

10th
SE Europe
Energy
Dialogue

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SESSION VII: Energy Poverty in SE Europe

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Starting points

- **Energy poverty**: Characterized by the inability to secure a socially and materially necessitated level of energy services in the home (based on Buzar, 2007)
- No internationally agreed definition of energy poverty
- Strong link between energy and chronic poverty
- But not all households living in energy poverty are poor
- Poor households rely on biomass and their own muscles – kerosene & candles; wealthy households buy electricity and LPG (but also use biomass)
- Poor households use less fuel than rich – less boiled water plus high pollution exposure & safety
- Urban poor not necessarily better off than rural poor.

The Problem

- More than 3 billion people worldwide depend on solid fuels, including biomass fuels and coal, for their energy needs.
- People are forced to skimp on food to pay their utility bills or to buy wood.
- They often just use what they can find, burning toxic materials, manure, crop residues, plastic bottles or other waste for warmth
- Cooking and heating with solid fuels on open fires or traditional stoves results in high levels of indoor air pollution.
- Indoor smoke can lead to pollution levels 20 times higher than accepted WHO guideline values.
- Largely an invisible problem in the EU despite its potentially significant extent
- Limited amount of scientific research

Impacts of fuel poverty

- There is strong evidence relating to specific health impacts e.g. cardiovascular and respiratory problems below certain temperature thresholds, especially for the elderly
- A conservative estimate of the number of excess winter deaths caused by fuel poverty is 1 in 10 or more than the average number of road deaths last year

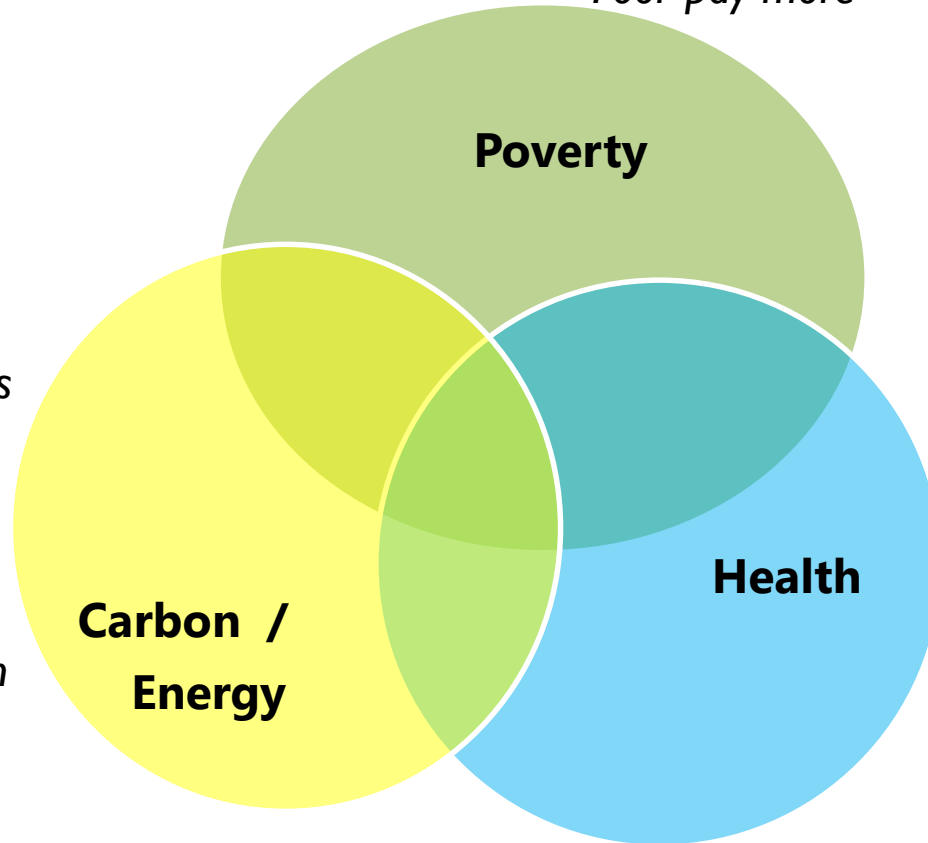
Indoor air pollution can lead to:

- ✓ acute lower respiratory infections
- ✓ chronic obstructive pulmonary disease
- ✓ lung cancer
- ✓ pathological changes in blood
- ✓ damage of the nervous system



