Environmental Health Inequalities in Europe: Implications for Housing and Health

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Equality: a WHO priority by mandate

Objective set in the Constitution (1946):

Attainment by all peoples of the highest possible level of health

Alma-Ata Declaration (1978):

I - The Conference strongly reaffirms that health (…) is a fundamental human right (…) whose realization requires the action of many other social and economic sectors in addition to the health sector.

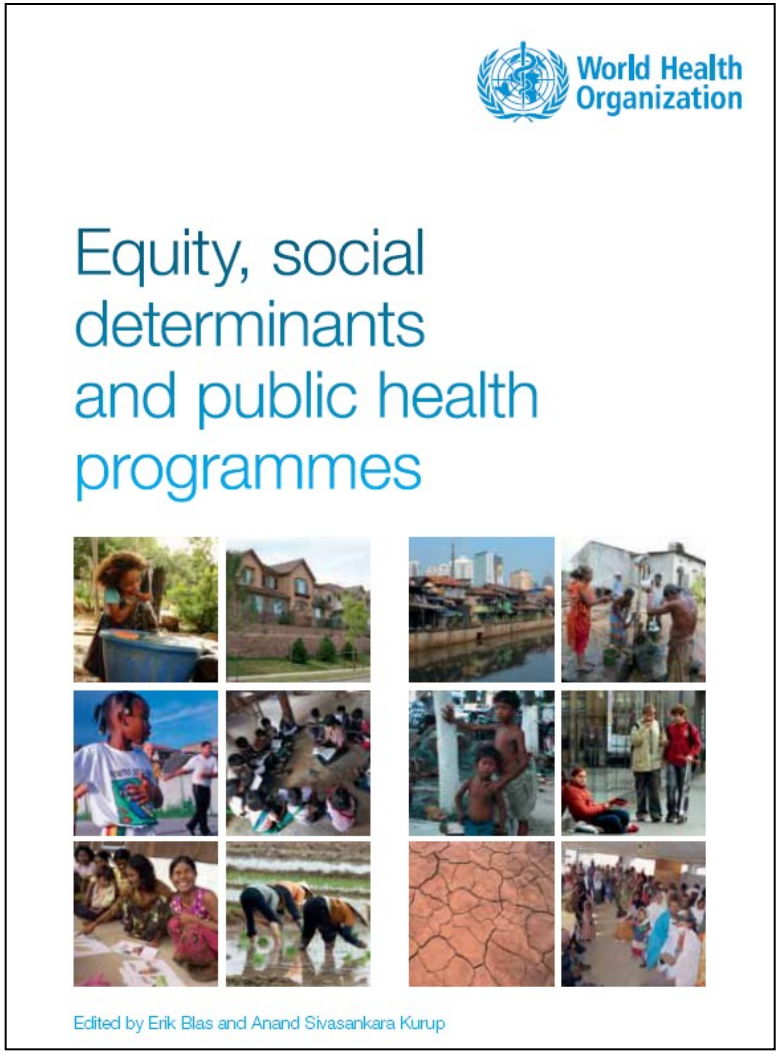
Definition of (in)equality vs (in)equity

Inequalities represent any differences and disparities without distinguishing whether they are natural / unavoidable (such as consequences of age) or avoidable / unfair.

Inequities represent differences and disparities that are considered avoidable, unjust or unfair (such as results of discriminatory systems, processes or policies).

…includes value judgment!!!

WHO analytical approach



Socioeconomic context & position
(society)

Differential exposure
(social & physical environment)

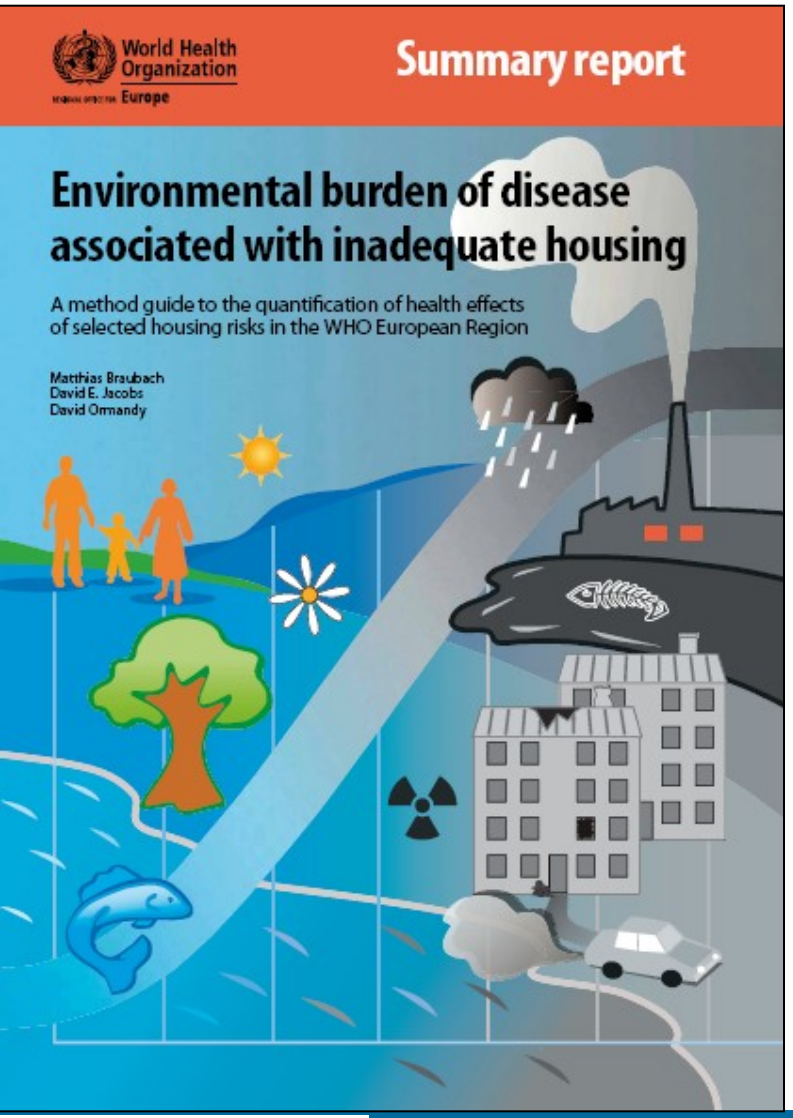
Differential vulnerability
(population group)

Differential health outcomes
(individual)

Differential consequences
(individual)

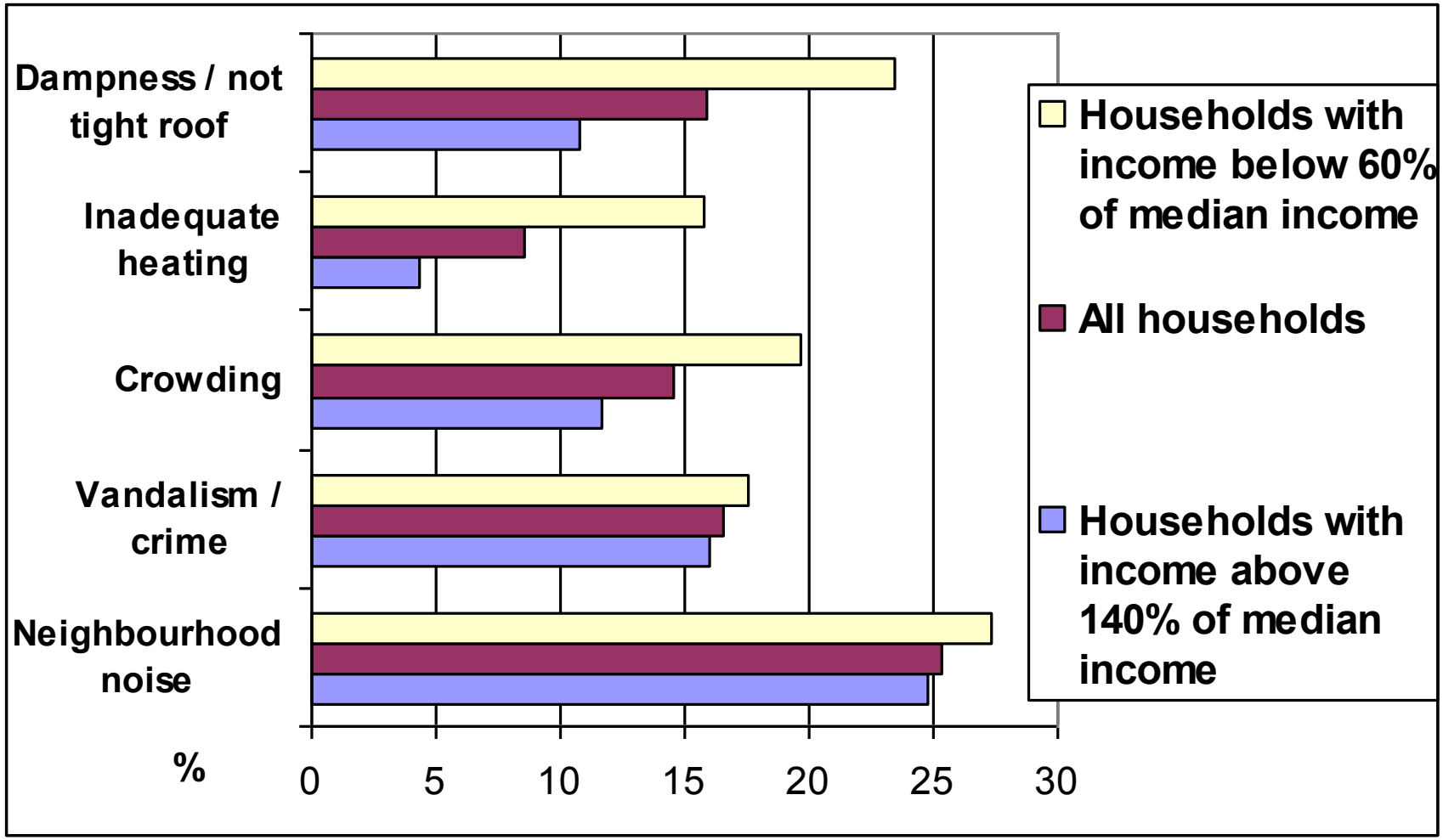
Examples of environmental disadvantage affecting health status: often housing-related

Overall housing EBD assessment



Inadequate housing accounts for over 100 000 deaths per year in the WHO European Region and causes or contributes to many preventable diseases and injuries, including respiratory, nervous system and cardio-vascular diseases and cancer.

Poverty and housing problems



Source: Eurostat, ECHP data for 2000

WHO EH inequality assessment for Europe

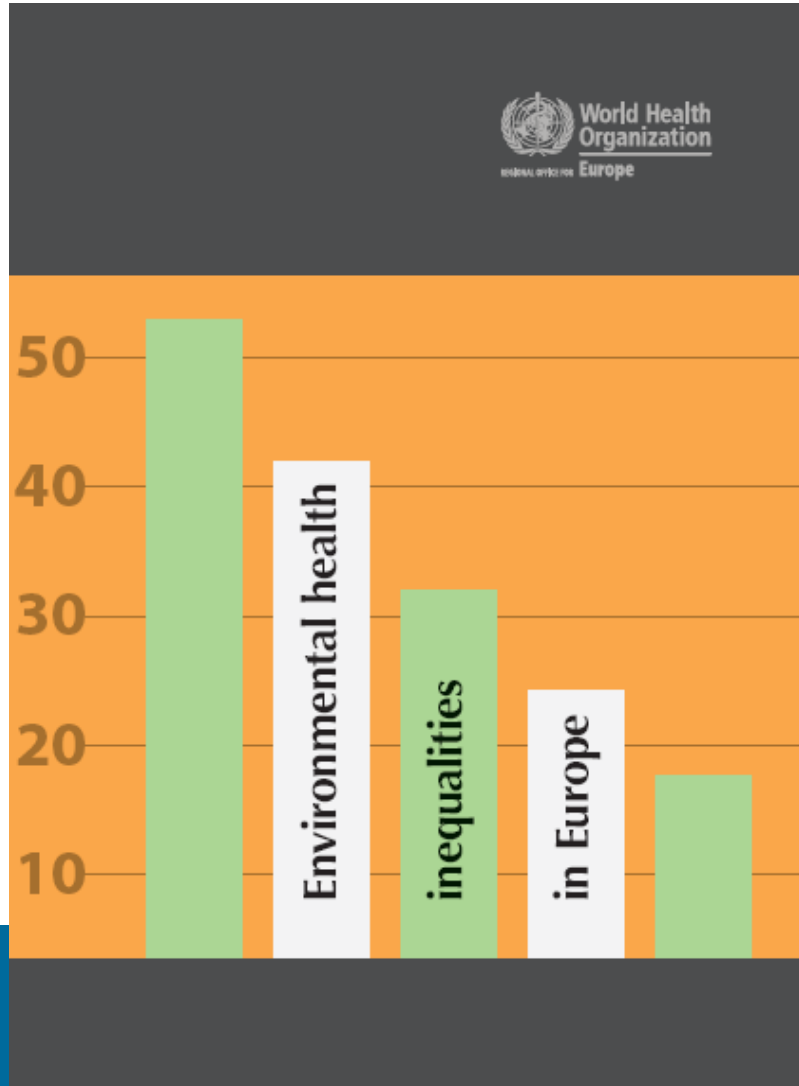
Reporting environmental health inequalities in the WHO European Region

