



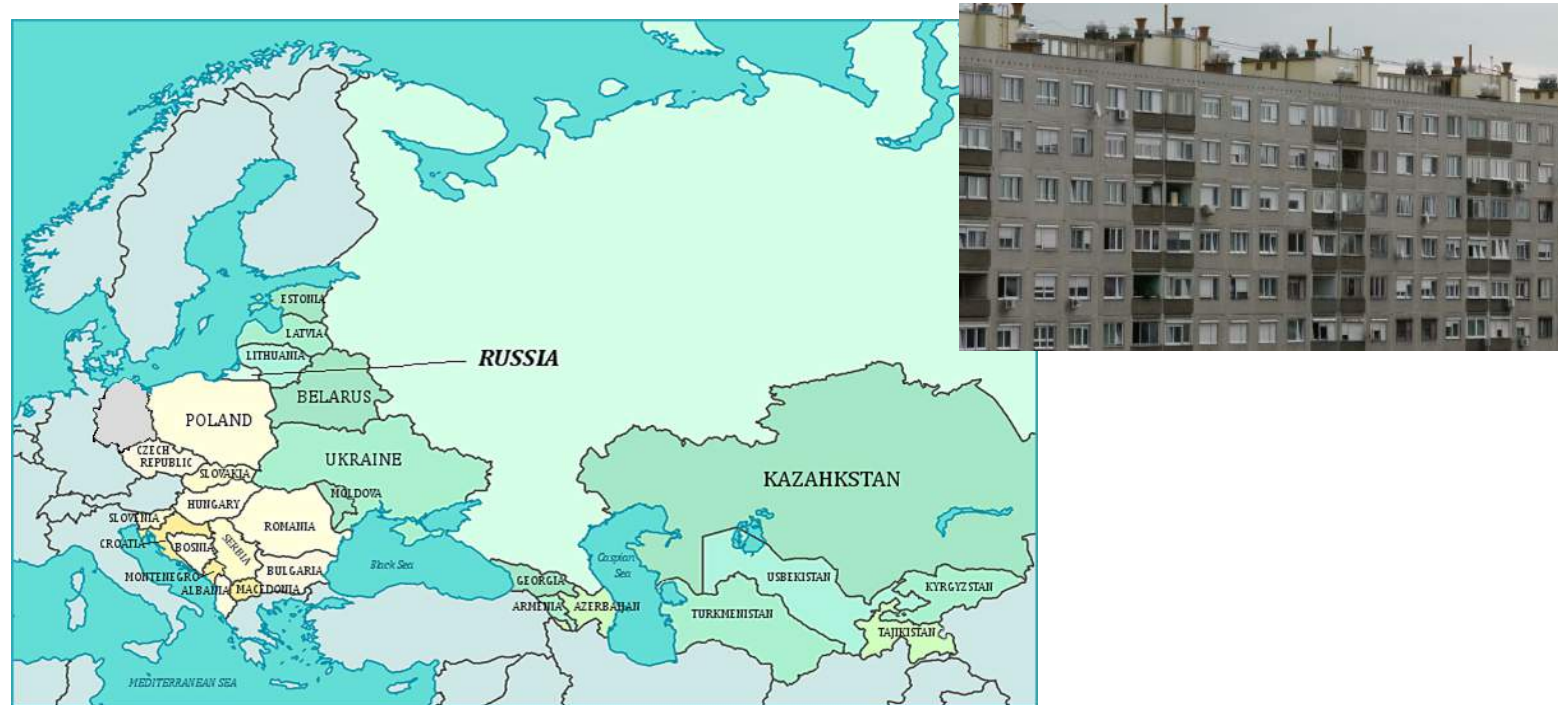
Residential Energy Efficiency in Low Income Housing

Besim Nebiu – Habitat for Humanity International



Context

Energy poverty of people living in multi-unit residential buildings is a housing issue which affects a great number of people in this region.



Structure of Housing Stock

- **Much of the existing housing stock dates back to 1950s-1970s**
- **Mostly pre-fabricated multi-story apartment buildings -in some countries representing 30%, in some more than 70% of the housing stock**
- **After the privatization of 1990s, 90%+ of dwellings are privately owned**
- **Residential heating accounts for more than 40 % of total country's energy use**



Challenges to Renovate the multi-apartment buildings

- **Poor management and maintenance**
- **Limited access to finance**
- **Low income levels**
- **Lack of awareness/demand for EE products**
- **Lack of incentive due to low, subsidized energy prices**
- **Insufficient legal and regulatory support/environment**
- **Lack of mechanism de-risking the loans**
- **Need to restructuring subsidies to target only low-income households**