Perspectives on fuel poverty

- Unequal ability to convert cash to warmth
- Pushed into poverty by high costs
- Poor pay more



-Capital investments out of reach for some

- Potential obstacle to carbon mitigation policy delivery, especially where costs go on bills

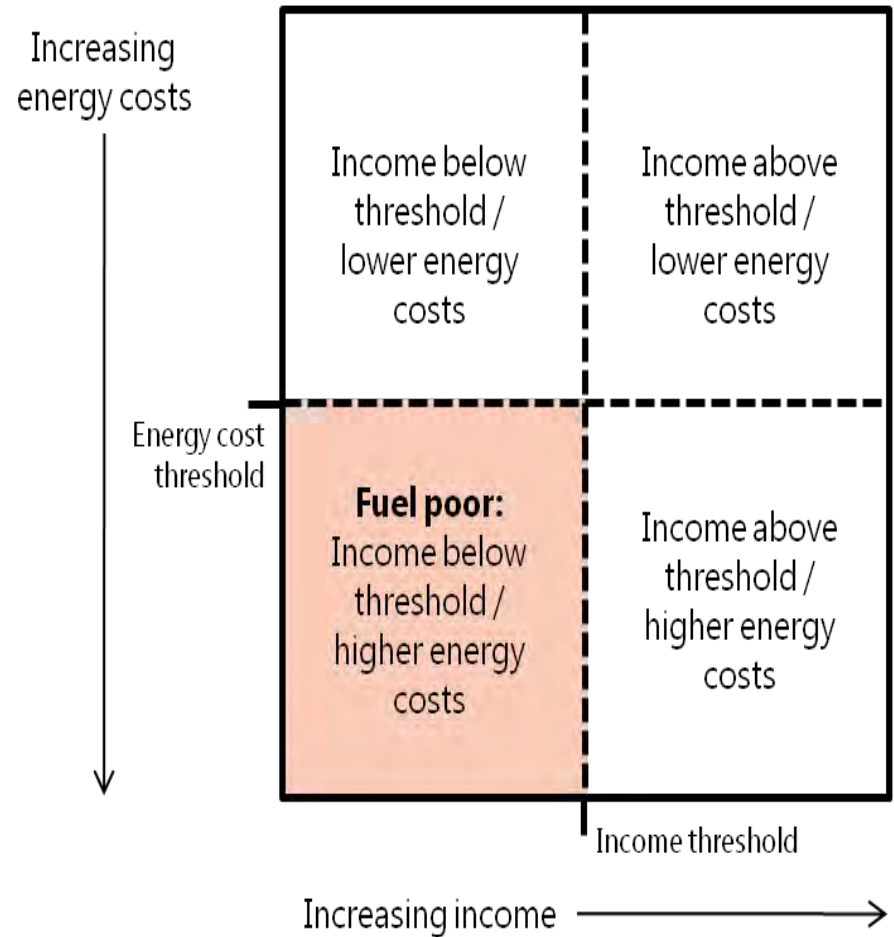
- High rate of morbidity issues in general
- Mental health and social well-being
- Social isolation

Measuring energy poverty

Measuring energy poverty in the EU has been problematic in methodology for a range of theoretical and practical reasons.

Three main methods have been used to date:

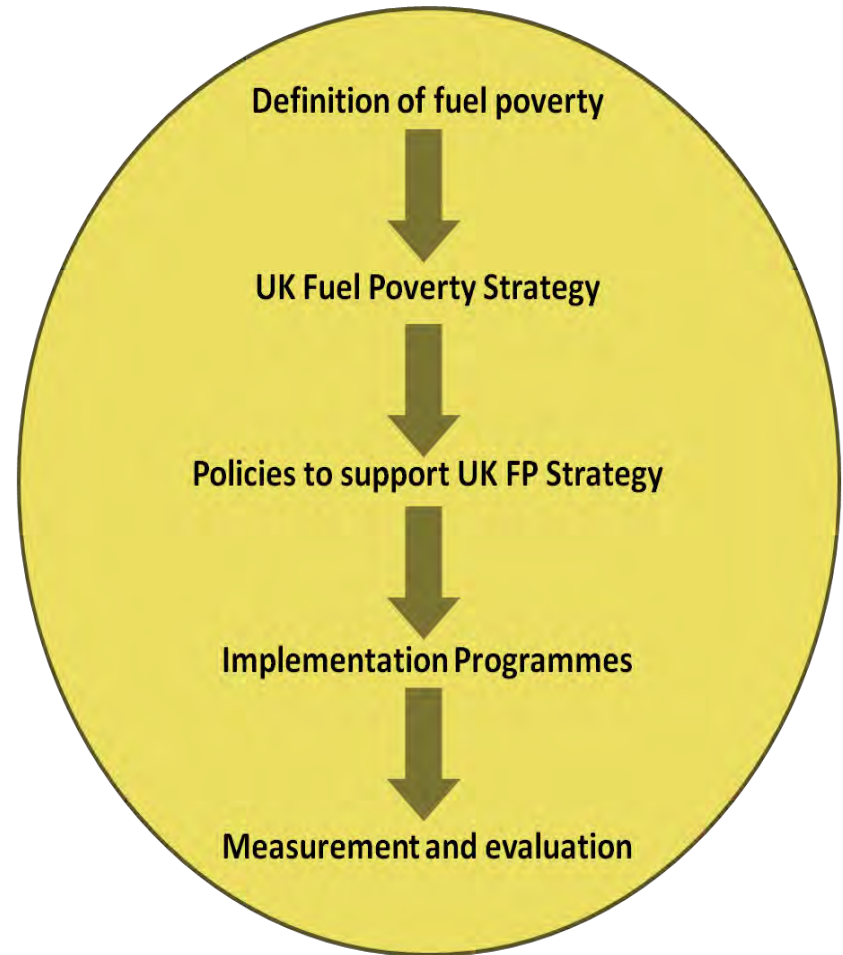
- Expenditure-based (national budget surveys)
- Subjective self-reporting (EU-SILC)
- Direct measurement (individual case studies)



Why measurement matters

What a good indicator can do

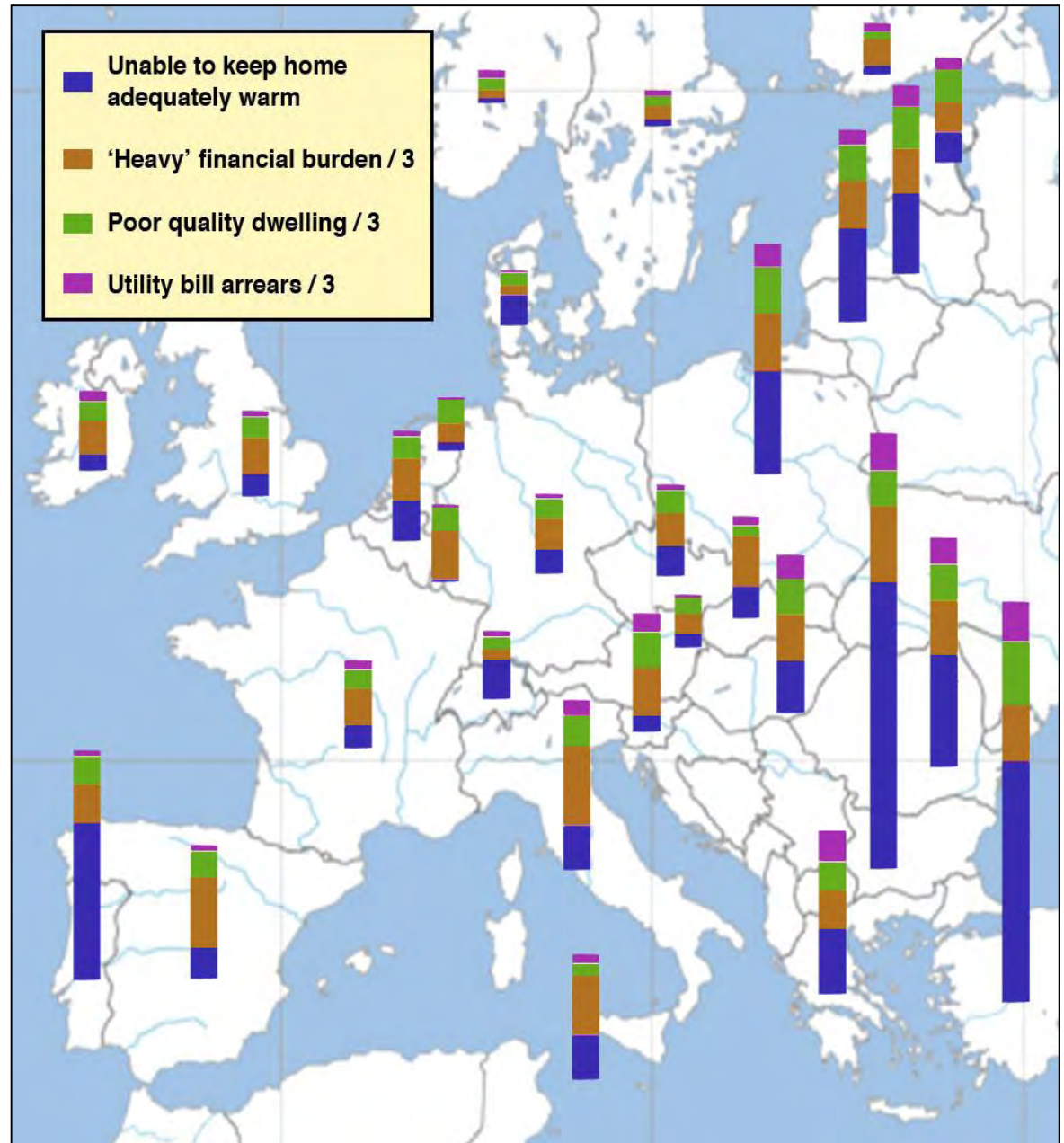
- **Monitor trends** and underlying changes
- **Indicate extent, depth** (and possibly persistence)
- **Identify** the kinds of people affected
- **Support policy design** and assessment



