfit housing, consequently, relates to the housing affordability problem and strongly indicates states' housing and welfare policy failures in providing adequate and affordable housing to all member of societies.

Energy poverty and unfit housing are partly overlapping problems: those who live in poverty most probably suffer from energy poverty, but those who are energy poor do not necessarily live in unfit housing. In reality, a significant proportion of the energy poor live in otherwise adequate housing. But those who live in unfit housing typically not only suffer from energy poverty, but also deep poverty with all their underlying causes such as very low income, unfavourable position in the labour market, low educational attainment, bad health condition.[2]

[1] Energy poverty is defined and measured in several different ways, however it is not in the scope of this paper to discuss them. There is considerable literature on this problem, for example, the project ComAct (Community Tailored Actions for Energy Poverty Mitigation) deals with this issue in details. Turai, E., Schmatzberger, S. and Broer, R (2018) Overview report on the energy poverty concept. https://comact-project.eu/wp-content/uploads/2021/05/ComAct-D1.1_Overview-report-on-the-energy-poverty-concept_Final-version_UPDATED-1.pdf

[2] Several studies discuss the relation between energy poverty, income poverty and housing quality issues. The already referred ComAct report (Turai, et al, 2018) provides an overview of the related literature and how the different interpretations are translated to different indicators of energy poverty.

Thus, energy, housing and income poverty are often interrelated for the most vulnerable groups, which means that no efficient solutions can be delivered to energy poverty without tackling housing poverty and income poverty problems at the same time.

2. ENERGY POVERTY AND UNFIT HOUSING IN HUNGARY

Despite the quality of the housing stock significantly improved in the last thirty years in Hungary, significant problems still persist in this respect.[3]

The housing stock consists of 4.4 million units in Hungary, of which 30 % was built before 1960 and only 16% after 1990. However, the number of inhabited dwellings is considerably lower: only 3.85 million. Regarding the tenure structure of the inhabited stock, only 1.3% of the stock is owned by the municipalities, while the share of the private rentals is 6.7% according to the official statistics[4]. But experts estimate that this rate is higher, around 8-10% of the inhabited stock, as some part of the stock still operates in the grey sector. Consequently, the vast majority of the housing stock is owner-occupied, amounting to the 85-90% of the stock.

The number of dwellings without running water, bathroom or toilet exceeds 100,000 units, typically located in deprived or segregated areas of cities and villages. The number of adobe houses is 566 thousands out of which 140 thousand houses is without foundation[5]. The majority of this stock was built before the World War II and particularly characterised by the lack of renovation. In villages the most problematic housing stock consists of the adobe houses, although this kind of housing can be found in cities and towns, as well.

Regarding the more urbanised areas, the unfit housing covers those multi-storey buildings but also low-rise houses which were built in the first half of the twenty century in order to house the working class families. In such buildings the number of one-roomed flats, without toilets and bathroom is high.

Altogether, 665 thousand units (17% of the inhabited stock) can be regarded as substandard housing, lacking basic amenities (running water, toilet or bathroom), or having other substantial quality problems such as mouldy, dampened walls, not enough light or overcrowding.[6]

Common features of the urban and village unfit housing stock is the deterred renovation and modernisation, or if they happened, they were implemented in a less professional way, often done by the dwellers of the flats.

The outdated heating system is one of the largest problem regarding the outfit housing. Households use solid fuel (wood or coal) for heating totally in 1.45 million units (38%), out of which in 800 units households do not use other type of heating at all.[7]

[3] A good indication of the quality improvement is that 25.9% of the housing stock had no inner toilet and 56.2% was not connected to the sewage system in 1990, whereas in 2016 the respective indicators decreased to 5.4% and 14.9%. (Central Statistical Office, Census, 1990 and Microcensus, 2016)

[4] Központi Statisztikai Hivatal: Mikrocenzus, 2016. (Central Statistical Office, Microcensus, 2016.)

[5] Központi Statisztikai Hivatal, 2016: Miben élünk? A 2015. évi lakásfelvétel főbb eredményei. (Central Statistical Office: In what do we live? The main results of the housing survey, 2015.)

[6] MRI's own calculation of Metropolitan Research Institute, based on the data of Central Statistical Office's Housing Survey, 2015. The calculation was made by József Hegedüs.

[7] Central Statistical Office, Microcenzus, 2015,

Among those who use only solid fuel, approx. 200,000 low-income households receives in kind support to their heating cost in form of firewood or even coal (although the number of households who would need support in this regards is higher)[8]. The poor households only can buy firewood of worse quality often still with high water content which has low caloric value and thus has a high air-polluting effect. Furthermore, the stoves and chimneys in unfit housing are often broken and of bad quality, which has considerable negative effects on the households' health. The problem is highlighted by the fact that the level of air pollution is highest not in cities but in smaller villages of the least developed regions of Northern Hungary.

Regarding the affordability of energy prices, households pay more than 25% of their income to energy bills (including the cost of firewood and coal) in 407 thousand units (10,5 % of the total inhabited units), out of which 105 thousand units can be regarded as substandard housing. It means that the majority of households whose relative energy cost is too high compared to their income live in adequate housing. Data also show that households in substandard housing

In the lowest income quintile, the share of those units where households face housing quality and energy affordability problem is considerably higher: 39 % of the concerned units is substandard and in 54% of the units households primarily heat with solid fuel, whereas in 35% household pay more than 25% of their income to energy bills. It also worth mentioning that the average share of the energy bills in households' income is 23%.

	Thousand units	% in the total inhabited stock	% in the lowest income quintile
Substandard housing	664.9	17.2	39.2
Primarily solid fuel heating	1.128	29.2	53.7
Unaffordable energy cost	407.2	10.5	34.6
Substandard housing + Primarily solid fuel heating	350.5	9.1	
Substandard housing + Unaffordable energy cost	105.3	2.7	

Table 1. Some characteristics of energy poverty in the total housing stock, and in the stock inhabited by the lowest income quintile

Source: Central Statistics Office, Housing Survey 2015. MRI's own calculation.