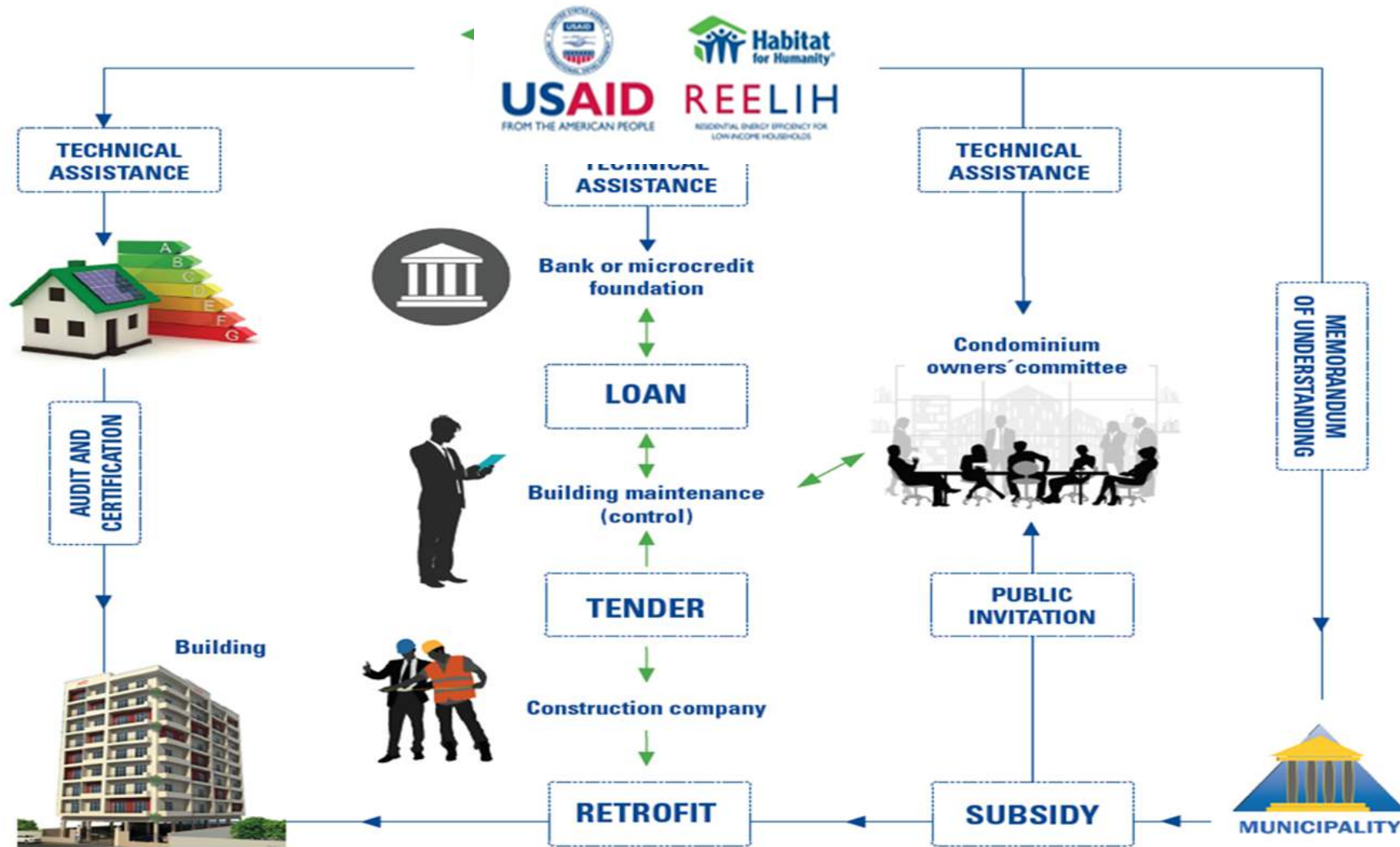


Social Impacts

- Huge energy consumption of residential buildings leads to high energy bills relative to income and therefore contribute to energy poverty
- Low income consumers in residential buildings will be able to afford the market price of energy only if the consumption of their building can be reduced.
- The best to do this is energy efficiency retrofitting.

