



Universität  
Bremen

WHO Collaborating Centre for  
Environmental Health Inequalities



# Environmental health inequalities in Europe - launching the inequality fact sheet series

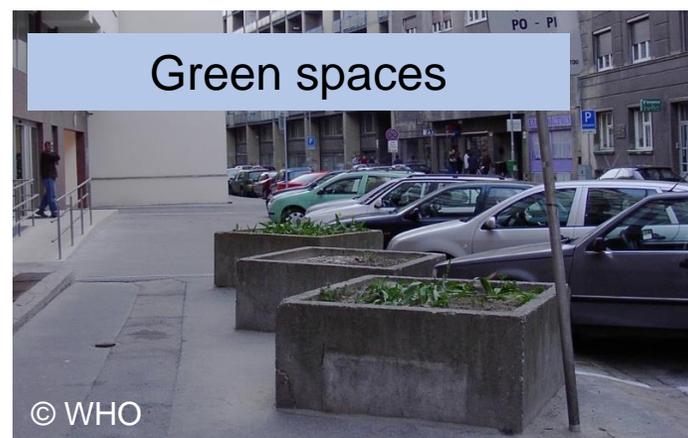
**Gabriele Bolte**

Department of Social Epidemiology  
Institute of Public Health and Nursing Research  
University of Bremen

Launch event  
16.02.2022



# Environmental health risks: often socially unequal distributed



# Recent reviews on environmental health inequalities

Open Access **Review**



## Social Inequalities in Exposure to Ambient Air Pollution: A Systematic Review in the WHO European Region

by  Jonathan Fairburn,  Steffen Andreas Schüle,  Stefanie Dreger,  Lisa Karla Hilz and  Gabriele Bolte

Open Access **Review**



## Social Inequalities in Environmental Noise Exposure: A Review of Evidence in the WHO European Region

by  Stefanie Dreger,  Steffen Andreas Schüle,  Lisa Karla Hilz and  Gabriele Bolte

Open Access **Review**



## Social Inequalities in Environmental Resources of Green and Blue Spaces: A Review of Evidence in the WHO European Region

by  Steffen Andreas Schüle,  Lisa Karla Hilz,  Stefanie Dreger and  Gabriele Bolte

