

Increasing energy standards and unfit housing: cases, solutions and dilemmas

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Aim and context of the research

- ▶ Examine the nature of the problem: energy poverty in unfit housing in the CEE countries
 - ▶ The poor live in owner-occupied sector and
 - ▶ In rural areas concentrated in the least developed regions
 - ▶ Low proportion of social, affordable (municipal) housing
- ▶ We chose Hungary as an exemplary country to illustrate different kind of problems of unfit housing
- ▶ We presented smaller scale projects for renovating unfit housing
- ▶ Although energy efficiency was not a major element of these projects, but rather the upscaling the housing quality
- ▶ Energy efficient investments in the housing sector was not a main focus of the housing policy despite
 - ▶ substantial EU funding was available, and
 - ▶ the economic conditions were favourable
 - ▶ Instead housing policy focuses on helping middle class to get access to homeownership



Housing and energy poverty



Why to distinguish them?

- ▶ Those who are in housing poverty are also in energy poverty, but many of those who are in energy poverty not are in housing poverty.
- ▶ Housing and energy poverty increases the inequalities of those who are affected compared to those who are simply in income poverty
- ▶ The significance of energy poverty has increased and will increase in terms of effects on social inequalities:
 - ▶ The EU regulation on the decrease of carbon emission (carbon-tax)
 - ▶ The increased price of energy (heating costs: gas, firewood)

	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 (> 25% of hh income)	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	

Housing stock: 4.4 million units
Inhabited stock: 3.85 million units

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

Technical challenges: urban multi-unit historical stock



- ▶ Projects upgrading dilapidated municipal stock
- ▶ First task is to ensure the functionality of the building
- ▶ Modernisation of the flats
- ▶ Renovate and replace the structural and mechanical systems (main water, sewage pipelines, etc.)
- ▶ Energy efficiency vs. Historical heritage aspects (insulation)
- ▶ Heating system: gas system should be replaced but to what?
 - ▶ Use of solar energy limited possibilities (roof surface too little)
 - ▶ Individual solutions less effective
 - ▶ Central heating on building level or district heating → high cost of building out the system inside the building, and energy is still a question (electricity, geothermal energy, heat pumps)
 - ▶ Energy communities
 - ▶ Is city/district infrastructure development is needed?

Technical challenges: renovating rural unfit housing



- ▶ Adobe houses
- ▶ low comfort level, without connection to water and sewage system
- ▶ Solid fuel, bad quality chimneys and stoves (air quality, hazard to health)
- ▶ Renovation again has to ensure the basic modernisation
- ▶ Insulation and installation of non-gas heating system easier (heat pumps, solar energy), although in case of adobe houses special technologies are needed
- ▶ Switches from gas to electricity but housing allowance is needed to finance heating cost
- ▶ Energy communities → „social solar park” pilot programs of least developed villages (FETE) selling electricity produced by solar energy to the electric grid (current regulation rejects new contracts)

Economic and social challenges

- ▶ General approach: cost of renovation \geq value of the home \rightarrow not worth renovating
 - ▶ Location matters: in villages, underdeveloped regions housing prices are very low
- ▶ Instead renovation cost should be compared to the buying a housing of better quality and its energy efficient renewal cost
 - ▶ FETE program helps vulnerable families to get access to homeownership subsidies, buy another house and renovate that with grants and subsidised loans
 - ▶ Mobility and/or economic development of the regions (transport system)
- ▶ Projects aimed at renewing of municipal housing in cities tend to exclude the most vulnerable people with very low and/or irregular income (households in debts, lacking legal title to housing)
- ▶ Housing with higher comfort level has higher maintenance costs \rightarrow housing allowance are not available, or only in very limited amount (weak welfare state)
 - ▶ Crowding out the poor to the periphery
- ▶ Pace of phasing out the worst stock (the lowest 10-15%):
 - ▶ The rate of newly constructed housing
 - ▶ The extent of filtration process generated by the new housing construction



Solutions to improve the situation of those living in unfit housing

- ▶ Complex issue: technical, environmental, economic, social and also has urban/rural dimension → all should be paid attention
- ▶ Projects rarely do so, but projects results and impacts are strongly interrelated with local and national social, housing and energy policies
- ▶ EU funds have substantial role in renovation of unfit housing → should be available more
- ▶ Phasing out the worst stock → more affordable, social housing needed, or subsidies targeting the most vulnerable (now they disproportionally housed in the owner occupied sector)
- ▶ Vulnerable groups should get access to modern technologies: cheap and healthy energy
- ▶ Non-refundable grants should target low-income and vulnerable households (solutions to hybrid ownership)
- ▶ Energy transition needs infrastructure system development in urban and rural areas: national and local governments', and all stakeholders' cooperation in developing technological solutions and networks
- ▶ Technical assistance to the vulnerable, low-income groups to get access to financing tools and to implement investments
- ▶ Welfare system corrections with an integrated approach to tackle complex problems: social benefits, social and employment services





Thank you for your attention!

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