⇒ Based on available statistical data

⇒ Assessing magnitude and patterns of environmental disparities

⇒ Identifying evidence gaps

Launched 14 February 2012

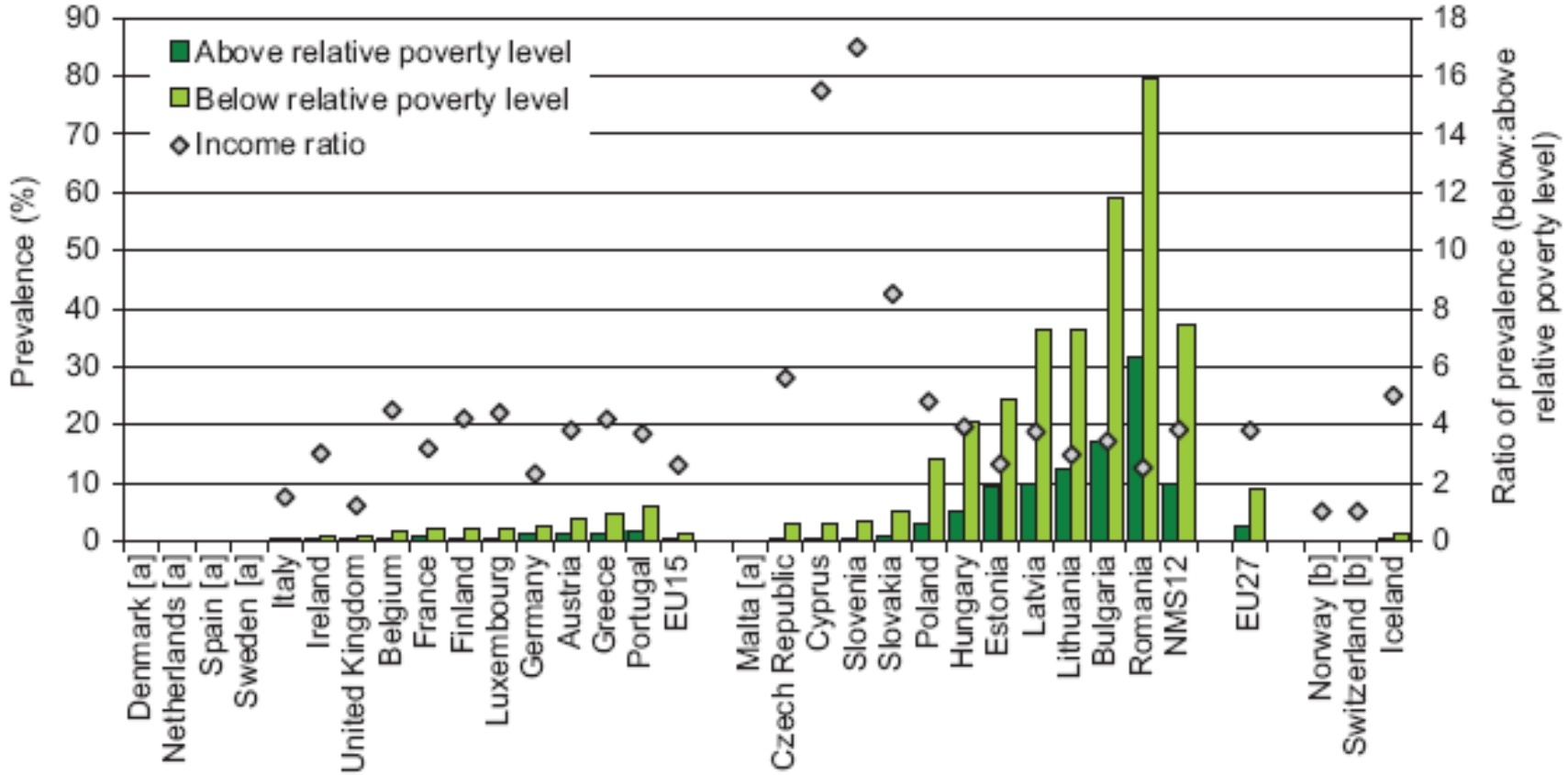


Environment and health inequality indicators

Indicator	Sociodemographic stratification options available	Data source
Housing-related inequalities		
Inadequate water supply	Urbanization level	WHO/UNICEF
Lack of a flush toilet	Age, sex, income/poverty status and household type	Eurostat
Lack of a bath or shower	Age, sex, income/poverty status and household type	Eurostat
Overcrowding	Age, sex, income/poverty status and household type	Eurostat
Dampness in the home	Age, sex, income/poverty status and household type	Eurostat
Inability to keep the home adequately warm	Age, sex, income/poverty status and household type	Eurostat
Injury-related inequalities		
Work-related injuries	Sex, age and occupation	Eurostat
Fatal road traffic injuries	Country income, age and sex	WHO
Fatal poisonings	Country income, age and sex	WHO
Fatal falls	Country income, age and sex	WHO
Environment-related inequalities		
Noise exposure at home	Income/poverty status and household type	Eurostat
Lack of access to green/recreational areas	Age, sex, income, difficulty paying bills, employment, education level and household type	Eurofound
Second-hand smoke exposure at home	Age, sex, self-assessed social position, difficulty paying bills and employment	Eurobarometer
Second-hand smoke exposure at work	Age, sex, self-assessed social position, difficulty paying bills and occupation	Eurobarometer

Selected results for housing-related inequalities, their health relevance, and their implications

Fig. 5. Prevalence of lack of a flush toilet in the dwelling by relative poverty level (2009)

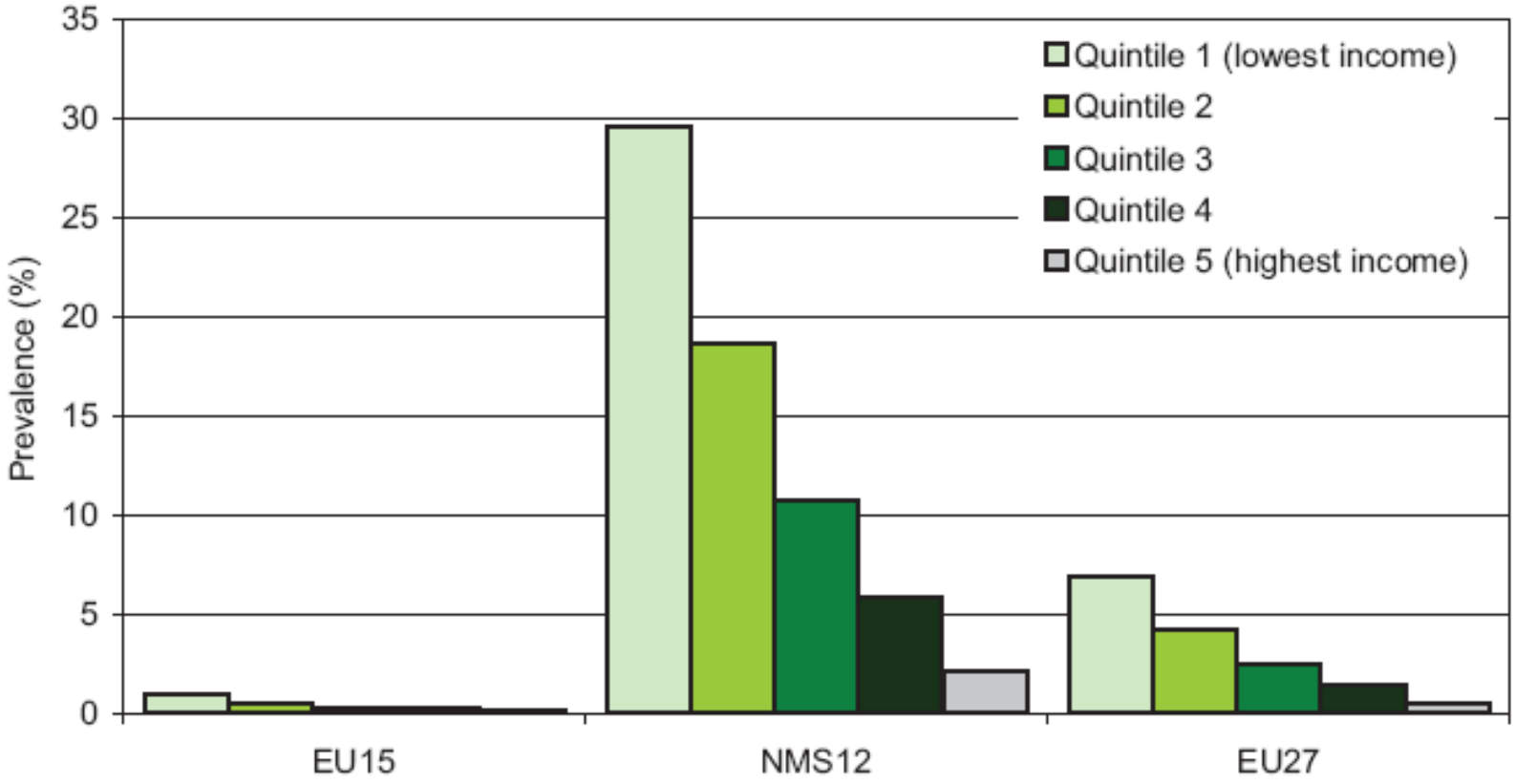


Source: data from EU-SILC, 2011.

Notes: [a] countries reporting full population coverage; [b] countries reporting 0.1% for both above and below relative poverty level.

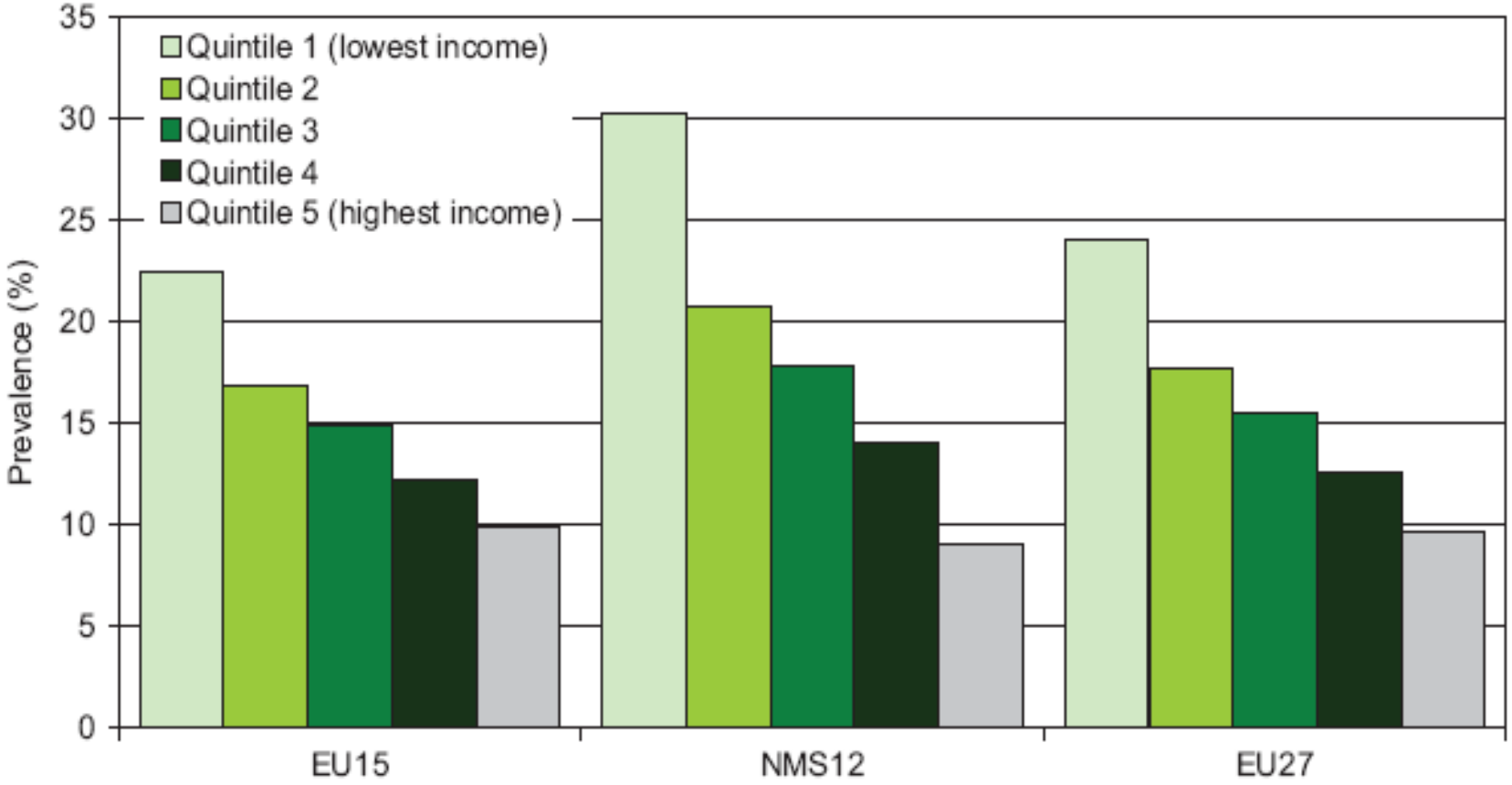
19 November 2012: In recognition of World Toilet Day, on November 19, the UN Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation, Catarina de Albuquerque, declared that eliminating inequities should start with toilets.