The condition of the municipal housing sector is worse than the average: 40% of the stock was built before 1945 and significant part of it still does not have inner toilet (6.4%) and of small size, only one-room flat (6.2%), whereas in the stock owned by private persons the shares are 15.8%, 3.9 % and 6.2%, respectively.

[8] Habitat for Humanity Magyarország: Éves jelentés a lakhatási szegénységről 2020 (Annual Report on Housing Poverty 2020). https://webcache.googleusercontent.com/search?q=cache:hGI_QNmIPB4J:https://habitat.hu/sites/lakhatasi-jelentes-2020/&cd=1&hl=hu&ct=clnk&gl=hu

3. MAIN FEATURES OF THE HOUSING POLICY

The Hungarian national housing policy can be characterised by the lack of social housing policy. The housing subsidies support the owner-occupied sector and primarily target families with children. Most of the subsidies are for new housing construction, while less attention is paid to renovation. This is especially true in case of renovation of multi-unit buildings, the scope of the available subsidy schemes is minimal for this part of the housing stock. The energy efficient renewal of the housing stock has not been a priority of the government in power since 2010.[9]

The main types of housing subsidies are as follows: [10]

- Housing Subsidy for Families (CSOK) supports the purchase (construction) of new or existing housing. Those families are eligible who have a minor child or declare their intention to have a child. Applicants must have social security at least for 6 months. The subsidy consists of two parts: a non-refundable one-off payment, the amount of which depends on the number of children, and whether the family buys a new or existing home. The other part of the subsidy is a preferential loan.
- Subsidized 'baby loan', which is a general-purpose loan, but often used for housing purposes, is available for young married couples who commit to have children. The loan is free of interest in the first five years and after the third child is born the family does not have to pay back the outstanding principal. However, families bear substantial risk, because if the first new baby is not born in five years or the couple divorces they have to pay back the interest subsidy in one amount with a punishment interest rate.
- Home renovation subsidies also target families with at least one child. A non-refundable subsidy reimburses the 50% of renovation costs up to a certain amount, and families can take out a subsidized loan to finance the renovation. The subsidy scheme does not have an energy focus, although it can be used for this purpose.
- A specific housing subsidy program (so called "village CSOK") has been introduced for a limited period (until the end of 2022) that provides the same amount of subsidy for families buying and/or renovating homes in villages with decreasing population as the CSOK subsidy does in case of new homes. The scheme is not targeted at disadvantaged families but actually can mean a significant support for them in improving their housing situation. (See more in Chapter 4.3.3)

[9] The analysis of Hungarian subsidy programmes for renovation residential buildings can be found in the study of „Turai, E. and Szemző, H. (2022): Social justice and more ambitious energy performance requirements in the post-socialist context” which is a background paper for FEANTSA.

[10] A detailed description of these government housing subsidies is available on the homepage of a Hungarian bank, OTP: https://www.otpbank.hu/static/portal/sw/file/CSOK_Baby_loan_Renovation_loan_summary.pdf

The majority of public housing is owned by the municipalities, which are responsible by law for maintaining and developing the stock, although it is not a compulsory task for them. Municipalities have no legal obligation to provide social housing for vulnerable groups, and thus, the central government does not provide any financial contribution to the maintenance of the stock. Therefore, the municipalities have only marginal interest to maintain and improve it, which is indicated in the long-standing process of drastic shrinkage of the stock and the high share of dilapidated vacant units.

EU funds were used for housing only on limited scale. EU resources backed a preferential loan for energy efficient renovation of privately owned residential buildings, which could be primarily used by single family houses (or flat owners in multi-family buildings), as the access to the scheme for multi-family buildings was encumbered by the strict financing conditions (10,630 private persons and 60 multi-family buildings used the scheme). As for the improvement of municipal housing, some EU funding was available, especially in the framework of area-based urban and rural regeneration programmes (see the next chapter), but the overall improvement of the municipal social housing stock was not a goal of the related operational programmes[11].

Regarding the support for households to maintain their housing the government abolished the central housing allowance scheme in 2015, and transferred it to the municipalities competence to decide on whether they provide such allowance, and if yes, to whom with what conditions.

Summing up it can be concluded, that the Hungarian housing subsidy system disproportionately supports the homeownership of the better-off households and the lower income households can get access to these schemes only on very limited scale. The provision of affordable housing is practically not included in the policy (only exception is the “village CSOK”).

4. EXPERIENCES IN RENEWING UNFIT HOUSING

In this chapter we show examples of renovation programs for unfit housing both in urban and rural areas. We examine what results the different programs achieved in terms of improving the quality and energy efficiency of buildings, and whether they were able to improve the situation of vulnerable households originally living in those dwellings.

[11] The urban area-based regeneration programme of segregated neighbourhoods was included in the regional operative programmes, whereas the improvement and elimination of rural segregates was the part of the Human Development Operational Programme. The latter one also included a smaller scale programme for the renovation of municipal flats in cities. These housing interventions were financed by ERDF, and only municipal housing or in the case of private housing the common area of multi-unit buildings could be renewed. The general energy efficient renovation programme was financed by the Cohesion Fund in the framework of Economic and Innovation Operational Programme.

4.1. INITIATIVES IN THE URBAN HOUSING STOCK

The most significant, longest running program in cities and towns, which provides relevant experiences on the effectiveness and barriers to energy-efficient renovation of unfit housing is the EU funded, so called ‘Socially sensitive rehabilitation programme’[12]. The programme is an area-based scheme targeting deprived neighbourhoods or segregated areas (usually Roma settlements) and has an integrated nature using both soft (ESF) and hard (ERDF) interventions. Regarding the housing renovation elements of the programme, the main objective of municipalities was to modernise the dilapidated, low-comfort municipal stock, and improving the energy efficiency of buildings was less of a priority, although the related call for proposals included an energy efficiency requirement.