Open Access **Review**



## Environmental Justice in Industrially Contaminated Sites. A Review of Scientific Evidence in the WHO European Region

by  Roberto Pasetto,  Benedetta Mattioli and  Daniela Marsili

Open Access **Review**



## Are There Changes in Inequalities in Injuries? A Review of Evidence in the WHO European Region

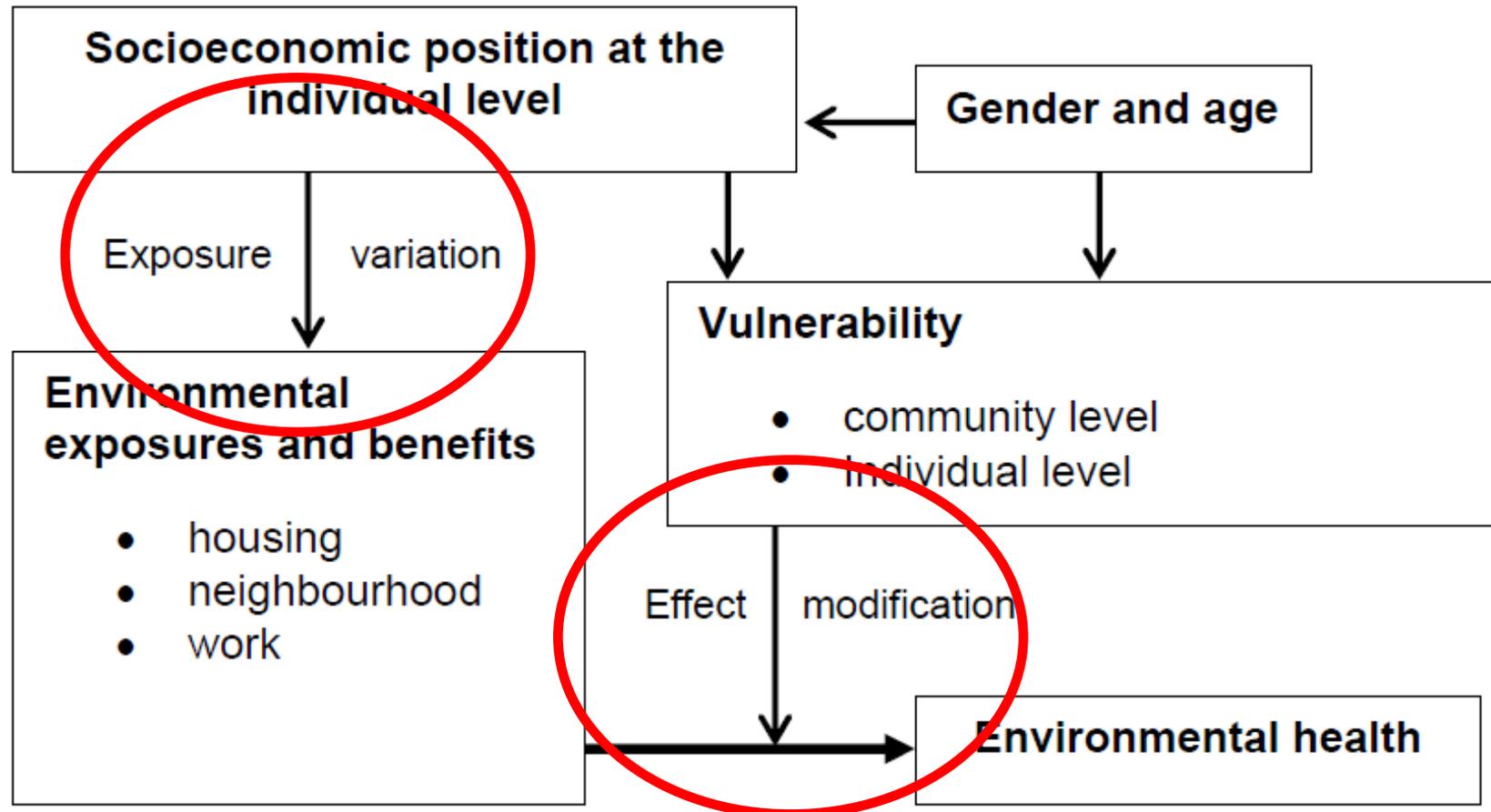
by  Mathilde Sengoelge,  Merel Leithaus,  Matthias Braubach and  Lucie Laflamme

## Special Issue 2019: Achieving Environmental Health Equity: Great Expectations

International Journal of  
*Environmental Research  
and Public Health*

# Social inequalities in environmental health

## Macroeconomic context: social disparities and stratification



# Environmental health equity

## **United Nations Human Rights Council 2021**

- Recognition of having a clean, health and sustainable environment as a human right

## **6th Ministerial Conference on Environment and Health, Ostrava 2017**

- Equity as a cross-cutting dimension:  
“Any action should consider the distribution of impacts across the population and avoid equity-related side effects”  
[Annex II – compendium of actions]

# Equity aspects in the WHO European Programme of Work and in the SDGs

Both the **WHO European Programme of Work** and the **Sustainable Development Agenda** are based on a “**leaving no one behind**” approach to make sure that their implementation benefits everyone, and tackles existing inequalities.