Fig. 9. Prevalence of lack of a bath or shower by income quintile (2009)



Source: data from EU-SILC, 2011.

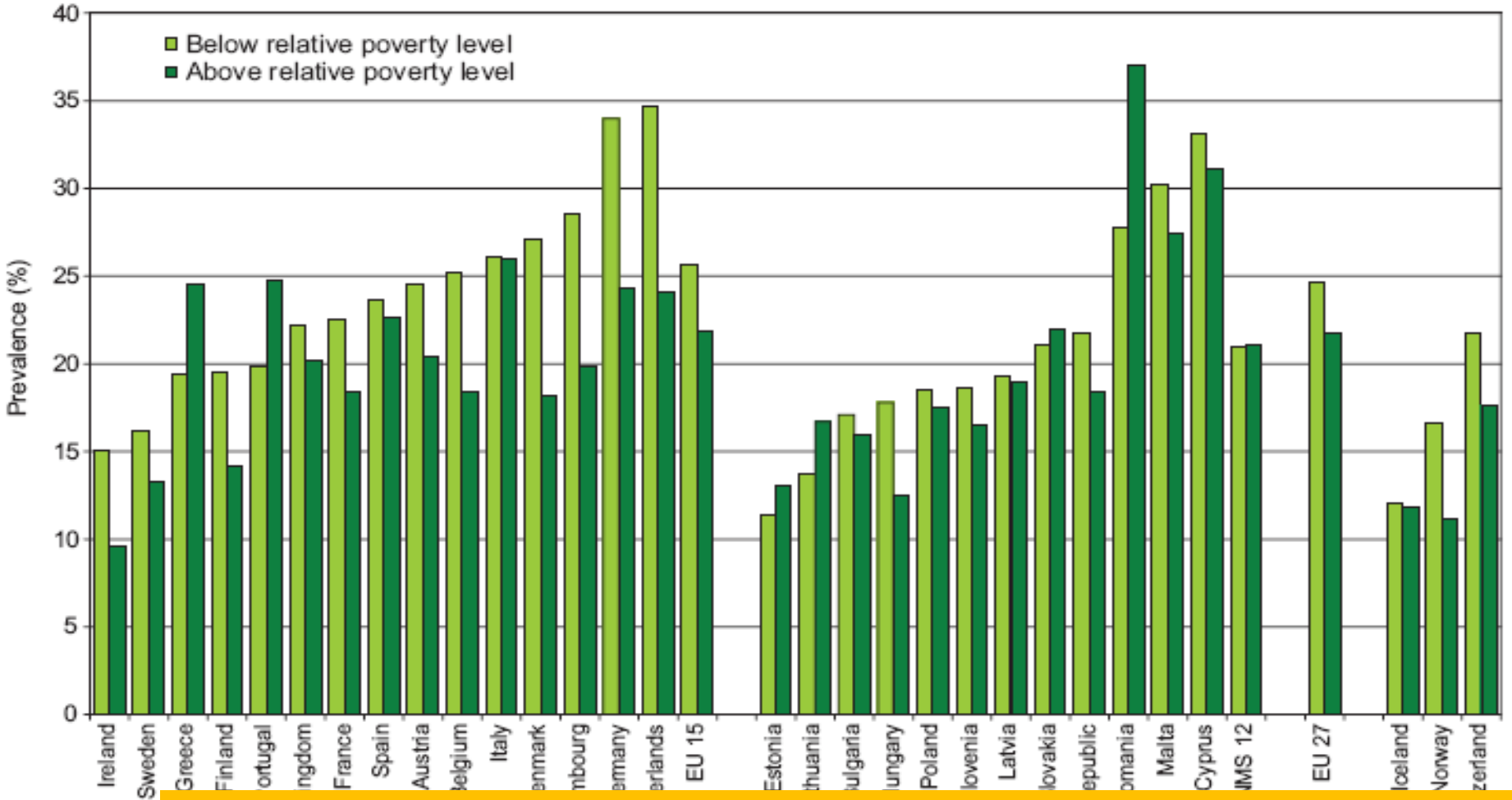
Fig. 14. Prevalence of damp dwellings by income quintile (2009)



Source: data from EU-SILC, 2011.

Green Ambulance, Brussels: majority of inspected homes had some contamination with damp and mould.

Fig. 34. Prevalence of complaints about noise from neighbours or from the street by relative poverty level (2009)

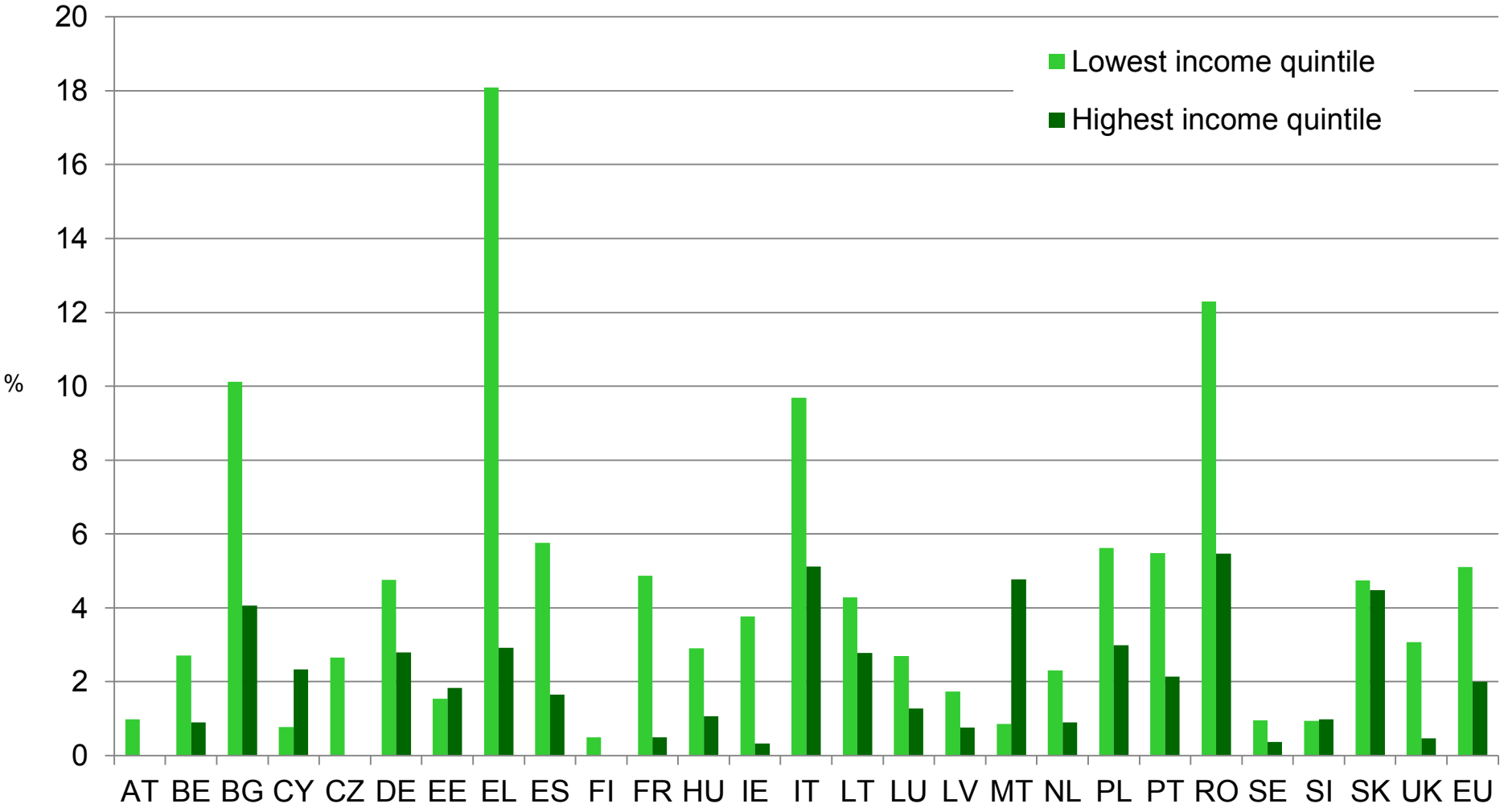


Source: data fro

Several studies measuring traffic noise exposure levels in dB indicate a significant inequality in exposure; with low-income households and partially ethnic minorities being most exposed.

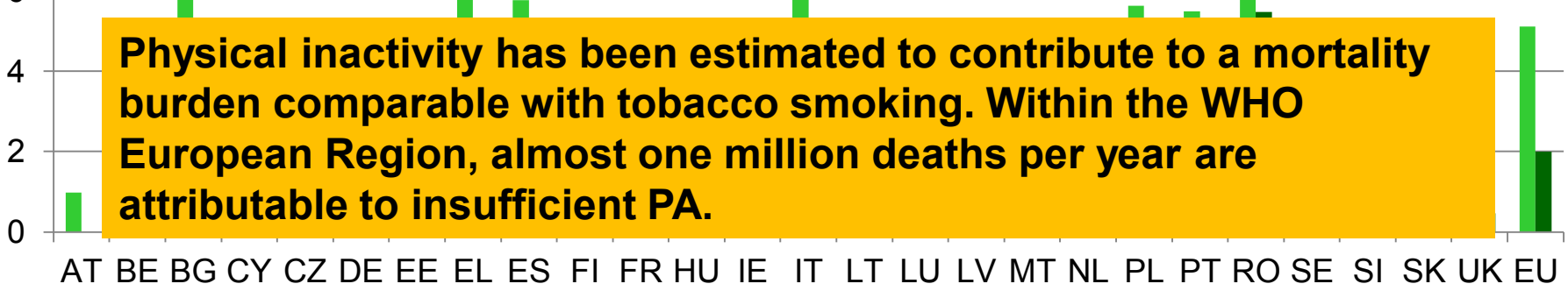
In Germany, 3% of myocardial infarcts (3900 cases = 4.8 / 100 000 residents) are caused by road traffic noise exposure.