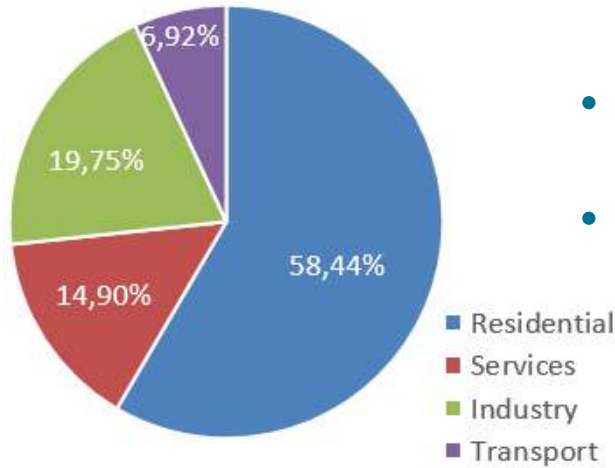


REELIH Eco-system of stakeholders



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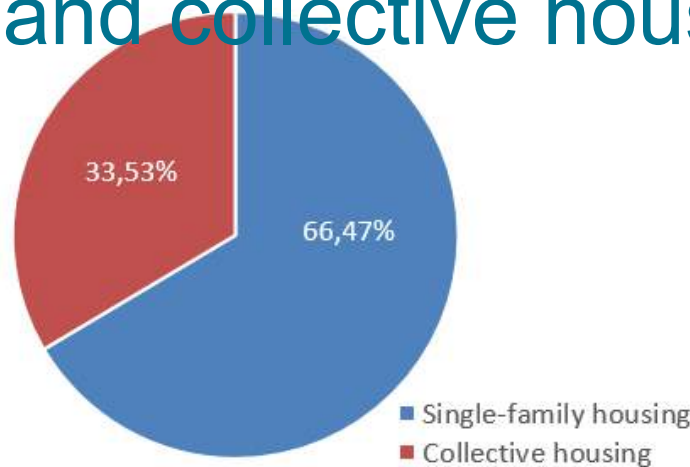
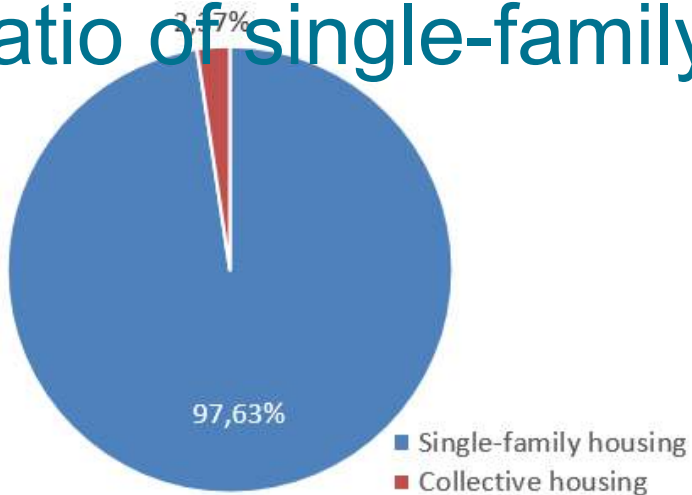
Case: Bosnia and Herzegovina



- Energy intensity of BiH: 0.5 toe / 1000 USD of GDP
- 4 times higher than EU/OECD average

First National Energy Efficiency Action Plan 2010-2018

Ratio of single-family and collective housing



- 20,422 collective residential buildings

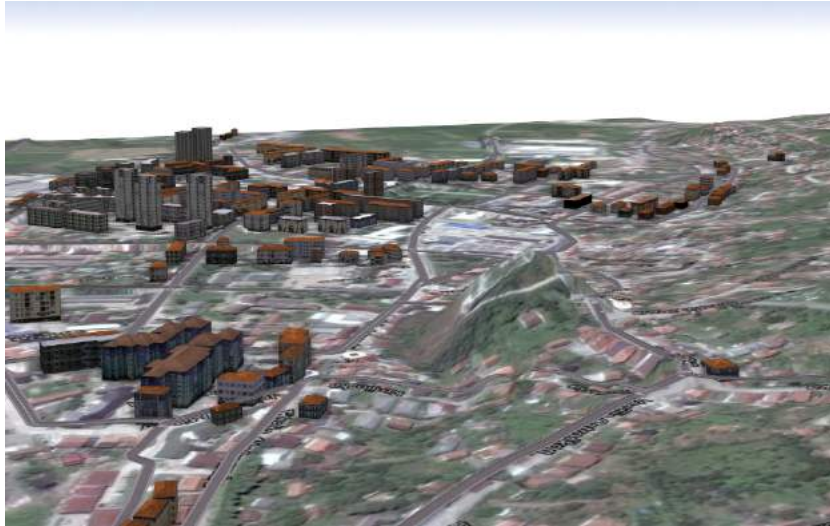
Census of population, households and dwellings in Bosnia and Herzegovina, 2013