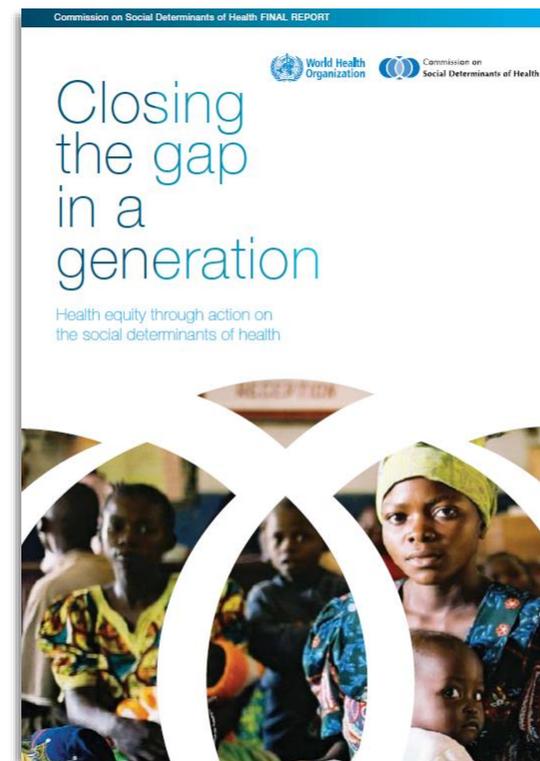
# Tackling health inequalities

1 Improve Daily Living Conditions

2 Tackle the Inequitable Distribution  
of Power, Money, and Resources

3 Measure and Understand the Problem  
and Assess the Impact of Action

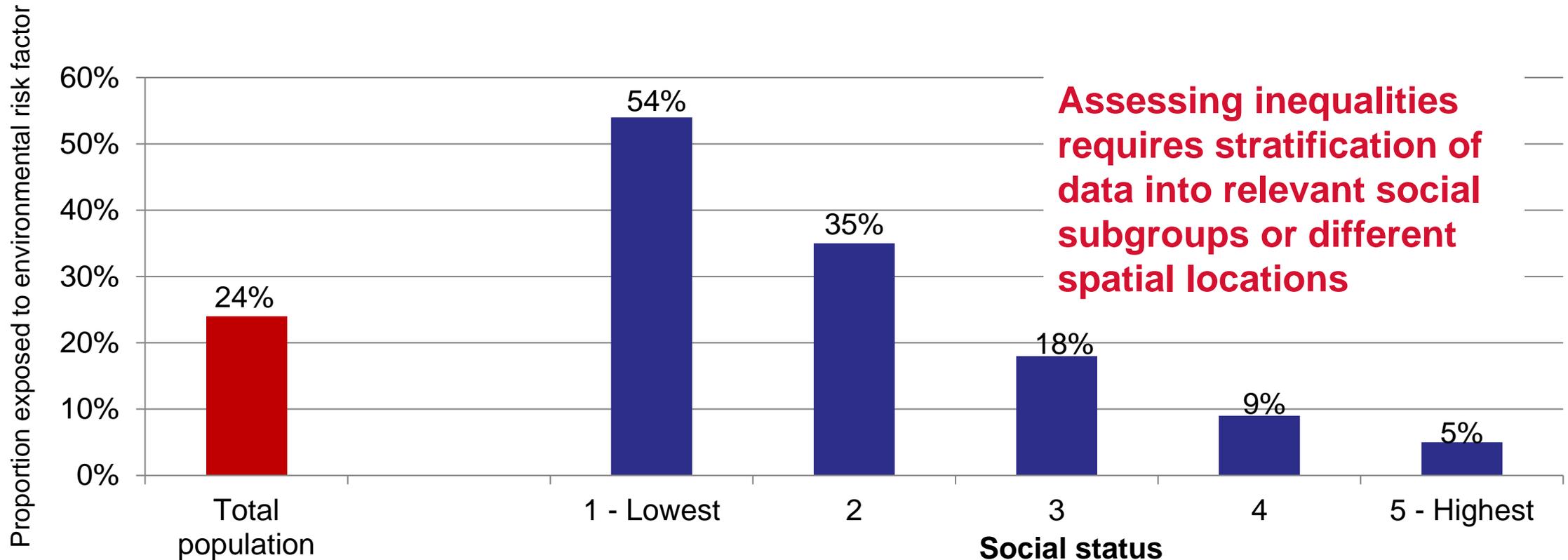
- National and global health equity surveillance systems for routine monitoring of health inequity and the social determinants of health



[WHO/CSDH 2008]

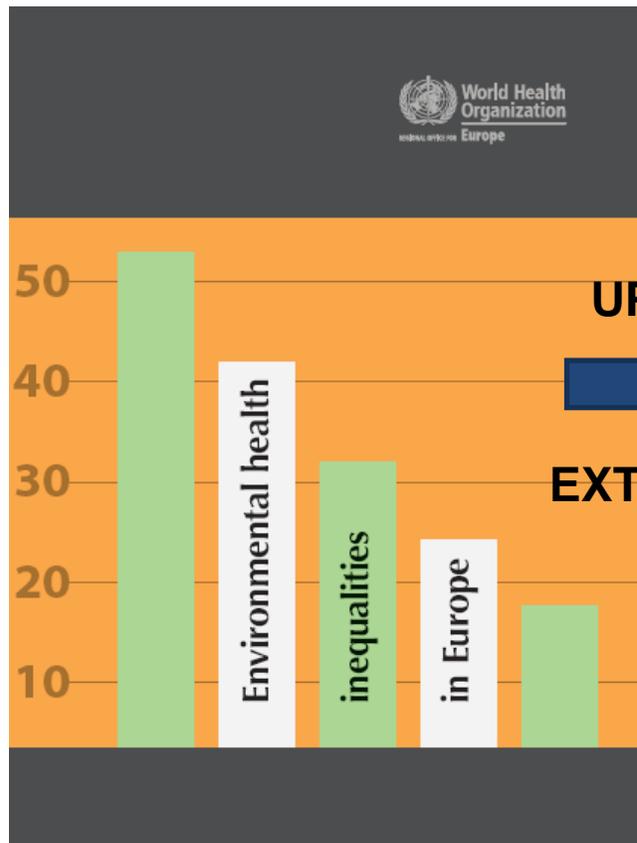
# Monitoring environmental health inequalities