Households reporting “great difficulty” in accessing recreational or green areas



Source: Eurofound EQLS 2012

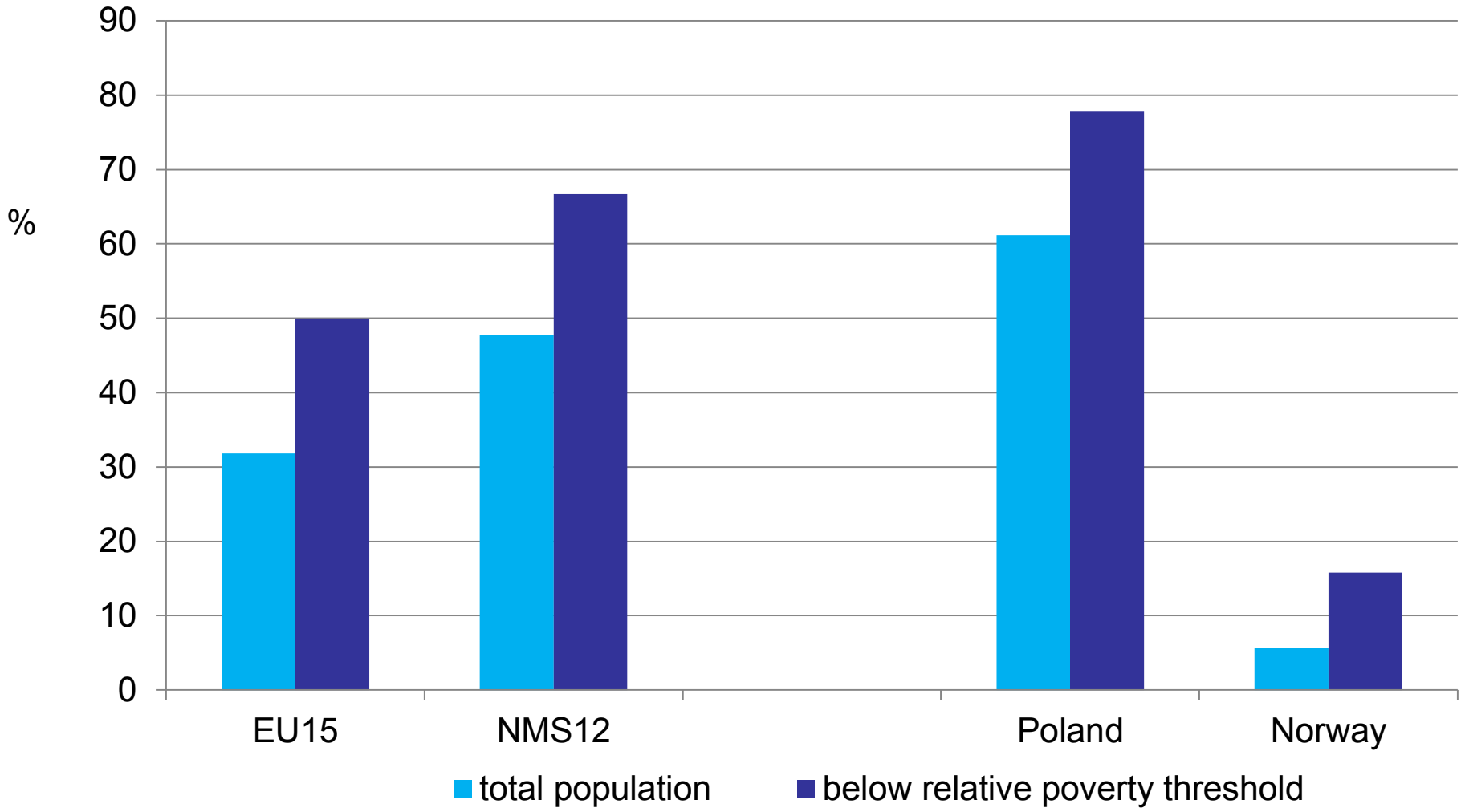
Households reporting “great difficulty” in accessing recreational or green areas



Physical inactivity has been estimated to contribute to a mortality burden comparable with tobacco smoking. Within the WHO European Region, almost one million deaths per year are attributable to insufficient PA.

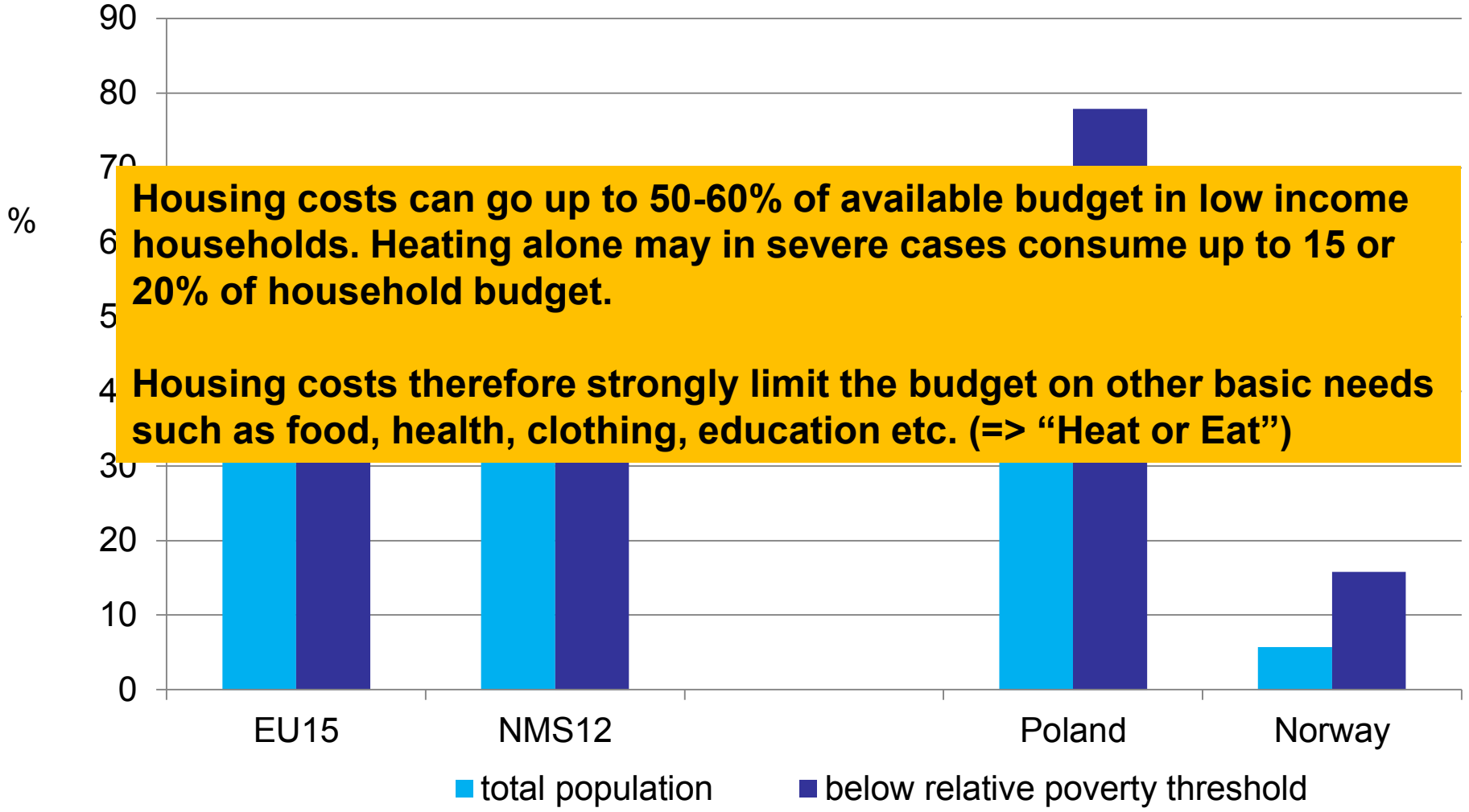
Source: Eurofound EQLS 2012

Households with “heavy financial burden” due to the housing costs (2011)



Source: Eurostat SILC

Households with “heavy financial burden” due to the housing costs (2011)



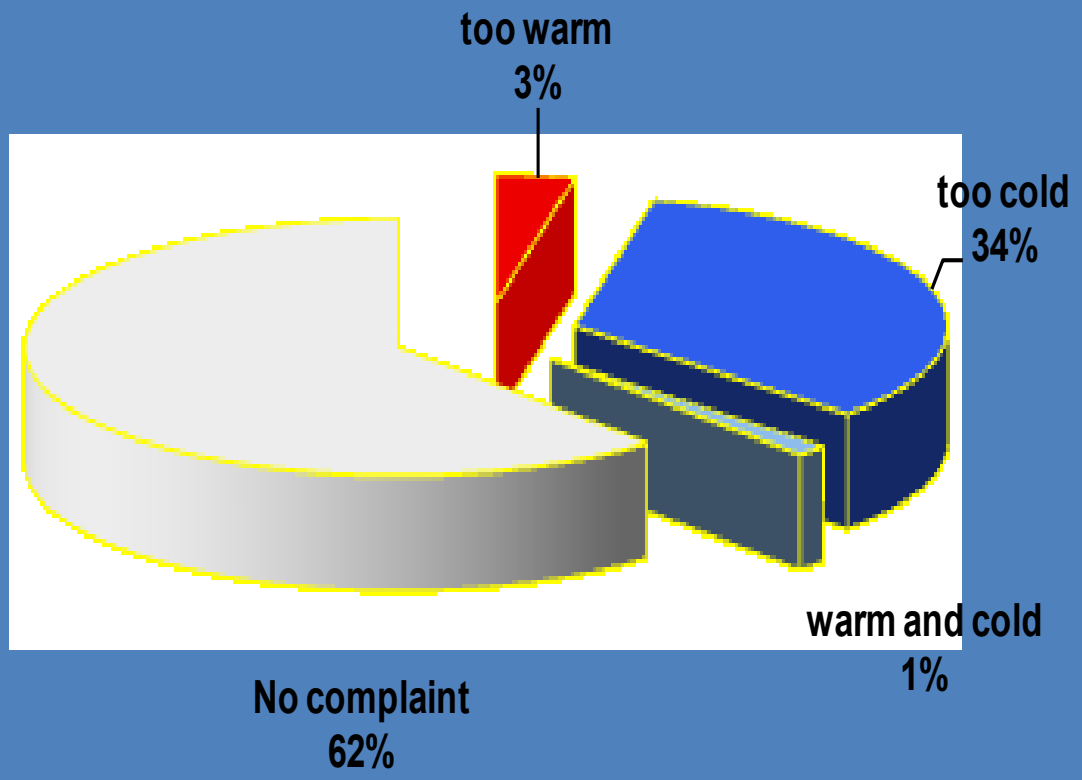
Housing costs can go up to 50-60% of available budget in low income households. Heating alone may in severe cases consume up to 15 or 20% of household budget.

Housing costs therefore strongly limit the budget on other basic needs such as food, health, clothing, education etc. (=> “Heat or Eat”)

Source: Eurostat SILC

Energy, thermal comfort and equity

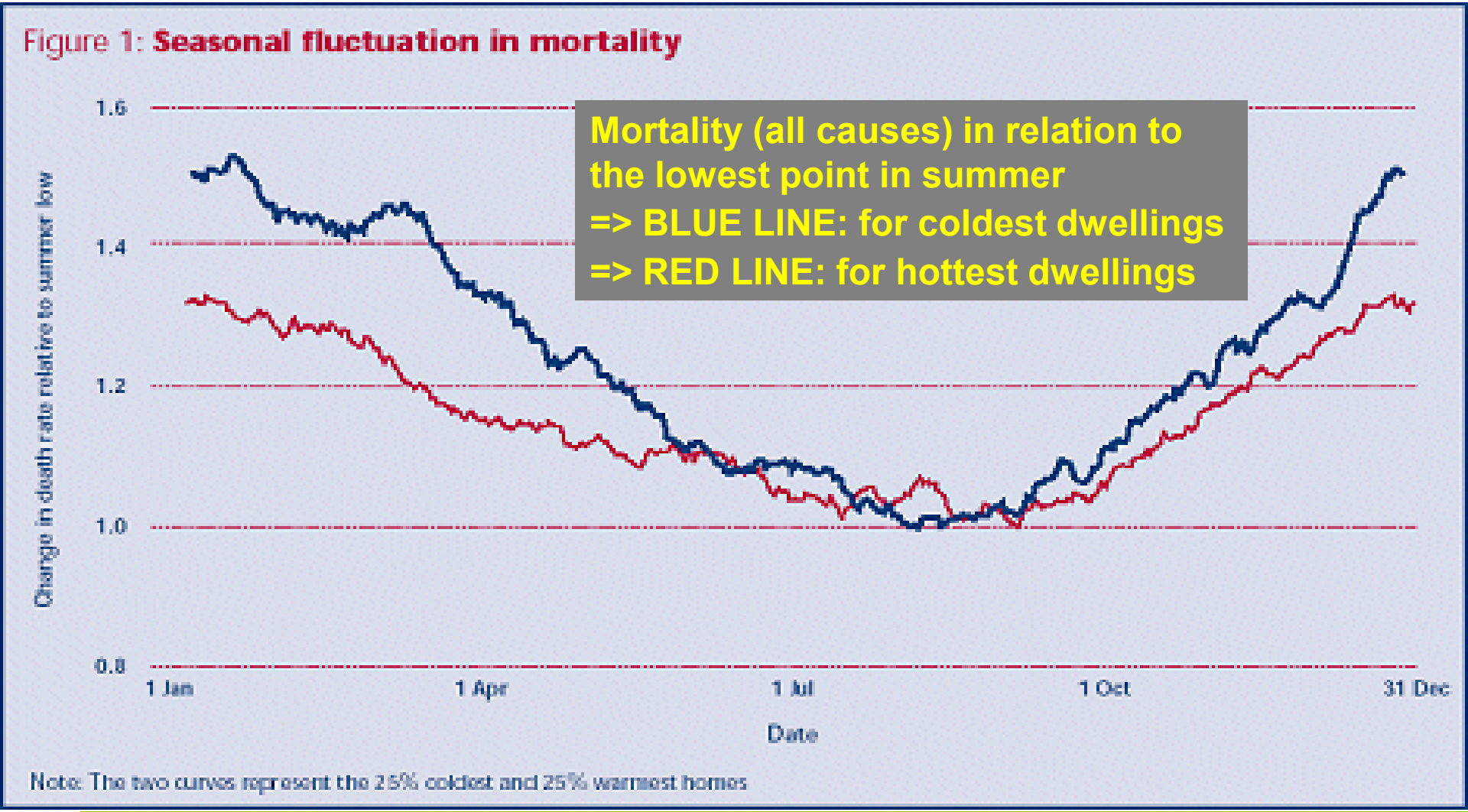
WHO LARES (2003): Perception of too cold temperatures in winter time



In Eastern European cities, 45% of the poorest households report cold temperature in winter versus 26% of the most well-off households.