Steps 1 to 4 courtesy of Prof C Liddell (NI Review 2011)

Energy-poverty relevant indicators in the EU's Statistics on Income and Living Conditions (SILC) survey

(2003-2009 population percentage averages, stacked up)



Energy poverty policies in the EU

- Recognized the existence of a ‘growing’ energy poverty problem in Europe, requiring M-S ‘who are affected and which have not yet done so’ to ensure the necessary energy supply for vulnerable customers, ‘aiming at decreasing the number of people’ suffering from this situation
- National governments were asked to formulate ‘appropriate measures’ to address energy poverty, including the development of national energy action plans
- The important role of the European Energy Poverty Observatory

Energy Poverty in SE Europe-Report by SEE SEP Programme



**ALBANIA
BOSNIA AND
HERZEGOVINA
CROATIA
KOSOVO
FYRo MACEDONIA
MONTENEGRO
SERBIA**

Energy Poverty in SE Europe

Basic data for western Balkan countries

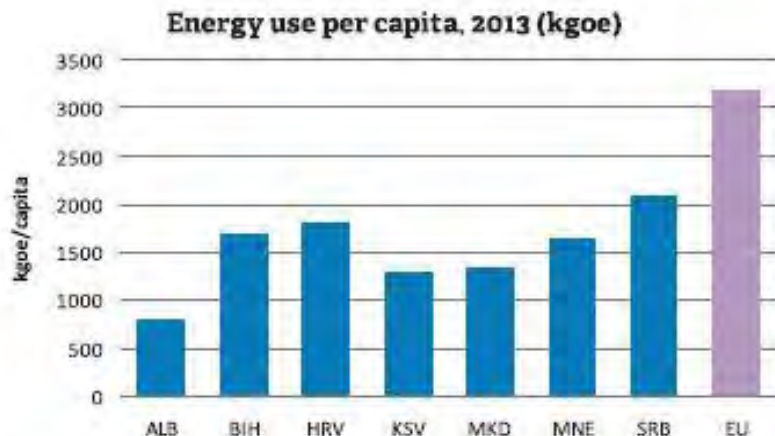
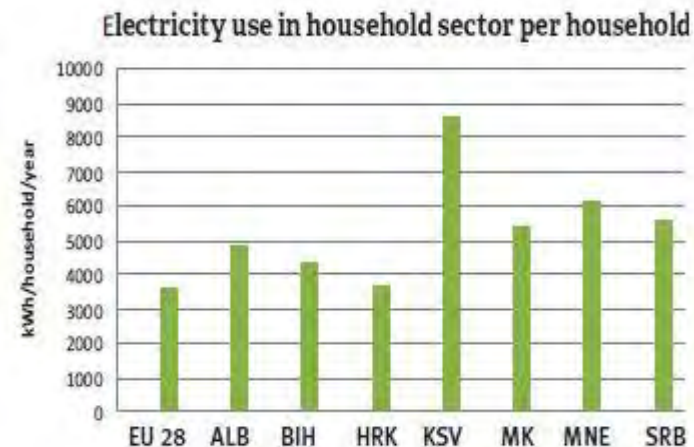
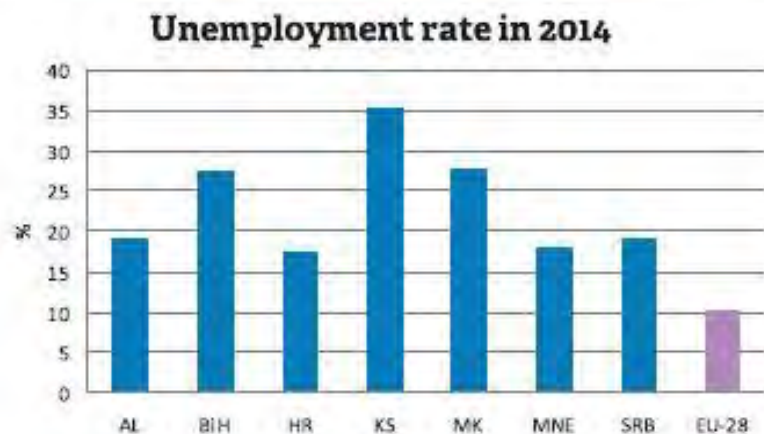
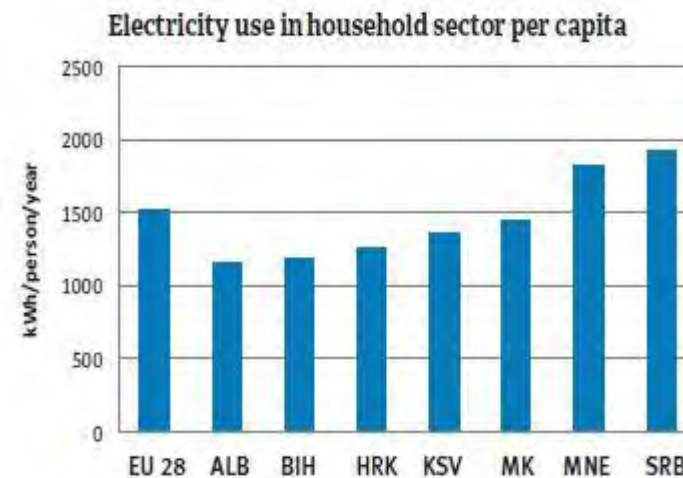


FIGURE 1 Energy use per capita in 2013. (Modified from [5]).



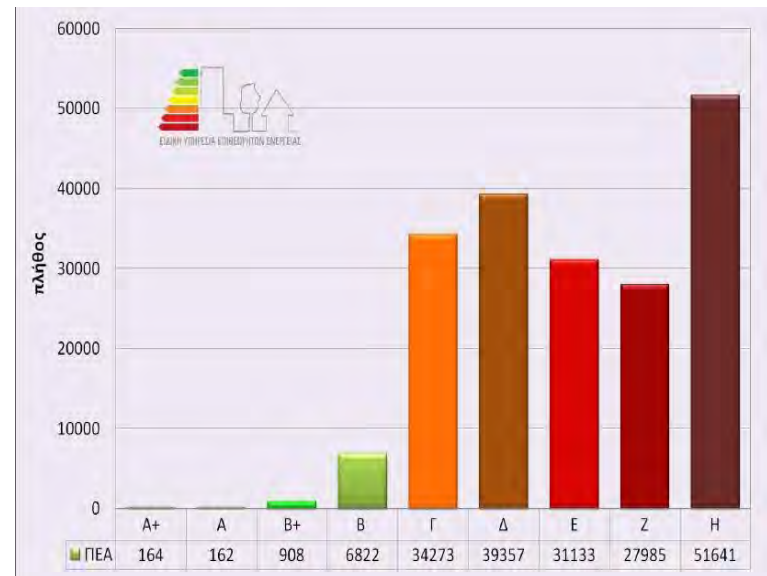
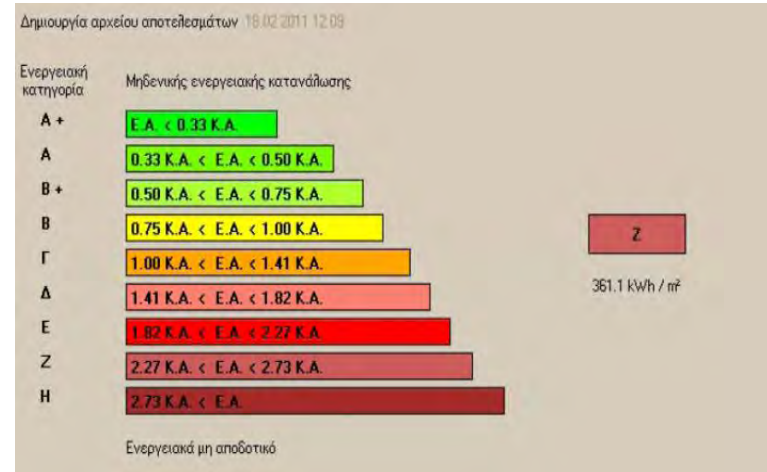
Main Outputs/Proposals of «Energy Poverty in SE Europe-Surviving the Cold» Report by SEE SEP, 2015