Exposure to environmental risks can be very different within a population



# Monitoring of environmental health inequalities: Assessment Reports of WHO and new fact sheet series

2012



UPDATE

EXTENSION

2019



2022 onwards



# Monitoring of environmental health inequalities: Objectives of the fact sheet series

## Establish an evidence base on environmental health inequalities in Europe by:

- quantifying the **magnitude of environmental health inequalities** within countries in the WHO European Region, using international databases;
- assessing the **recent trends** of social inequalities in environmental exposures or environmental health outcomes;
- identifying
  - the **most significant inequalities**,
  - the **most affected population groups**for follow-up at the national or local level and to enable informed decision-making



**Evidence  
for action**

# Coverage of the Environmental Health Inequalities Fact Sheet Series



## Environmental Health Inequalities Fact Sheets launched today

Inequalities related to  
housing conditions

Inequalities related to  
basic service supply



# Structure of the fact sheets

The image displays a collage of overlapping fact sheet pages. The visible sections include:

- Environmental health inequalities: fact sheet series** (repeated across multiple pages)
- Inequalities in access to at least basic sanitation services** (repeated across multiple pages)
- Conclusions and suggested mitigation actions**

The inequality gap between rural and urban populations relying on less than basic – and therefore unsafe – sanitation services varies widely. Some countries show only marginal differences, while others show strong rural/urban inequalities, up to an absolute prevalence difference of 22 percentage points and an equity ratio of 17:1.

Improvements in access to at least basic sanitation services can be observed since 2000 in the Euro 3 and Euro 4 subregions, and since 2005 in the Euro 2 subregion. However, relative inequalities have increased slightly in the Euro 2 and significantly in the Euro 4 subregion.

Analysis of wealth inequalities reveals significant gaps between wealthier and poorer population groups. Across 12 of 16 countries with available data, reliance on less than basic sanitation services is highest in the poorest wealth quintiles and shows a clear social gradient.

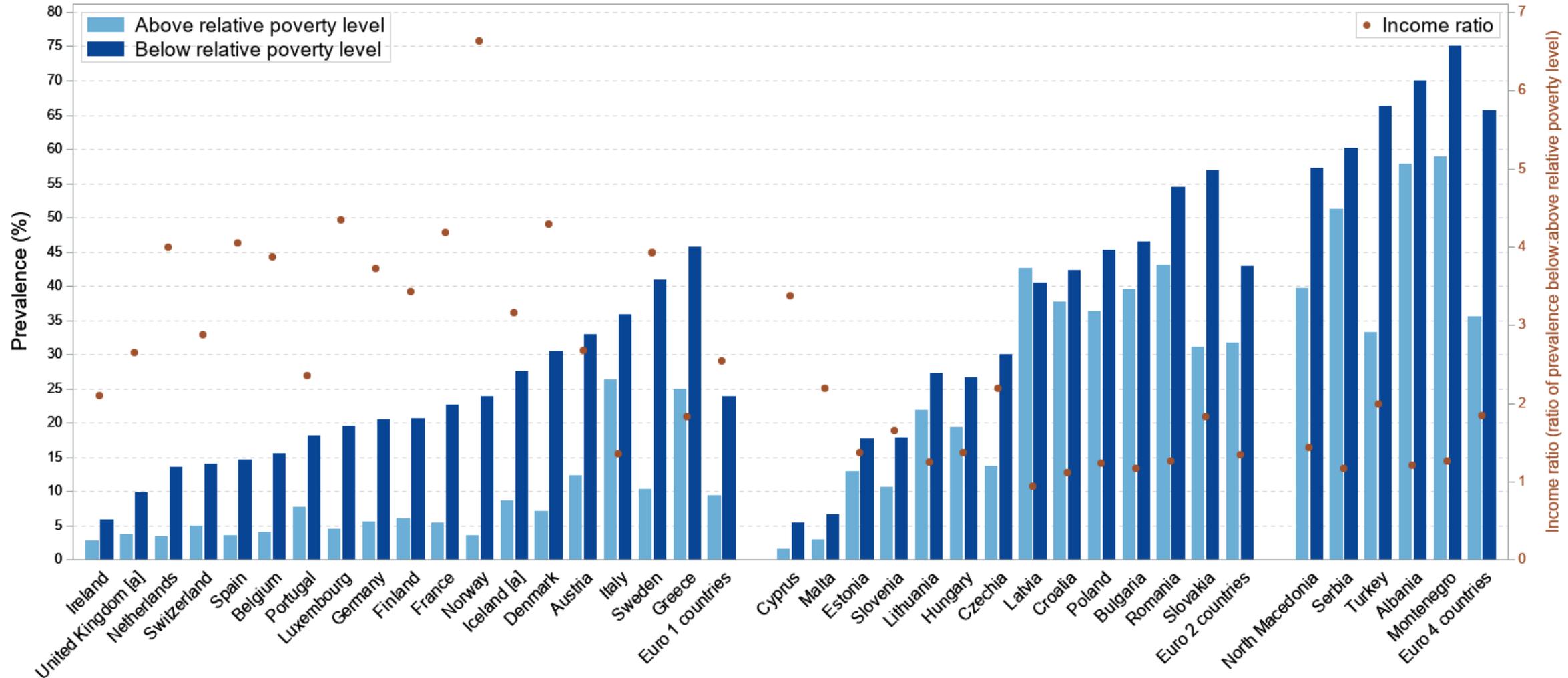
The integrated analysis of socioeconomic and spatial inequalities suggests that poverty is the most important determinant of relying on less than basic sanitation services. In 10 countries, the most disadvantaged group is the rural poor and in six countries the urban poor. Interventions to close persisting inequality gaps in access to at least basic sanitation should therefore prioritize those disadvantaged groups.