In Western European cities, 25% of the poorest households report cold temperature in winter versus 17% of the most well-off households.

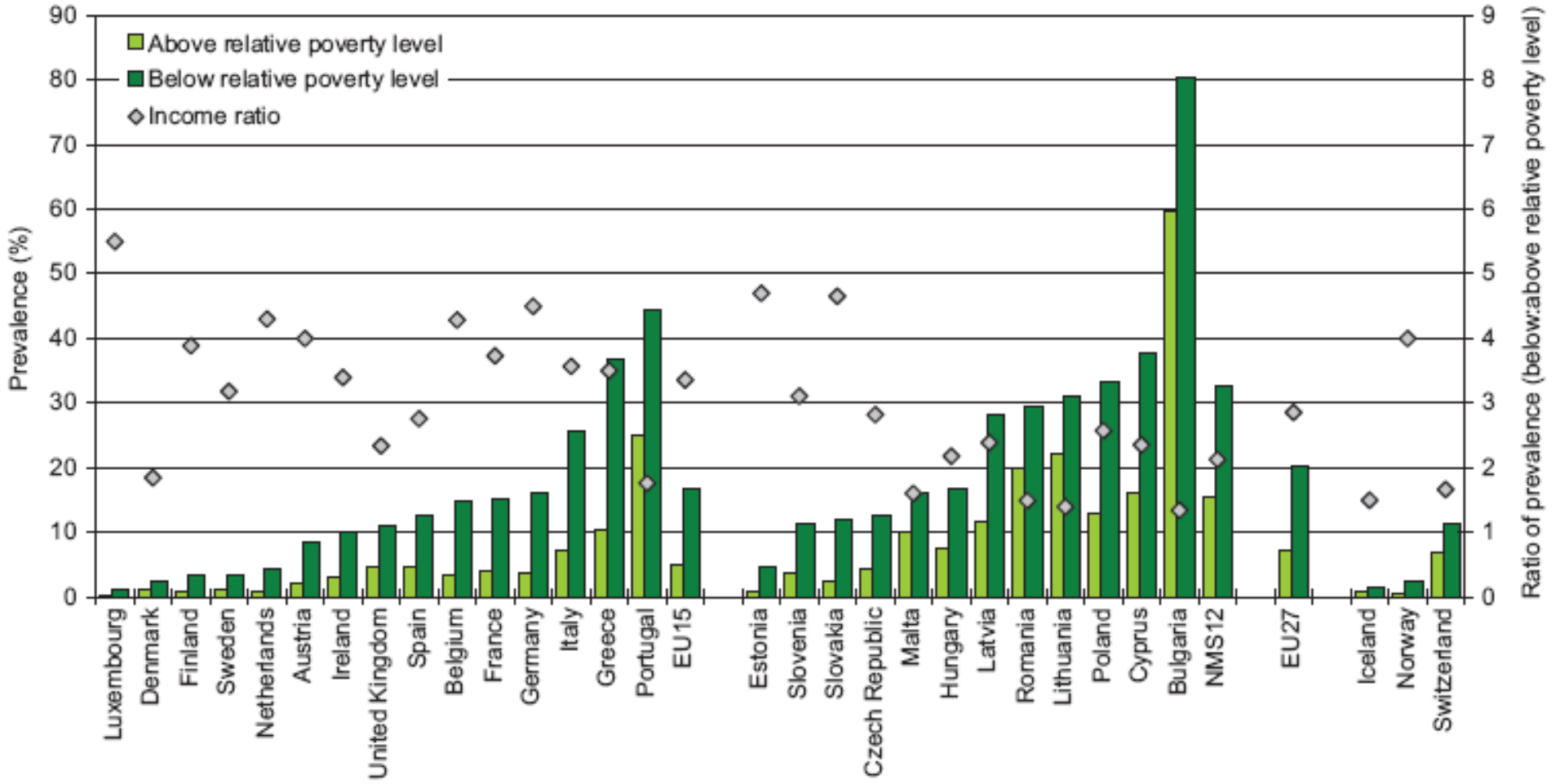
Thermal comfort versus mortality (UK)



UK estimation: up to 25% of Excess Winter Mortality may be due to housing

Source: Wilkinson et al. (2001)

Fig. 15. Prevalence of inability to keep the home warm by relative poverty level (2009)

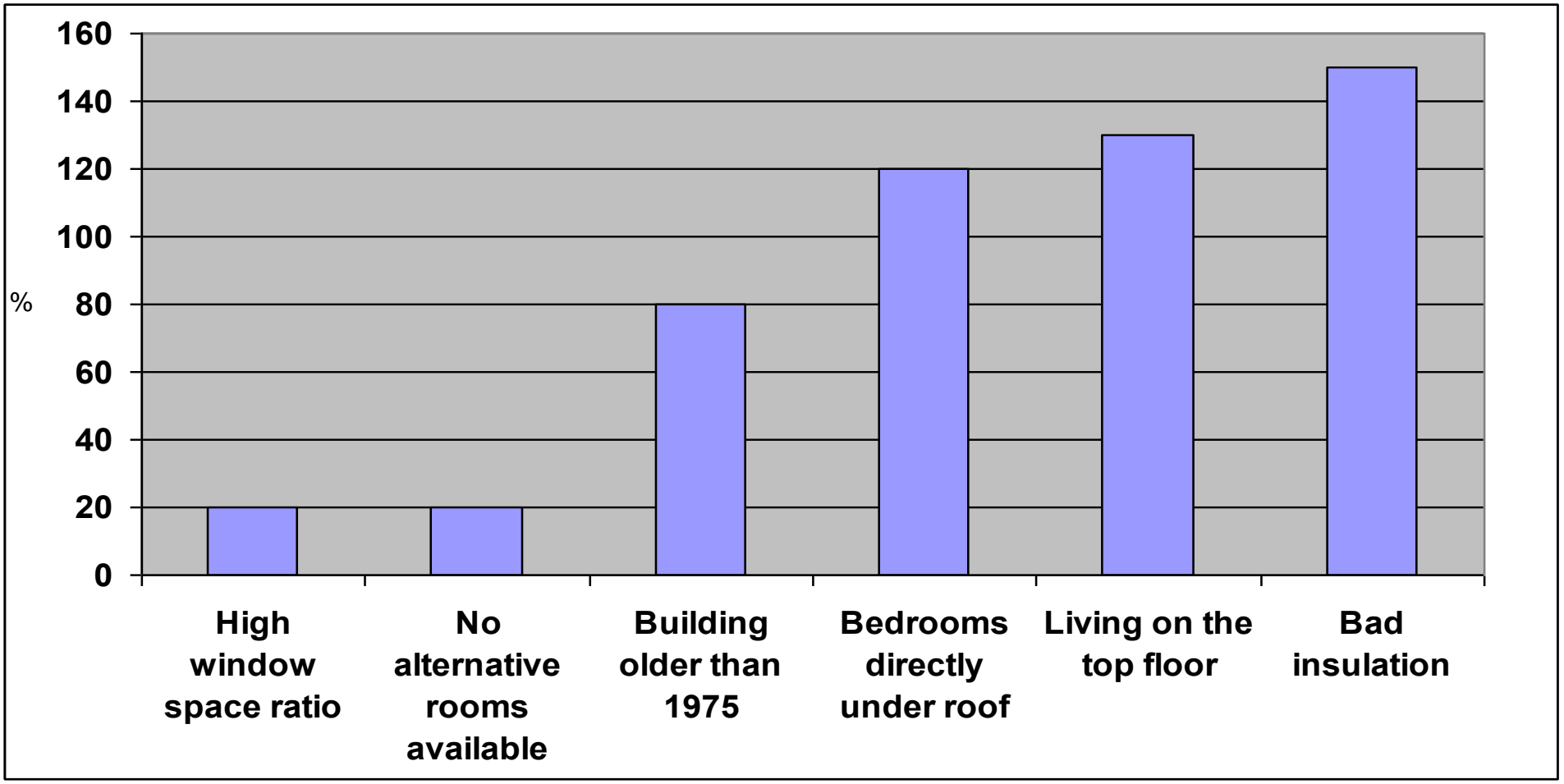


Source: data from EU-SILC, 2011.

Survey on household reaction on rising energy prices in Germany (late 2011):

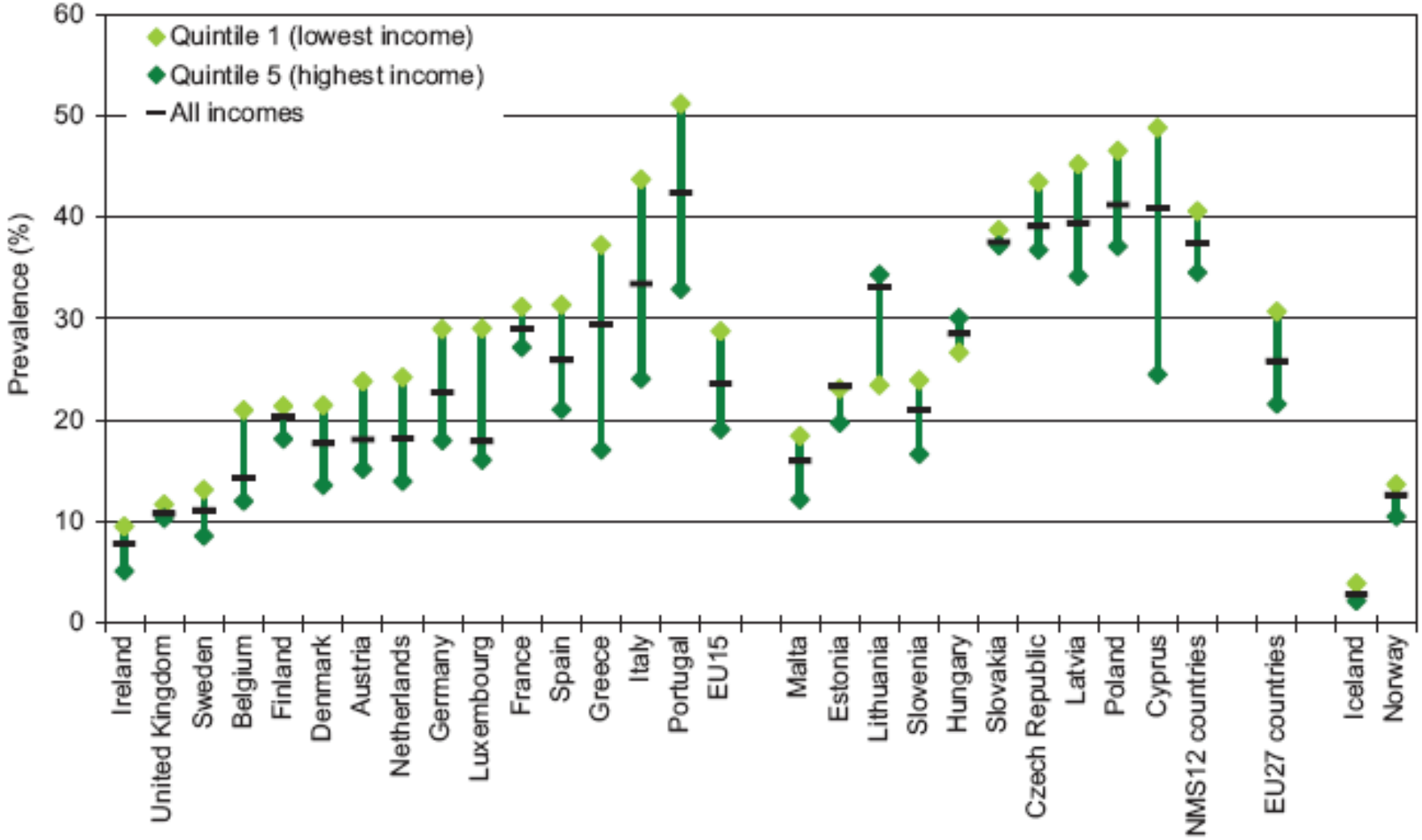
- 46% reduce room temperature levels and wear warmer clothing to save energy costs
- 41 % heat selected rooms only

Mortality increase during French heatwave in 2003: housing risk factors (elderly residents)



Source: Vandentorren et al. 2006

Fig. 19. Prevalence of inability to keep the home adequately cool in summer by income (2007)