by total no. of buildings

by total no. of dwelling units





Before



After



Investment: ~ \$17,500 EUR
Expected savings: 55%

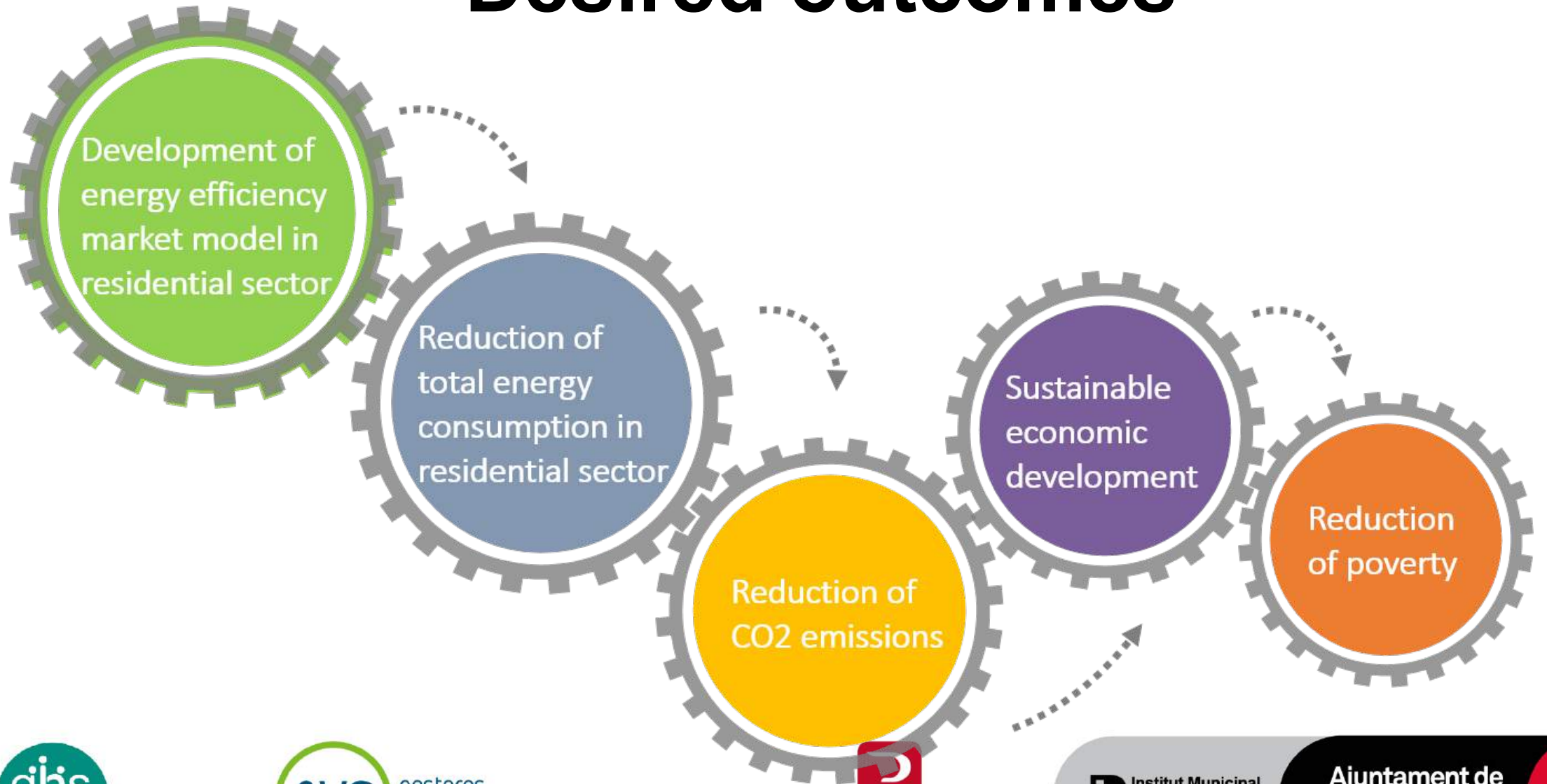


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Desired outcomes



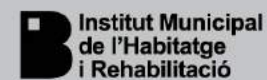
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Strategic Approach

- **Improve bank's understanding of the vast residential lending market potential**
- **Develop targeted subsidy scheme for the government agencies**
- **Improve the legislation governing the Home Owners Associations (law on HOA)**
- **Improve the capacity of the local business on implementing the EE projects**



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Strategic objectives for REELIH

- **Understanding of connection between investing in residential energy efficiency and reducing energy poverty**
- **Convene & organize stakeholders**
- **Test and demonstrate as a means to raise demand for rehabilitation**



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THANK YOU!

www.getwarmhomes.org



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