4.1.1 THE CASE OF JÓZSEFVÁROS [13]

Józsefváros, a district municipality in Budapest, implemented several projects in the framework of the “Socially sensitive rehabilitation programme” in the last 15 years. The district still has a much higher share of public housing (9% in 2021) than the city (4.4%) and national averages (1.3%), although the large part of the stock is in deteriorated condition as the dominantly hundred-year old buildings lack any major renovation since they were built. Because of the scarce funding, a basic strategic dilemma that the municipality faces when developing renovation projects is whether deep renovation should be implemented in less building, or more building should be renovated on a lower scale. However, the municipality has to take into account some objective criteria when determining preferences for intervention types. One such criterion is that first the structural and engineering interventions have to be implemented that ensures the basic functionality of the buildings. Often the change of windows belongs to this category because of their advanced state of deterioration. In case of additional but still scarce funding, it can be decided whether to modernize the apartments by installing toilet and bathroom, or implement energy efficiency related investments.

In case of the last project of the municipality, two historical buildings consisting of 23 and 26 units and belonging to the II energy performance category (which means ‘very low’, the second worse on the 12 degrees scale, see the Annex for the Building Energy Rating) were renovated with the following interventions:

[12] The socially sensitive rehabilitation programme was introduced in 2007 and from the beginning it was an integrated programme with ERDF and ESF interventions. Despite the basic principles have not changed the programme went through significant changes in order to benefit more the disadvantaged groups.

[13] The description was based partly on the interview made with Anna Kerékygártó and Gergely Schum who work at Józsefváros, District 8th Municipality of Budapest, and partly on the Territorial case study of Magdolna –Orczy quarter in Józsefváros Budapest, a background study to Teller, Nóra et al. 2022: Összefoglaló Jelentés. Szociális településrehabilitáció eredményességének értékelése. (Synthesis Report. Outcome evaluation of the socially sensitive rehabilitation programme). The case study was prepared by Anna Kerékygártó, Metropolitan Research Institute. <https://www.palyazat.gov.hu/szocialis-telepulsrehabilitaci-eredmnyessgnek-rtkelese>. Downloaded on 01.09.2022.

- structural interventions covered the change of the suspending corridors in the inner courts, renewal of the of the roofs and the rain water drainage system, and the renewal of the stairways also exchanging the emergency support structure that statically strengthened the stairways,
- engineering interventions consisted of the change of the main water pipeline and electrical wiring system,
- energy efficient elements were the insulation of the attic slab and changing the windows and front doors to well insulated plastic ones (e.g. three-glazed windows). However, the external and inner façades and the firewall were not insulated, despite the latter one could have been easily insulated, but the facades were repaired and painted.

The post-renovation energy performance assessment showed only a one-category improvement (to HH, “weak” degree), despite the fact that the functionality of the buildings improved significantly: the engineering renewal made possible the subsequent modernisation of the flats themselves, which can be carried out by the tenants later on. The lack of modernisation of the flats (e.g. instalment of bathroom) caused dissatisfaction among tenants who, therefore, did not appreciate the renovation. Another negative development was that because of the training related to the practical guidance on how to ventilate the flats with the new well-insulated windows did not happened, the flats became mouldy, especially that majority of the flats were of small sized and overcrowded. The delay in delivering the training occurred because of the organisational problem of the soft project elements, and the lack of coordination between the hard and soft interventions.

As the energy performance assessment proposed, a higher (DD) energy category could have been achieved in the buildings if a central heating system had been installed instead of the individual gas heaters, but it was seen as a too costly investment at the time of the planning. Further improvements could be achieved by insulating the facades, but the main objection to this in the case of historic buildings is that insulation can only be achieved by removing the ornamentation, which is costly and, if done on a large scale, radically changes the urban landscape.

The cost of renovation was between 8.3 and 9.4 million HUF (20,750 and 23,500 EUR) per flat, which meant a 230,000-315,000 HUF per sqm cost^[14]. There is no information on how much the tenants’ heating costs were after the renovation, as the municipality has not yet investigated it.

It is worth mentioning that in an earlier programme one of the municipal buildings inhabited by many disadvantaged households went through a deeper renovation: the heating system of the building was modernised to a fossil fuel based central heating system, the flats were equipped with individual heating meters, and the walls were insulated. However, as no training was provided to the tenants, they were not aware of how to use the new equipment. In addition, the gas company issued heating bills incorrectly and the tenants should have paid several times more than their consumption justified. This problem was not noticed and then not solved by the housing management company for a longer period, which also indicates the inefficient management of the stock.

Since 2019, the new district leadership has changed the focus of the local public housing policy aiming to retain more of public stock. The former policy wanted to decrease the stock by privatising it to the sitting tenants and demolish those dilapidated buildings that were fully owned by the municipality. According to the new policy, the municipality wants to keep the size of the currently inhabited stock and carry out renovation on a larger scale, and even considers building new public rental housing to replace those deteriorated buildings of which demolition is inevitable. A pilot project is planned in a block where six publicly owned buildings are located. The three smaller, lower-rise buildings would be pulled down, the land would be sold, and the revenue would be spent on the deep renovation of the remaining three buildings, although additional resources will be needed to complete the development, which is planned from EU funds. The renovation covers the full insulation of the facades, the change of roof, suspended corridors, windows and the main engineering system. A new central heating system would be installed and the flats would be modernised and diversified in terms of their size, as currently the majority of the flats consist of one room and a kitchen, many lacking bathroom. Additional storeys are planned to be built on a smaller building. As a result of the project the number of flats would somewhat decrease but composition of the units would be more diversified. The project has only a rough budget, with an estimated investment cost of 1.5 billion HUF (3.75 million EUR) per building. It means a 15 million HUF (37.5 thousand EUR) per flats investment taken into account the current number of flats (around 230 units) in the three buildings, which can be estimated as 50-60% of a similar flat in the market.