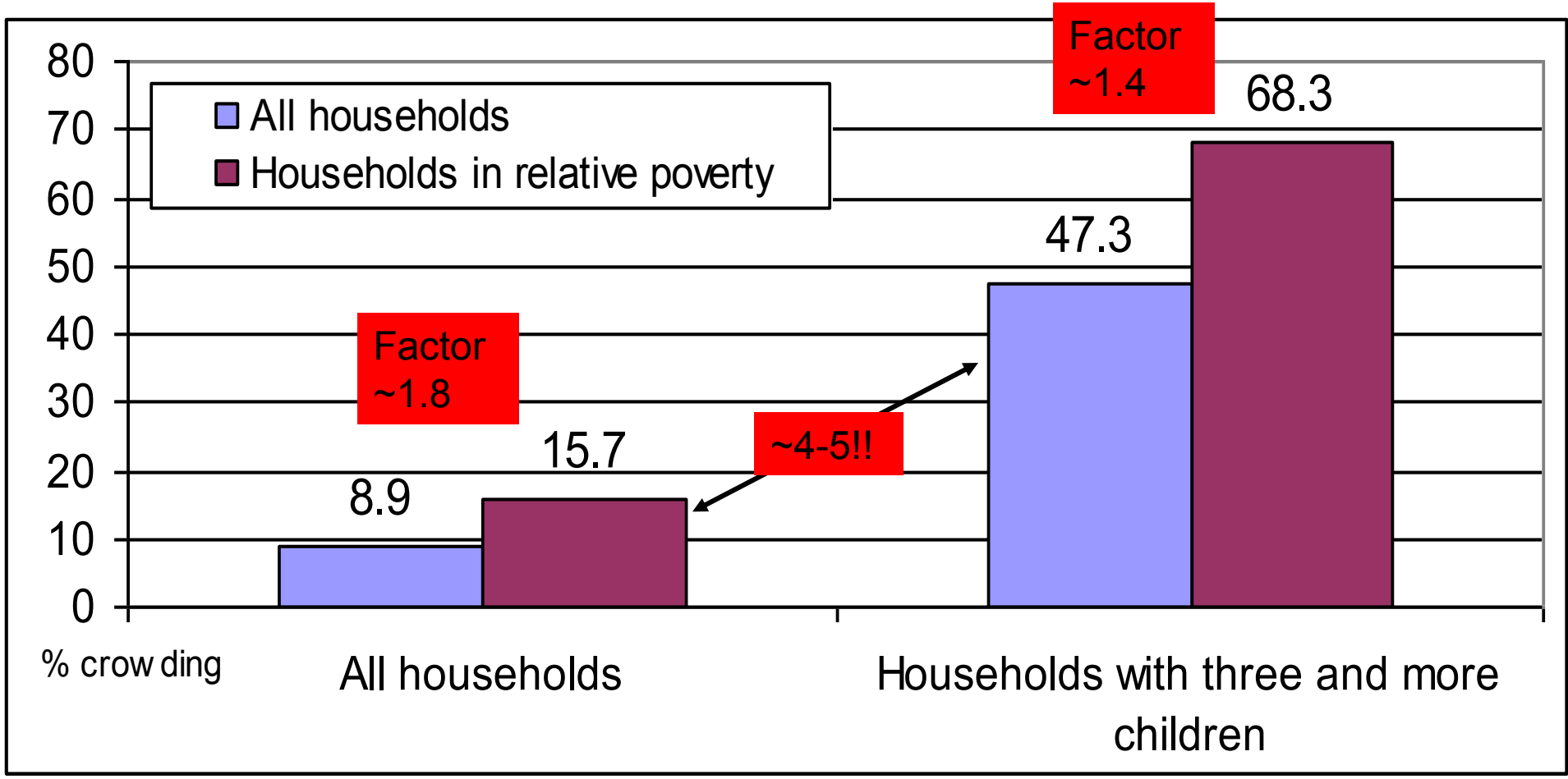
Source: data from EU-SILC, 2011.

Report conclusions

- Housing-related inequalities exist in all MS
- Housing-related inequalities are accumulative/clustered
- Strongest inequality related to income/poverty
- Disconnection between absolute prevalence level and relative inequalities on national level
- Inequality patterns are very different by country
- Causal mechanisms often unclear
- Impact on health (inequity) often not quantifiable

Equity impacts beyond income and poverty

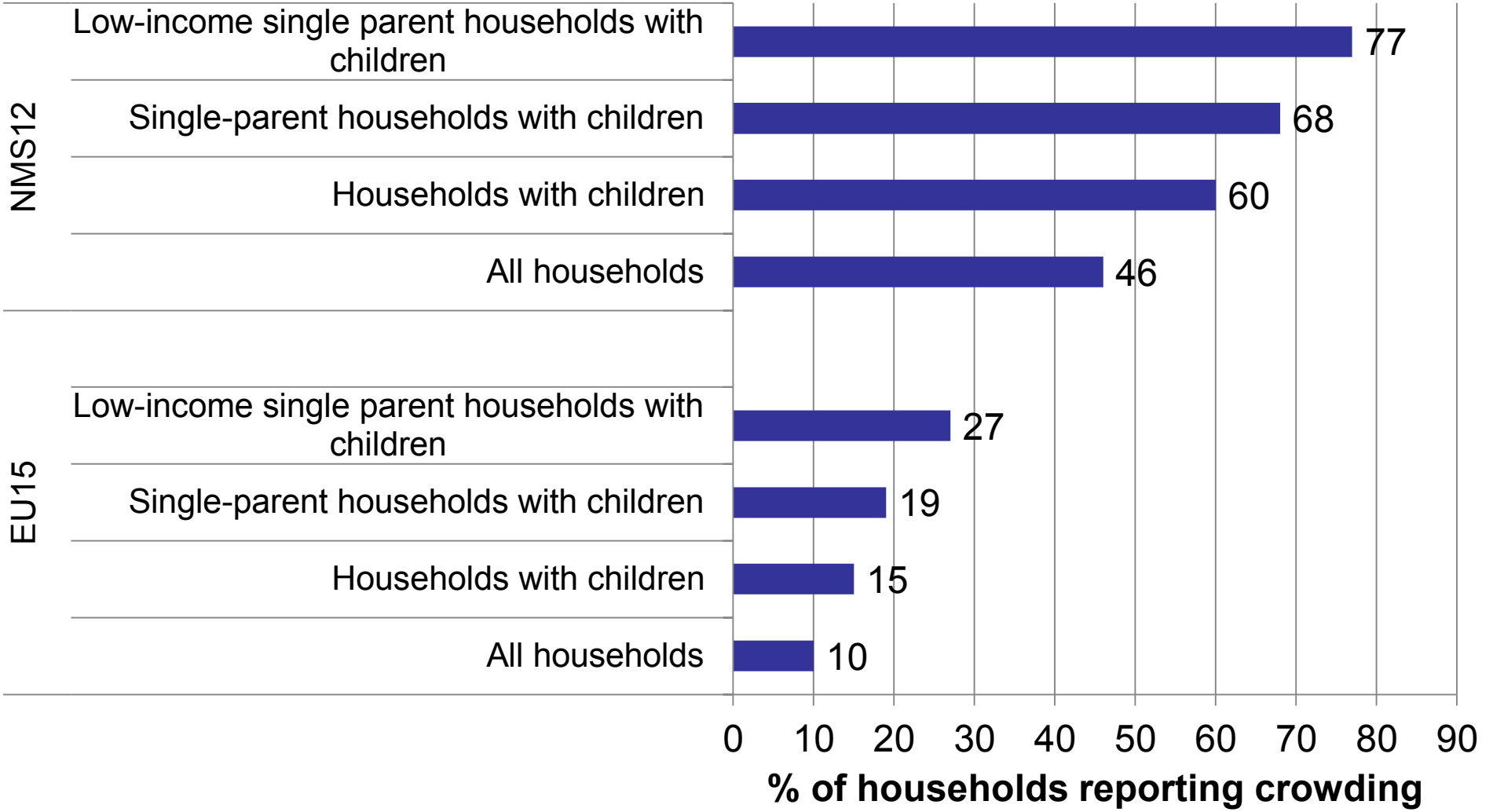
Household composition, relative poverty and crowding (2001 data)



Relative poverty: below 60% of median income

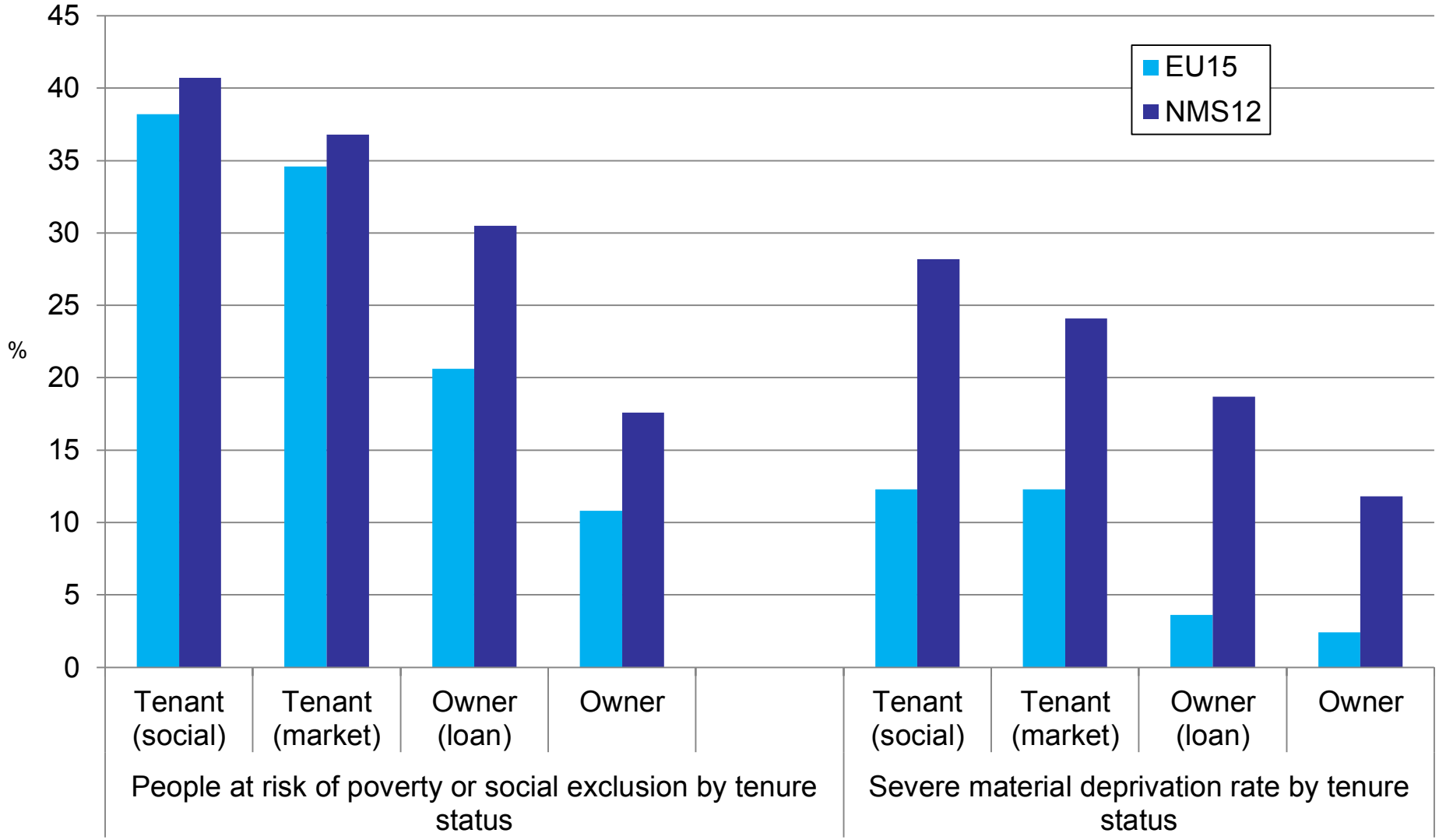
Source: Eurostat, ECHP data for 2001

Multiple deprivation example: crowding (2009)



Source: Eurostat SILC, 2011

Equity impact of tenure (2011)



Source: Eurostat SILC (2012)

Action

Priorities (a subjective suggestion…)

- Thermal comfort (maintaining ventilation)
- Larger dwellings (4-5 bed rooms)
- Social housing provision (or re-establishment…) scattered throughout city (=> no clusters)
- Rehabilitation of basic amenities in low-cost or public housing sector
- General affordability / rent levels
- Urban minimum standards (connectivity, basic infrastructure for daily needs, child care/schools, green areas…)

Possible actions for tackling inequalities

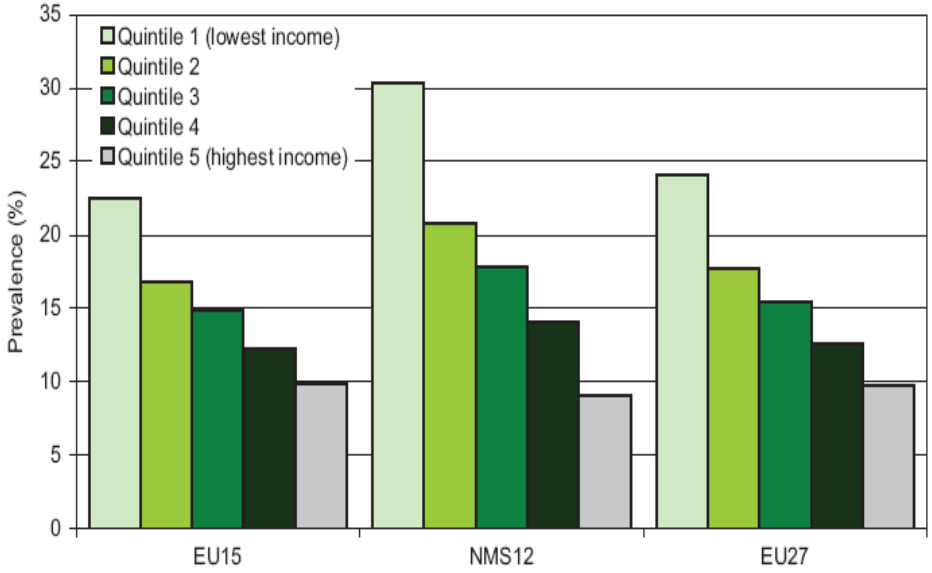
Note: Actions must be tailored to the respective national situation.