- Define energy poverty to enable monitoring of the measures implemented, at national level
- Broaden the scope of measures for protection of the vulnerable to include EE measures, which should have priority
- Provide publicly accessible statistics on energy expenditures and living conditions.
- Alignment of state legislation with the EU acquis in relation to energy consumer protection, so to provide mechanisms for the protection of energy consumers, in both the electricity and gas sector, with special focus on EE improvements.

Energy Poverty in Greece

BUILDING SECTOR:

- 4.3 million buildings stock of which
 - 78% corresponds to houses
- 75% were built before 1981
- EE efforts should focus on existing stock, mainly on public ones (EED)
- Economic crisis reveals the problem!
 - Electricity became the main «fuel» for heating along with wood-fireplaces
 - Serious problem with «thermal comfort» during winter/summer!
 - PPC: «*last resort*» in electricity leading to a 30% unpaid bills and to financial crisis for the company.
 - Great part of building apartments shut-down central heating system (oil/gas) due to unpaid bills.
 - Energy prices are heavily taxed



Measures to tackle Energy Poverty

- I. “Exoikonomo kat’ Econ” (Energy Saving at Home) with 270 million Euros from EU Structural Funds
- II “Financial Assistance to low-income people” for covering up heating bills – oil and gas
- III. “Low cost electricity to long-term unemployed/ disabled/families with 3 children” up to a monthly limit of 200 kWh.

Greece’s current difficult economic predicament and the availability of organized programmes and some funding subsidies from EU, provide an excellent opportunity for introducing energy efficiency measures.

How to end energy poverty

- Improved availability of modern energy
- Decentralize Energy and use RES & EE
- Offer discounts on energy to those with low income
- Develop alternative energy sources and make them available at a reasonable price
- Build up the economy, agriculture and ecotourism to create more jobs, thereby increasing people's purchasing power
- Keep populations informed about possible impacts using mass media and by organizing information campaigns



Instead of a conclusion

- Energy poverty is a growing problem in Europe, where:
 - 52.08 m people cannot keep their home adequately warm
 - 161.42 m are facing disproportionate housing expenditure
 - 87.46 m are living in poor quality dwellings
 - 41.74 m face arrears on their utility bills
- There are significant opportunities to address the issue via demand-side EE policies at the regional scale
- Needed: a regional level-indicator of energy poverty, customised for SE Europe peculiarities and tied to EU assistance for residential energy efficiency.

Existing research

- Not a single study has looked at the EU as a whole
- Four transnational studies:
 - Healy (2004): EU-15, subjective and objective housing indicators based on ECHP
 - Buzar (2007): EU-10 and case studies, mainly expenditure and subjective indicators based on own research
 - WHO (2007): independent data on housing, energy and thermal comfort in 10 countries
 - EPEE (2009): range of indicators based on EU-SILC in Belgium, Spain, France, Italy and the United Kingdom
- Country-based work (Bouzarovski 2010; Freund and Wallich 1996; Kovačević 2004)
- Policy-led research (EBRD 2003; Lampietti and Meyer 2002; Velody et al. 2003; Fankhauser and Tepic 2005)
- www.decc.gov.uk/hillsfuelpovertyreview



Thank you for your attention!