Several challenges appear or can be foreseen even in this early phase of the project planning:

- taken into account the characteristics of the old multi storey buildings it is difficult to decide what kind of energy should be used for the modernised central heating system as the options are more limited than in the case of the newly built houses. The main question is that whether it is feasible to shift from gas to non-fossil energy.
- because of the deep renovation tenants have to be temporarily moved to another flat. However, not enough vacant flats are available of acceptable quality and size that fit the composition of the households (typically larger flats are scarce). Therefore the municipality have to buy additional flats in the market but as prices has soared new construction is also considered.
- tenants do not want to move to streets where segregation is more advanced, and it is true even in the case of renovated buildings if they are located in streets of bad reputation.

4.1.2 RENEWING FORMER WORKING-CLASS COLONY HOUSING

Another example^[15] for the socially sensitive rehabilitation project was implemented in a mid-sized city, Salgótarján. The city has a population of 34 thousand people and the total number of dwellings are 18 thousand, out of which 860 is in municipal ownership. The city is a shrinking locality and in twenty years, by 2020, it has the one-quarter of its population.

[15] The description was based on the Territorial case study of Salgótarján, a background study to Teller, Nóra et al. 2022: Összefoglaló Jelentés. Szociális településrehabilitáció eredményességének értékelése. (Synthesis Report. Outcome evaluation of the socially sensitive rehabilitation programme). The case study was prepared by Jelinek, Cs., Pósfai Zs. and Balogi, A., Periféria Központ. <https://www.palyazat.gov.hu/szocilis-teleplsrehabilitci-eredmnyessgnek-rtkelse>. Downloaded on 01.09.2022.

The proportion of Roma people is high, though the official census data shows that their presence in the city is 5.4% of the total population, local estimates say that it can be even as high as 20-25%.

The city was formerly, even before the socialist era, a quite significant industrial centre. Several working class colonies were built in the city before 1945, which gradually get inhabited by impoverished Roma families and became segregated after the change of the regime in 1989. Beside social segregation the buildings physical condition became dilapidated due to decades of neglect. In the city 11 segregated areas were identified by the census in 2011, and four additional areas as being at risk of segregation. Totally the 12 % of the total population lived in such areas. The colony, which was included in the project was also identified as a segregated neighbourhood but had a good, almost central location in the city, next to a housing estate. It consists of one-storey row houses with small apartments lacking basic comfort level such as bathrooms, toilets. Regarding tenure structure, only one part of the colony is in municipal ownership and in some buildings the flats are owner-occupied.

The project included the full renovation of the municipal buildings and the reconstruction of the flats creating 17 modernised, one and two-room flats with bathrooms. The interventions consisted of the renewal of the structural elements of the buildings, including the construction of foundation for the buildings as they were built without it. One of the main problem was that the buildings were heavily waterlogged, so special attention should have been paid to the water resistance of the foundation. As for the energy efficiency improvements, the buildings were fully insulated (walls, attic slab and floors) and 3-glazed windows, new doors were installed. Individual heating system was installed by flats with gas or timber central heating. However, a main problem of the implementation was that the water-insulation of the constructed foundation was not appropriate thus in a year the flats got dampened significantly. The municipality required repair from the contractor but it did not go smoothly.

Acceptance of the project was not without conflicts in the community as it caused substantial tension that only the municipally owned housing could be renovated but not the owner-occupied ones, while private owner families' housing and social circumstances did not defer substantially. However, this is a general problem that concerns all the segregated areas and unfit housing, namely that ERDF funding can be used only in the case of public or non-profit housing. Furthermore, not all the tenants who initially lived there were entitled to the renewed rental flats but only those who had enough income or the capacity to increase their income. According to the local housing decree only those were entitled to municipal housing who had registered work and did not have housing expenditure related arrears. Main strengths of the project were that the soft programs included interventions to eliminate the tenants' debts, which was successfully carried out in most of the cases, and, as a result of the program, the municipality changed its local regulation and acknowledged to be entitled to municipal housing also those who have non-registered jobs. Despite these positive developments, the most marginalised households (e.g. those with substance abuse problems) and those who had no legal title to the flats and were considered as "squatters" remained excluded from the project and from access to the renewed municipal housing.

The assessment of the project was ambiguous among the local politicians as some of them argued that it was not worth preserving and developing dilapidated housing in segregated areas on such a high costs. Instead those people who can pay the rent could be offered flats of similar size in the downtown area of the city, which would better serve their social integration. The average renovation cost per flat in the project was 10 million HUF (25 thousand EUR), which is somewhat lower than the price of a cheaper flat in a housing estate. However, the utility costs are very probably lower in the case of the renewed flats than they are in a multi-storey building, which is energy efficiently not renovated.

If the project is placed into the broader context of local housing and urban development policy, it can be seen that it is a primary interest of the city to eliminate the segregated areas of dilapidated housing that gradually becoming uninhabitable. It is reflected in the process of stock decrease over the last 15 years due to the continuous vacation and demolitions of municipal buildings, and privatisation of the flats to the sitting tenants, a process that has been going on for more than 30 years. Between 2010 and 2021 the municipal stock decreased by 25% (around 300 units), in 2021 there were 860 units in municipal ownership out of which only 590 was inhabited, 91 units were vacant and 179 units were designated to be demolished. Meanwhile, the socially sensitive rehabilitation projects included the full renovation of 53 flats, in another project further 5 units were renewed, and before 2014, the main engineering system of two municipal panel buildings were renewed. Apart from the EU funds, there is no external funding available for renovation, and the municipality has no own revenue for this purpose. Therefore, the city's strategy focuses on the demolition of dilapidated housing, but without resources these buildings are not replaced by new ones, and the renovation activities cover only a smaller proportion of the stock. The city targets those disadvantaged or lower income households who can pay the below-market rent, and according to their calculation the optimal size of the sector is around 600 units. However, the local social housing policy does not target the most vulnerable people who cannot even afford the below-market rent and the utility costs.