Option 1: general improvement of housing conditions, assuring minimum standards for all;

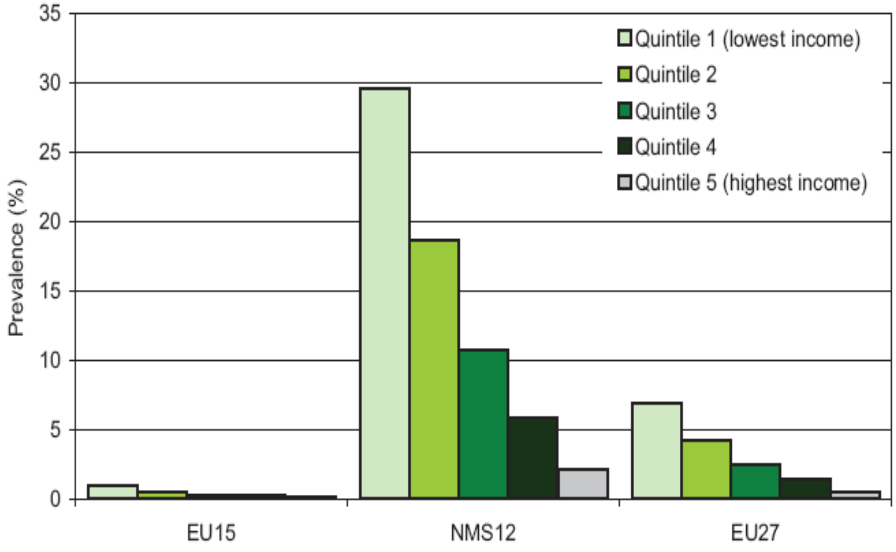
Option 2: mitigation and reduction of risk exposure in the most affected population groups / worst housing stock, targeting the most exposed and/or most vulnerable subpopulations;

Option 3: combination of general and targeted approaches

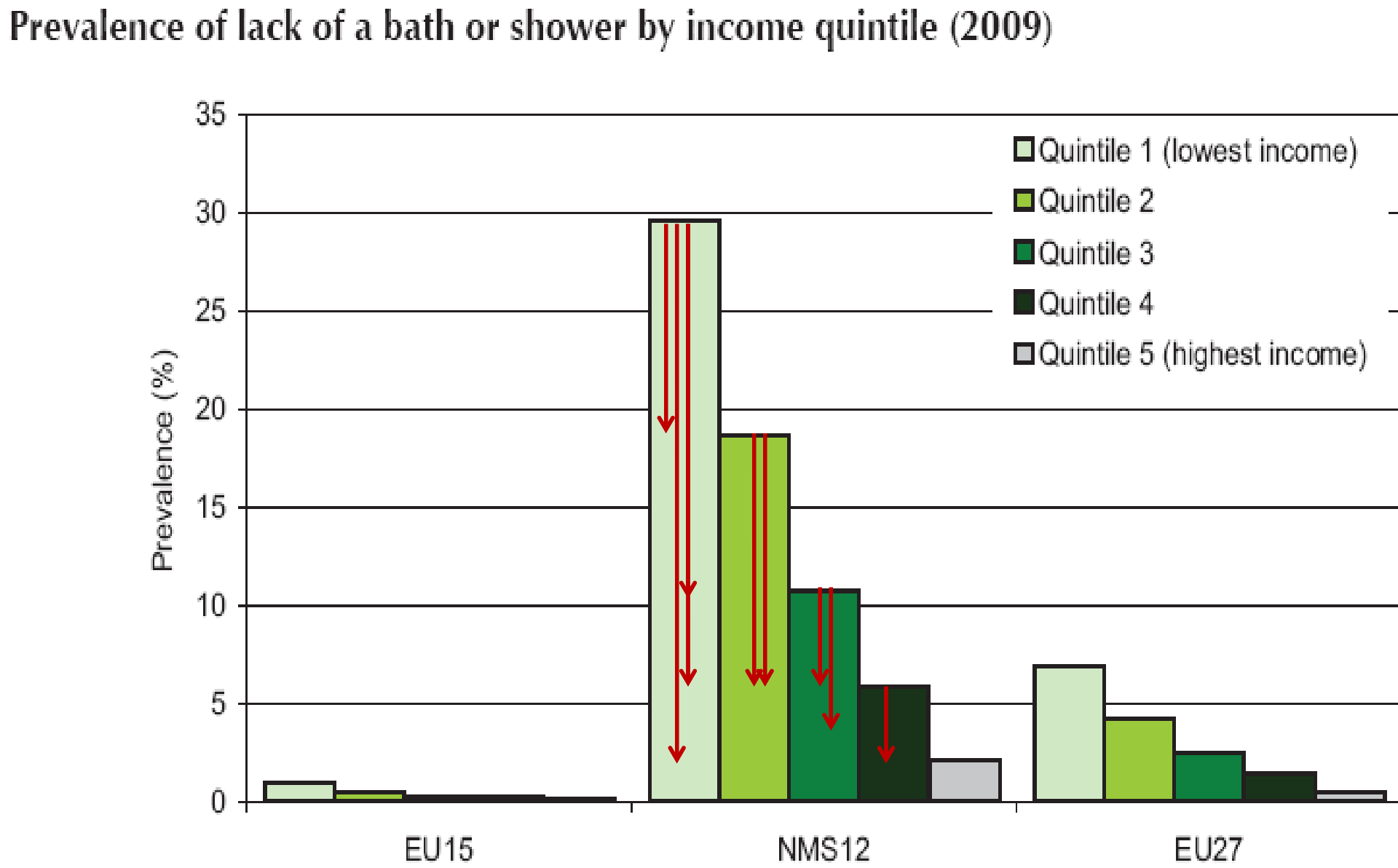
Prevalence of damp dwellings by income quintile (2009)



Prevalence of lack of a bath or shower by income quintile (2009)

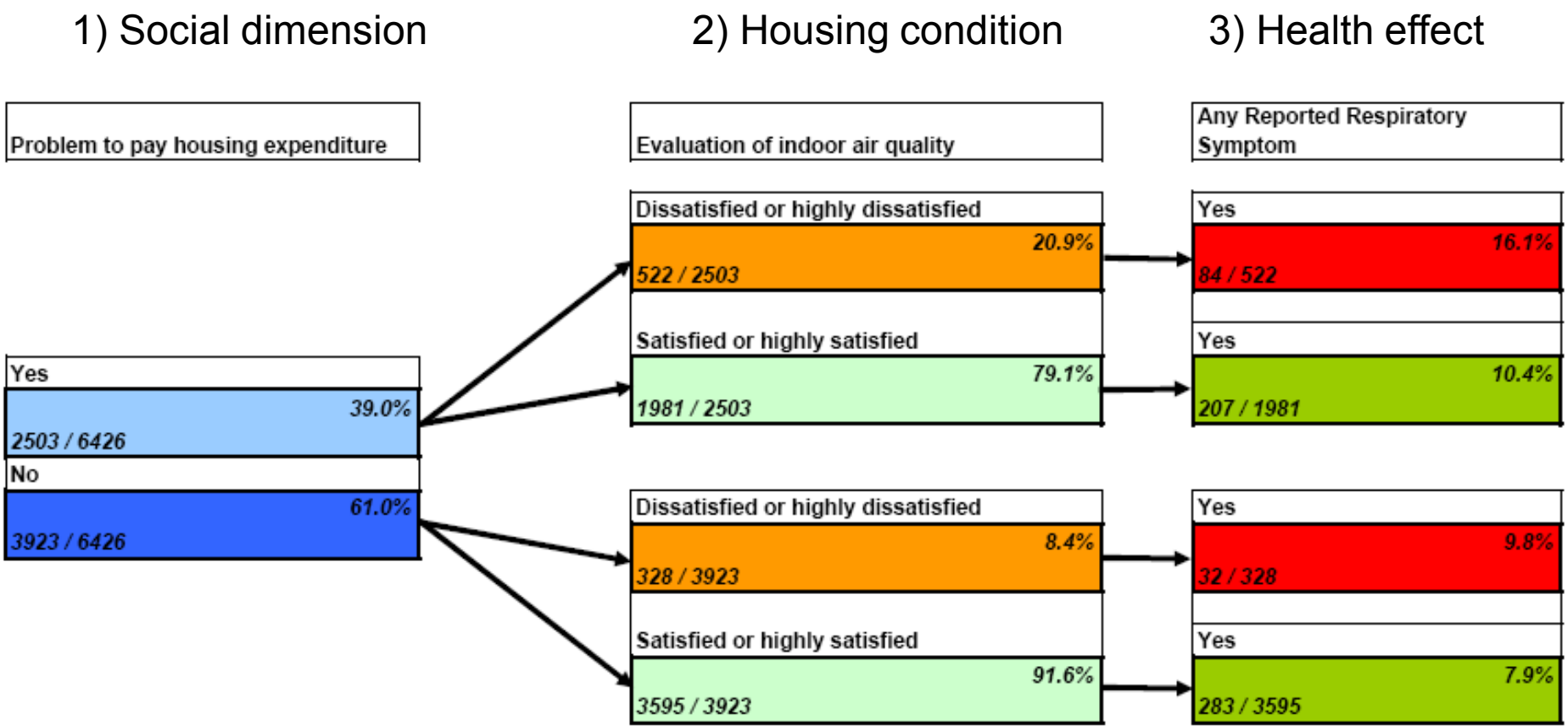


Targeted approaches: how to do?



Three requirements for a better assessment of housing equity and related health effects

1) Data linking social determinants, housing and health



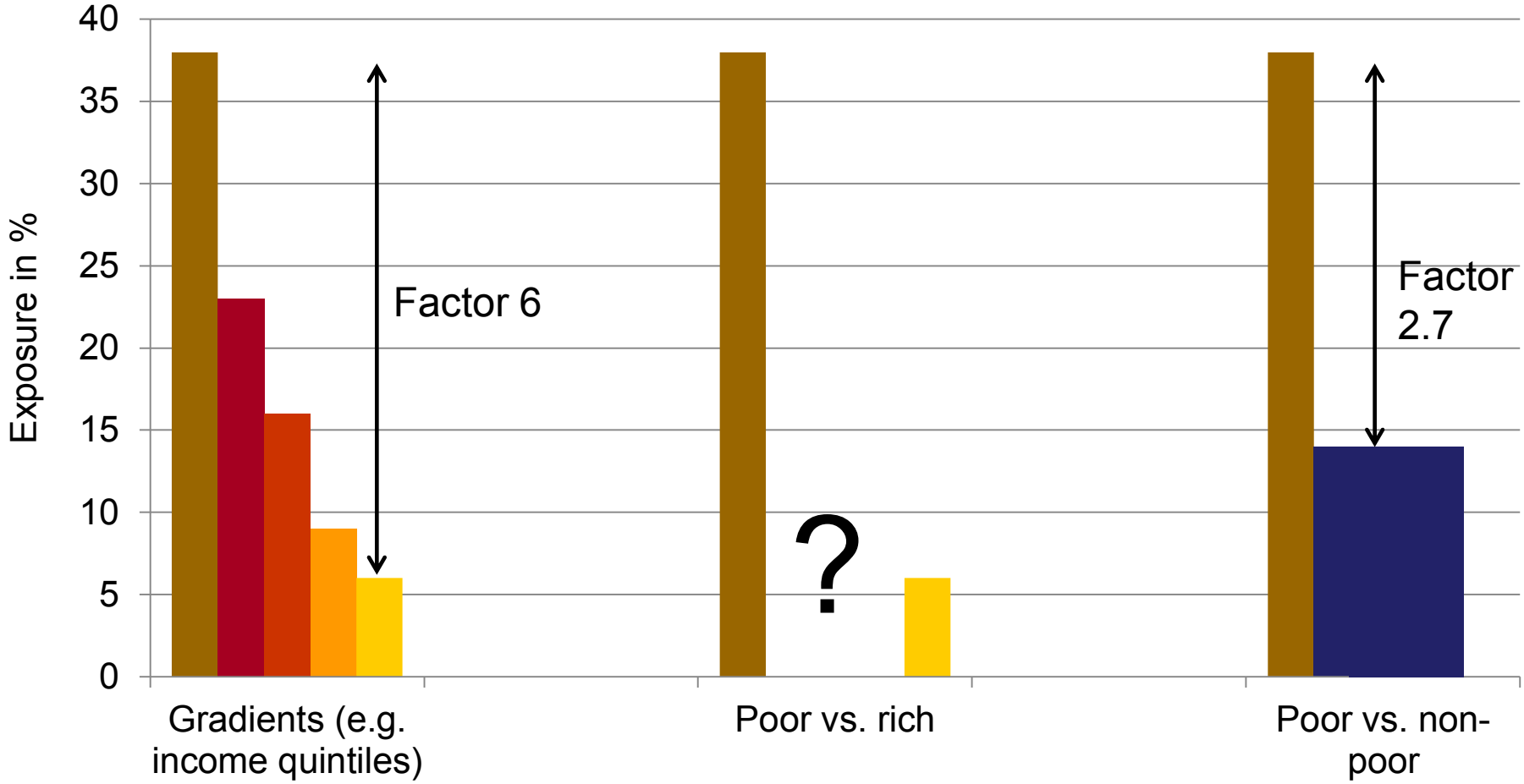
1) Data linking social determinants, housing and health