There is no systematic information on what happened to the former tenants whose houses were demolished. It seems that several parallel processes are going on. Tenants who are not in arrears and have a rental contract are offered another municipal flat. Others, without contract or being in arrears, move voluntarily or are forced to move out by the authorities. Some of them with higher income rent better quality housing on the private rental market, but those with low income often move to other segregated area and rent private flats of poor quality on higher price ('usuary lease'). Only few households with children (those who have registered job, and higher income) can make use of the state housing subsidies and buy a house on their own.

4.2. INITIATIVES ON THE PART OF THE NGOs [16]

Few NGOs also have launched small scale initiatives that relates to the improvement of the unfit housing sector.

[16] This chapter is based on the interview made with Vera Kovács, the co-president of „From Street to Home Association”.

One of them is From Streets to Home Association (ULE) that has launched a program in 2013 that uses vacant and decayed municipal housing (beside other type of housing) to house homeless people. ULE makes agreement with some municipalities (district municipalities of Budapest) that the ULE renovates the housing units provided by the municipality and in turn the municipality makes rental contract with the formerly homeless person or family whom ULE recommends.

The renovation of municipal flats, most of which is located in one-storey row houses, is organised and financed by the ULE. The interventions are very similar to those that are depicted above in the other two urban programmes. The main tasks includes the change of the engineering system (electric wires etc.), windows and entrance doors. Often they have to (re)build the foundation of the houses, if they do so, they insulate the floor, and most of the cases they also put insulation on the slab. Wall insulation is not always carried out, as in case of row-houses they should insulate the whole façade of the building. Regarding the heating systems in the first years tile stoves were built to replace the more expensive gas heating. But since 2016, they install heating pump systems as it does not require the reconstruction of chimneys and the approval of authorities, making the renovation cheaper and quicker.

The NGO can carry out the renovation at a lower price than the municipality as they are not bound by public procurement. Voluntary workers are also involved in the construction. As a result, the final construction costs can be half or even less than those of the municipality.

The ULE provides regular social work to their clients even after they moved into their new homes in order to enable them to retain their homes.

4.3. INITIATIVES IN THE RURAL AREAS

4.3. 1. RENOVATION OF ADOBE HOUSES [17]

Unfit housing in the rural areas covers single family houses and they are often made of adobe mostly representing the so-called traditional peasant house. Thus, before showing some rural initiatives, it is worth saying a few words about the problems and advantages of this stock, especially because they represent a substantial part of the rural housing stock. One of the major problems of adobe houses that most of them were originally built without foundation, which, together with the fact that of the adobe absorbs water very easily, leads to damp and mouldy walls. Despite the fact that many of them have been modernised, the use of inadequate technology means that the walls still get damp. However, now it is better-known what technologies can be used, and if the building structurally sound, it can be insulated. A significant advantage of the adobe buildings that the demolished bricks can be reused, and the technology to produce adobe bricks can be learned by local people, which means that it produces less construction material waste and it is more ecological friendly.

[17] This chapter was based on the interview made with Zsolt Nyúl, an architect dealing with renovation of adobe houses.

However, the renovation of such houses is not necessarily cheaper than renovating houses built by more modern technologies. . There are several civil initiatives that promotes the preservation of adobe houses and the use of adobe in modern housing, some of them also promotes the model of community self-help housing. However, it has hampered the renovation of adobe houses when the government introduced that housing renovation subsidy for families cannot be used for such houses. Nevertheless, it probably will change in the near future as the new minister responsible for construction affairs has announced that they are going to elaborate a new strategy to preserve adobe houses.

4.3.2. SOCIAL SOLAR PARK PROGRAMME IN DISADVANTAGED VILLAGES [18]

A new complex and integrated programme (FETE)[19] was launched in 2019 in order to develop the 300 most disadvantaged localities, mostly villages located in the least developed regions. The main social target group of the programme is families with children. The programme includes several subprograms such as social, educational, housing and economic development programs that are strongly interrelated.

As it was already described, heating the house during wintertime is one of the biggest challenge for families who are in poverty. Most poor people use stove, but the quality of the stoves and chimneys is often very problematic and thus poses a health hazard and causes air pollution. The families cannot afford gas or electric heating, some of them have been excluded from gas and electricity services because they were in arrears, and to heat the stove they often rely on bad quality timber or fuel with garbage. Therefore, the main goal of the social solar park pilot project is to ensure that every family with children has at least one safe and well-heated room. In the framework of the pilot project, a community solar park was set up in the border of the village called Tiszabő. The logic of the system is that the amount received from the sale of the energy produced by the solar power plant is used to establish a support fund, from which the heating costs of families selected through tenders are supported. The project helps the families to renovate one room of their house, fix or change the windows and the entrance door, and install an electric heater in one room. However, to install the electric heater panel, often the electric wires have to be changed in the house. The families also get prepaid electric meters, and receive a monthly support to pay the bill. The amount of the support is not enough to cover the whole monthly consumption of the family but means a substantial support. In addition, the program provides help for families to develop a more conscious energy consumption behaviour and household budget management in order to prevent indebtedness. So far, the project helped 70 families (with almost 300 children).

[18] The description is based on A Felzárkózás lépései. Felzárkózó települések c. kiadvány 2022/3 száma. (The Steps of Catching up. Journal of the Catching up programme, 03/2022.) p. 6-9.

[19] The programme is called „Catching-up localities” (Felzárkózó települések, FETE), and managed by the Social Inclusion State Secretary of the Ministry of Interior Affairs, run by the Maltese Charity Organisation and financed by national and EU funds. In the implementation five other charity organisations and few civil organisations participate.

By 2025, using the RRF funding, the programme plans to establish social solar park and the related supporting scheme in 50 other villages. However, whether Hungary will receive the RRF funds is still uncertain; more will be known by the end of the year. Additionally, a change in solar panel regulation could also jeopardise the programme, as according to the newest legislation, the government suspends new contracts for the purchase of electricity from solar panel owners. The reason for this is that the grid has not been sufficiently developed to meet the increased demand.

4.3.3. MOBILISING FAMILIES FROM THE UNFIT HOUSING [20]

A specific type of the family housing subsidies was introduced in 2019 for a temporary period in order to slow down the depopulation of villages. The scheme will be phased out at the end of 2022. The subsidy is a one-time payment for families with children who purchase, enlarge and/ or modernize a house in villages with decreasing population. The amount of the subsidy depends on the number of children and on the type of intervention: for families with three children the subsidy is 10 million HUF (25,000 EUR), out of which 5 million HUF at maximum can be spent on the purchase while the remaining amount is for modernisation and renovation. The subsidy can be used also to the house that is already owned by family but then the amount of the subsidy is 50% less. The main eligibility criteria of the subsidy are that at least one parent must have a social security insurance in the two-year period preceding the application, and that the house must have toilet and bathroom (at the time of the purchase or as a result of the modernisation). The criteria also include minimum requirement related to the size of the house but no criteria is posed to energy efficiency. In addition to the subsidy, the families are entitled to a preferential loan up to 10 million HUF with a maximum duration of 25 years.

As housing prices in villages in less developed areas are very low, initially the subsidy meant a sufficient amount to buy a house in such localities. However, in villages that have more favourable position in terms of transport the housing demand has increased gradually which led to housing price increase. In several places the prices have doubled by 2020 and 2021, furthermore in some localities practically there are no houses available for sale anymore.

Nevertheless, with the help of this subsidy even families living in unfit housing have been able to improve their situation and move to a better quality housing and/or renovate their housing, though it is important to emphasise that the main focus of renovation was not energy efficiency related development but to ensure the quality of adequate housing in terms of comfort level (water, sanitation, bathroom), heating and size. However, the requirement of the social security insurance period often excludes the most vulnerable groups as many of them has no longer term jobs, especially not registered jobs.

[20] The description is based on A Felzárkózás lépései. Felzárkózó települések c. kiadvány 2022/3 száma. (The Steps of Catching up. Journal of the Catching up programme, 03/2022.) p. 10-11.

In the FETE program, the Maltese Charity Organisation has set up an expert team that helps families to get access to this subsidy. The expert team works in FETE villages in four counties located in Northern Hungary that belongs to the least developed regions. Until the end of June, 2022 the team helped 80 families to receive the subsidy, out of which 42 families purchased another house of better quality and 38 modernised their existing housing. From those who bought another house 27 families also made some renovation on their new homes. Some of the families purchased their new home in another village (typically nearby their previous village). Those family who purchased a new home previously lived in very dilapidated housing, often not adequate for human habitation. In other cases the subsidy meant an opportunity for young families to move out from extremely overcrowded, multigenerational housing. Without getting access to better housing, the children of some families would have been placed in foster care, as the child protection authority had already started the formal proceedings against them.

The expert team provides complex support to families throughout the whole process, from the application phase, to assistance in choosing a new house in the market, to arrangement of the administrative procedure related to the purchase, to the planning and implementation of the renovation. The team works together with the social workers of the FETE program to find those disadvantaged families who are in precarious housing and also eligible for the subsidy. They are also in contact with local reliable construction entrepreneurs with whom the families can be connected. The program shows that vulnerable people often needs additional support to get access to subsidies, but if such assistance is in place then their situation can be improved as well.

There are no information on that how many families implemented energy efficiency related renovation. Nevertheless, with the increasing energy prices it has become a very pressing issue, especially for those families who managed to move to a bigger home with higher comfort level, as their energy costs, particularly the heating costs can increase substantially.

5. CONCLUSIONS, DILEMMAS

This chapter summarises the main conclusions and dilemmas that can be drawn from the Hungarian examples presented. It is important to stress that, as we have seen, EU funds play a crucial role in housing renovation. Therefore, their more targeted, efficient and extensive use should be encouraged by the EU. It can also be concluded that, despite some differences, the housing problems of the Central and Eastern European countries are very similar and therefore the conclusions drawn here are broadly valid for other countries in the region as well. A main commonality is that **the poor predominantly live in the owner-occupied sector** as the proportion of the social housing sector is extremely low in these countries. **Poverty, including housing and energy poverty strongly appears also in rural areas and concentrates in the least developed regions.**

As it was already discussed above, refurbishing unfit housing is a complex issue, which has several dimensions, such as technical, economic, social, energy efficiency/environmental, and urban-rural development dimensions. When developing solutions to the problem of unfit housing, all dimensions must be taken into consideration. As the Hungarian examples have shown, the projects that aim the refurbishment of unfit housing can focus on quite different dimensions, but they rarely tackle the problems in a fully comprehensive way. However, individual programmes and projects cannot be assessed without the context they are implemented in, as their results and impacts depend on and are strongly interrelated to local and national social, housing and energy policies.