1) Social dimension 2) Housing condition 3) Health effect

No publicly accessible database identified that enable the analysis of these three dimensions <u>simultaneously</u>

- ✓ **Social determinants => health inequalities**
- ✓ **Social determinants => environmental inequalities**
- ✓ **Environmental inequalities => health inequalities**
- **Social determinants => environmental inequalities => health inequalities**

2) Data formats enabling identification of target groups and gradients

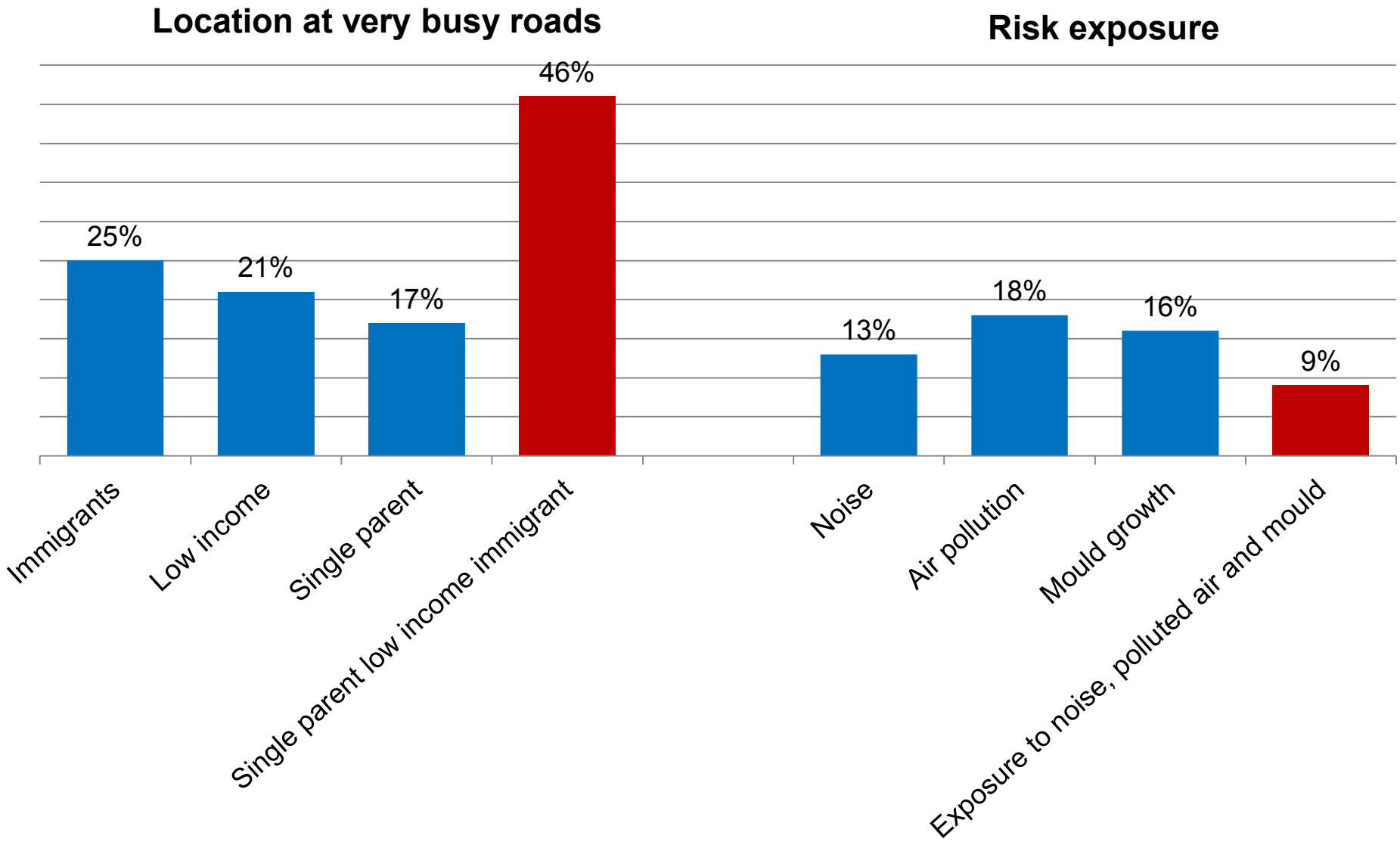


Eurostat data upon request

Eurostat public data until ca. 2009

Eurostat public data since ca. 2010

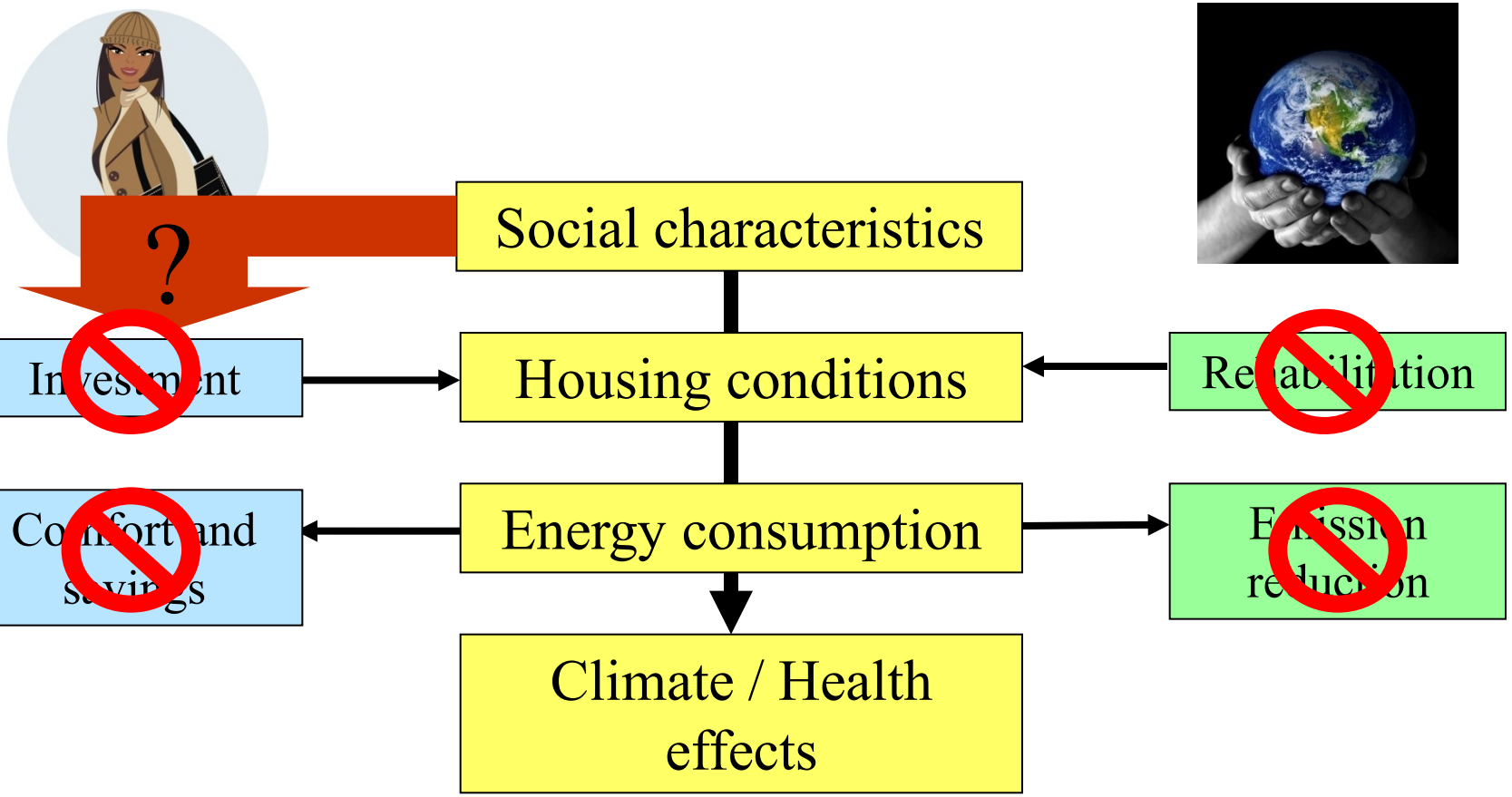
3) Studies combining disadvantage or outcomes (scenario data)



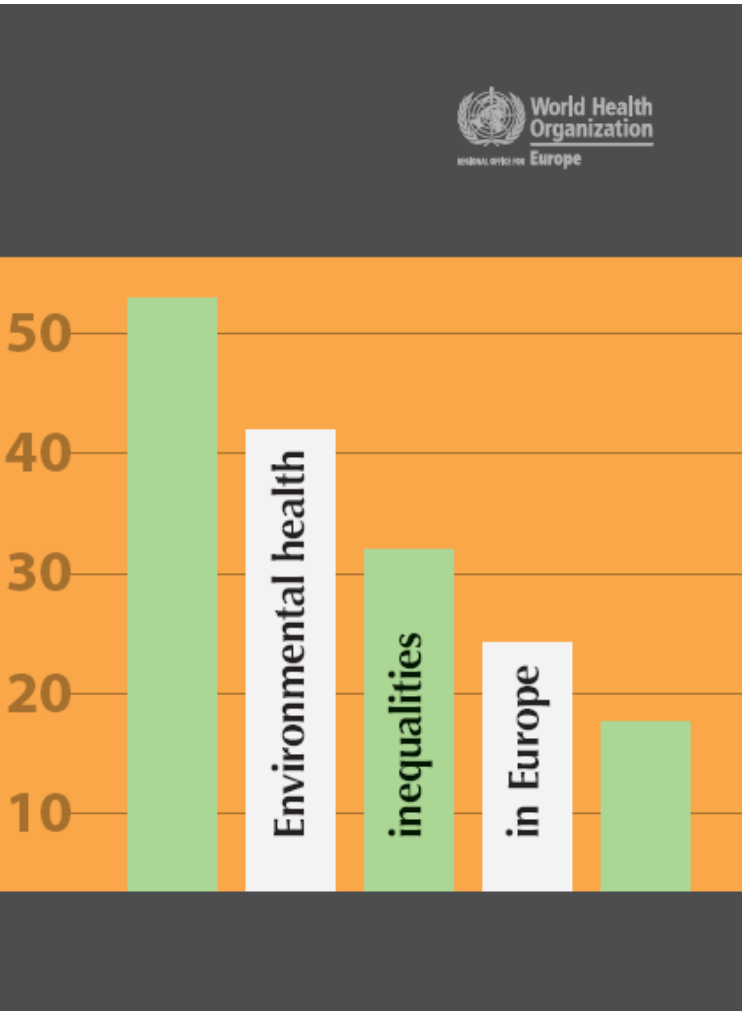
Conclusion

- Inadequate housing has severe morbidity / mortality effects
- Housing quality varies depending on social determinants
- Inequity is a HUGE challenge for housing, social welfare and public health actors
- Data allow assessing priority problems with exposure
- Data limitations in identifying risk groups and health impacts
- Risk group approach works less good for housing stock (=> “deprived area approach” instead)
- Risk group identification does not equal targeted action being possible (esp. related to outside environment issues)
- Adequate housing / minimum standards / balanced urban planning for all combined with targeted rehabilitation of problem stock is the main recommendation
- AFFORDABILITY is a key challenge!!!!

Distributional effects of policies trigger inequity: The example of thermal insulation campaigns



Thank you!



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