Most examples show that there is a lack of focus on addressing the housing situation of vulnerable groups in unfit housing and providing them with affordable housing of acceptable quality. Instead the projects rather focus on the physical renovation of housing. Since unfit housing (as described in the introduction) is a problem of income, housing and energy poverty, only those programmes can successfully improve the housing situation of the vulnerable groups that address these issues simultaneously. However, there is a lack of national social, housing and energy programmes on which municipalities and NGOs could rely on and which would provide systematic and long-term support for vulnerable groups. It is partly for this reason that the most vulnerable groups (usually labelled as 'non-payers') are consistently excluded from these projects, and there are no solutions offered to improve their housing situation. For example, in the case of municipal housing, housing is not provided for households in debt or who have lost or never had legal title to housing. Moreover, some urban examples show that projects are accompanied by spontaneous, market-generated or deliberate demolition of the worst stock while crowding out a significant proportion of the vulnerable groups to other part of unfit housing sector, often of more peripheral locations (from cities to the least developed villages).

A fundamental technical and economic question when considering the options for renovating unfit housing is what is worth renovating and what is not. From a technical point of view, it is clear that buildings that are unsafe or structurally unsound should be demolished. As we have seen, the primary task in the renovation of housing stock beyond this level is to ensure the functionality of the building, to renovate and replace the structural and mechanical systems, and only then the energy aspects can be taken into account. The specificities of each building (for example historical buildings) also limit the degree of energy efficiency that can be achieved through renovation, and for some buildings, as we have seen, the CC, DD category[21] cannot be exceeded.

The usual argument for economic considerations is that it is not worth renovating a building if the cost of renovation is higher or close to the market value of the property. However, as we have seen, especially in underdeveloped regions, the value of property is already very low, which would allow only very small interventions.

[21] The Annex shows the Building Energy Rating scale in Hungary, where BB category is the level that new buildings should at least reach. The energy consumption of buildings with CC and DD categories are 101-160% higher than that of the buildings with BB categories, but still significantly better than the average in Hungary.

It may be more appropriate to **consider the cost of buying a property of a slightly better quality and renovating it in an energy efficient way and compare this with the cost of renovating a deteriorated property**. A good example of this is the FETE programme for disadvantaged villages, which helped families living in uninhabitable housing to move to better quality housing using the specific scheme of family housing subsidy established only for villages.

This dilemma strongly relates to the question that at what pace the worst stock can be phased out of the housing system. Some international experts recommend that the worst 10-15% of the stock should be phased out and that the restoration of the stock beyond this level should be considered only. While, in principle, this is a rational proposal, the rate at which new housing is being built and the extent to which new housing construction leads to filtration processes should be examined in order to define the realistic rate at which the unfit housing can be dismantled.

The vast majority of the unfit housing is in private ownership, and only a smaller part of it is owned by the municipalities. Nevertheless, apart from energy efficient investments, the EU funds could not be used for the renovation of privately owned single family houses, not even in the case of programmes targeting segregated areas, meanwhile these properties are also in need of significant modernisation in other respects. Therefore, only those solutions can bring improvement, which enable the renovation of the private owner occupied sector in a wider circle if they fall into the category of unfit housing and inhabited by vulnerable groups and allow EU funds to be used for this purpose as well.

It is also clear that in general, not only the individual households, but also local authorities lack the necessary technological background for the energy renovation of some part of the residential buildings, and have not planned systematically which technologies are most appropriate for this specific type of buildings. In this regard, heating modernisation is the most pressing issue. For example, in the case of urban historical multi-apartment buildings, it is not clear what technology should be used if there is a need to switch from gas heating. It appears that individual solutions per apartment are unlikely to work (e.g. the installation of individual heat pumps for all the flats in a building may decrease the efficiency of the system and result in noise pollution). Therefore, it would be reasonable to switch to central heating systems or district heating, but the cost of building out these systems inside the buildings is very high. In the case of historical multi-storey buildings, the installation of solar panels can only provide a small proportion of the energy needed, as there is limited spaces to install the panels.

In case of rural unfit housing the most pressing issues are the elimination of highly polluting and unhealthy heating methods, while in terms of technological solutions there are more options to replace gas in the heating systems. In both cases, the establishment of energy communities can be an important part of creating sustainable and affordable heating systems, but the development of feasible schemes is still at an early stage. The community solar initiative of Maltese Charity organisation in the FETE programme is a good example of how this can be used to increase affordability.

In line with the EU requirements, the Hungarian government developed a long-term renovation strategy. However, this strategy still does not include detailed calculation that how to schedule the renovation of the housing stock, and how to ensure the needed resources for the renovation in a feasible way, and what kind of financing means and subsidies will be available for the households. In addition, the strategy does not address the problem of energy poverty.

In conclusion, **to tackle the problem of unfit housing** in a comprehensive way the following aspects should be taken into consideration when developing national and local interventions:

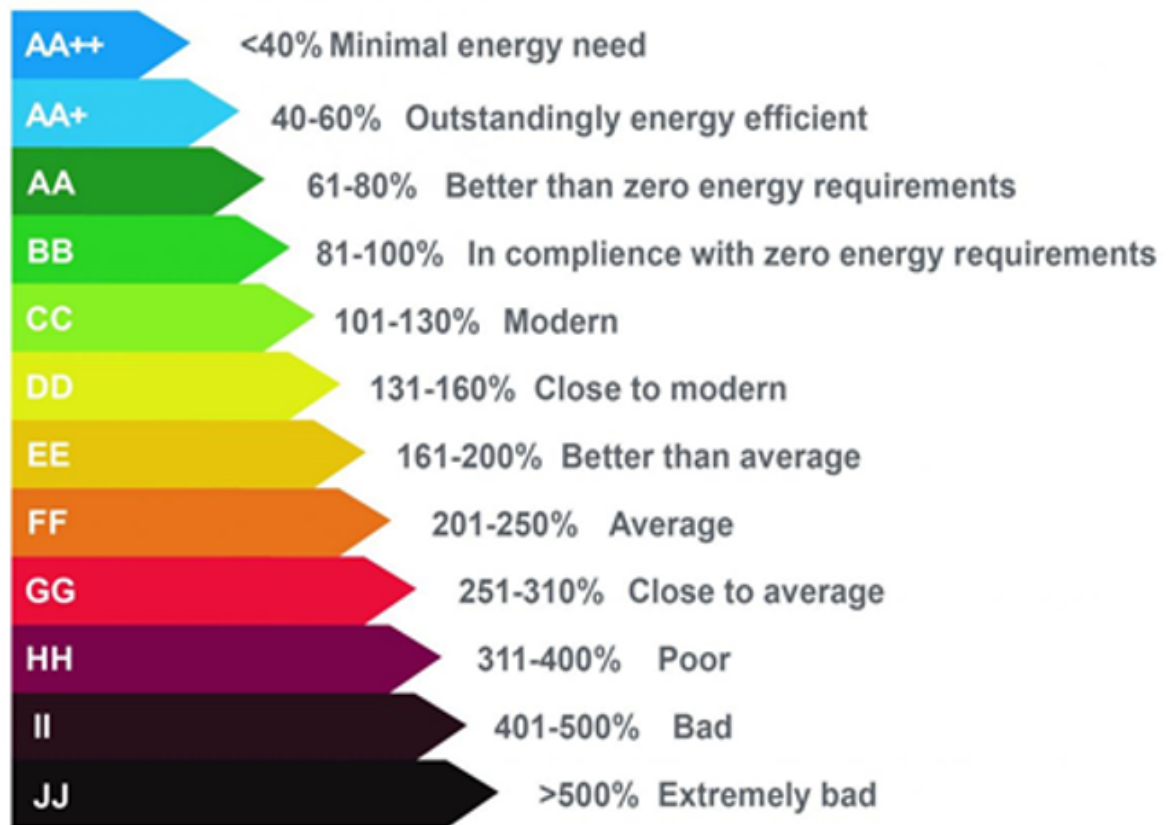
- The national long-term renovation programme and its translation into financing and subsidy schemes should include a consistent policy for unfit housing stock. On one hand, the renovation of unfit housing should not only take into account energy renovation, but also the implementation of interventions that ensure the basic functionality (structural renewal, modernisation). On the other hand, it also should enable the vulnerable groups to get access to the modern energy technologies that ensure cheap and healthy way of energy consumption.
- The technological solutions applicable to unfit housing are not fundamentally different from those applicable to the housing stock as a whole (or to specific sub-sectors). Nevertheless, **the financing scheme for renovation should be socially targeted so that the level of support is proportional to the income situation of the beneficiaries.** This applies to both EU and nationally funded support. **Non-refundable grants should be primarily targeted at the low-income and most disadvantaged, while for the more well-off households (preferential) loans should be provided.**[22]. The intensity of the subsidies for the different social groups should also depend on how long it takes to recover the cost of the renovation, taking into account the cost savings resulting from the reduction in energy consumption.
- As investments in the unfit housing sector (but also in other parts of the stock) can account for up to half of the value of the properties, it could also be considered for privately owned properties to be in hybrid ownership (similar to e.g. cooperative housing), so that the revitalised sector can serve to expand the affordable sector in the longer term.
- In order to modernise the heating systems, and switch from gas to other sustainable energy resources it is worth considering what larger scale infrastructure improvements are needed locally, e.g. to increase the use of district heating, geothermal energy, etc. in cities, and what is worth developing in villages. The national energy strategy deals with this challenge but the recommended solutions are not translated into effective measures yet, and it seems that closer cooperation is needed between the government and municipalities (and other local actors) in order to develop sustainable and feasible local developments.

[22] In some of the new member states, there are some good examples for more intensive subsidy for poor households in the renovation support schemes. For example in Croatia, the proportion of the non-refundable grant in the total cost of the investment depends not only on how deep the renovation is in terms of energy efficiency, but also it gives 100% support to the poorest. For more details see the already referred paper of Turai, E. and Szemző, H.

- The creation of energy communities can increase affordability, but feasible schemes need to be developed for specific sectors of the housing stock. Municipalities can generate and assist the establishment of local energy communities, but again, the government has substantial role as well as she not only should financially support the related investments but also should create the conditions that enables such solutions to work (for example carry out the development of the electrical grid).
- **Intensive technical assistance should be provided to households in planning their renovations**, as these are long-term investments and thus it is crucial what technology they invest in and how much energy it saves (in other words the lock-in effect should be avoided). Poor households may need help in finding reliable construction entrepreneurs who implement the renovation. It is also necessary to help households acquire the skills to use energy-efficient housing. This means training and monitoring households' behaviour over the longer term.
- It is also an important conclusion that **the housing subsidy system in general needs to be better targeted and extended to low-income and vulnerable groups**, in order to increase their access to affordable housing. This requires, on the one hand, better targeting of property-related subsidies towards these groups, the development of new affordable schemes, and, on the other hand, effective support for the renovation and the expansion of the municipal housing sector. Central government should provide regular support to municipalities to maintain and develop their stock and should programme EU funds for such purposes on a larger scale.
- An important element of making the housing support system more targeted and comprehensive is to **introduce a housing allowance subsidy for vulnerable and low-income households financed by the central government, which will enable them to pay for the maintenance costs of better quality housing**. Some countries already have such housing (or rent) allowances, among them the Czech system should be highlighted that compared to other countries in the region provide effective support to private renting and housing maintenance.
- The most vulnerable households need not only financial support, but help in improving their position in labour market, getting access to mainstream services (social, health, employment, education), managing their debt problems, clearing their legal title to housing, etc. In order to effectively improve their situation, services should be delivered with **an integrated approach taking account their individual needs**. In addition, rehabilitation programmes and housing developments in general should be implemented in a way that tackles segregation and hinders further crowding out of vulnerable groups to peripheries The government should enforce the above requirements when local projects are implemented from national or EU funds.

6. ANNEX

The categories of Building Energy Rating in Hungary:



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