**Suggested mitigation actions are:**

  - systematically identifying inequality gaps and their potential causes at national and local levels;
  - undertaking targeted assessments of inequalities related to drinking-water service provision and establishing and supporting equitable access action plans (8, 9);
  - improving monitoring systems and data availability, particularly for socioeconomic and sociodemographic inequalities, to improve the evidence base and to target interventions effectively;
  - setting and enforcing specific equitable access targets and implementation plans under the Protocol on Water and Health (4);
  - improving the capacity of water operators to embrace and consider equity considerations in planning, management and operation of services;
  - establishing procedures and capacities in rural communities to provide safely managed drinking-water services; and
  - including equity considerations as a prerequisite in the formulation of new programmes and projects on drinking-water infrastructure and management.
- References**
  - Environmental health inequalities resource package: a tool for understanding and reducing inequalities in environmental risk. Copenhagen: WHO Regional Office for Europe; 2019 (<https://apps.who.int/iris/handle/10665/346723>; accessed 16 December 2021).
  - JMP global database [online database]. Geneva: World Health Organization and United Nations Children's Fund; 2021 (<https://washdata.org/data/household/>; accessed 1 July 2021).
  - Progress on household drinking water, sanitation and hygiene 2000-2020: five years into the SDGs. Geneva: World Health Organization and United Nations Children's Fund; 2021 (<https://apps.who.int/iris/handle/10665/34508>; accessed 24 September 2021).
  - Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes. Copenhagen: WHO Regional Office for Europe; 1999 (<https://www.euro.who.int/en/health-topics/environment-and-health/water-and-sanitation/protocol-on-water-and-health>; accessed 24 September 2021).
  - Kulinkina AV, Shinee E, Guzmán Herrador BR, Nygård K, Schmolli O. The situation of water-related infectious diseases in the pan-European region. Copenhagen: WHO Regional Office for Europe; 2016 (<https://apps.who.int/iris/handle/10665/329534>; accessed 6 September 2021).
  - Safer water, better health. 2019 update. Geneva: World Health Organization; 2019 (<https://apps.who.int/iris/handle/10665/329905>; accessed 10 November 2021).
  - Environmental health inequalities in Europe: second assessment report. Copenhagen: WHO Regional Office for Europe; 2019 (<https://apps.who.int/iris/handle/10665/325176>; accessed 24 September 2021).
  - Guidance note on the development of action plans to ensure equitable access to water and sanitation. Geneva: United Nations Economic Commission for Europe; 2016 (<https://apps.who.int/iris/handle/10665/329563>; accessed 24 September 2021).
  - The Equitable Access Score-Card: supporting policy processes to achieve the human right for water and sanitation. Geneva: United Nations Economic Commission for Europe and WHO Regional Office for Europe; 2013 (<https://unecp.org/info/publications/pub/21778>; accessed 24 September 2021).

Further reading on the subject is available at: <https://www.uni-bremen.de/en/who-collaborating-centre-for-environmental-health-inequalities>

# Absolute and relative inequalities: Prevalence of overcrowding by relative poverty level



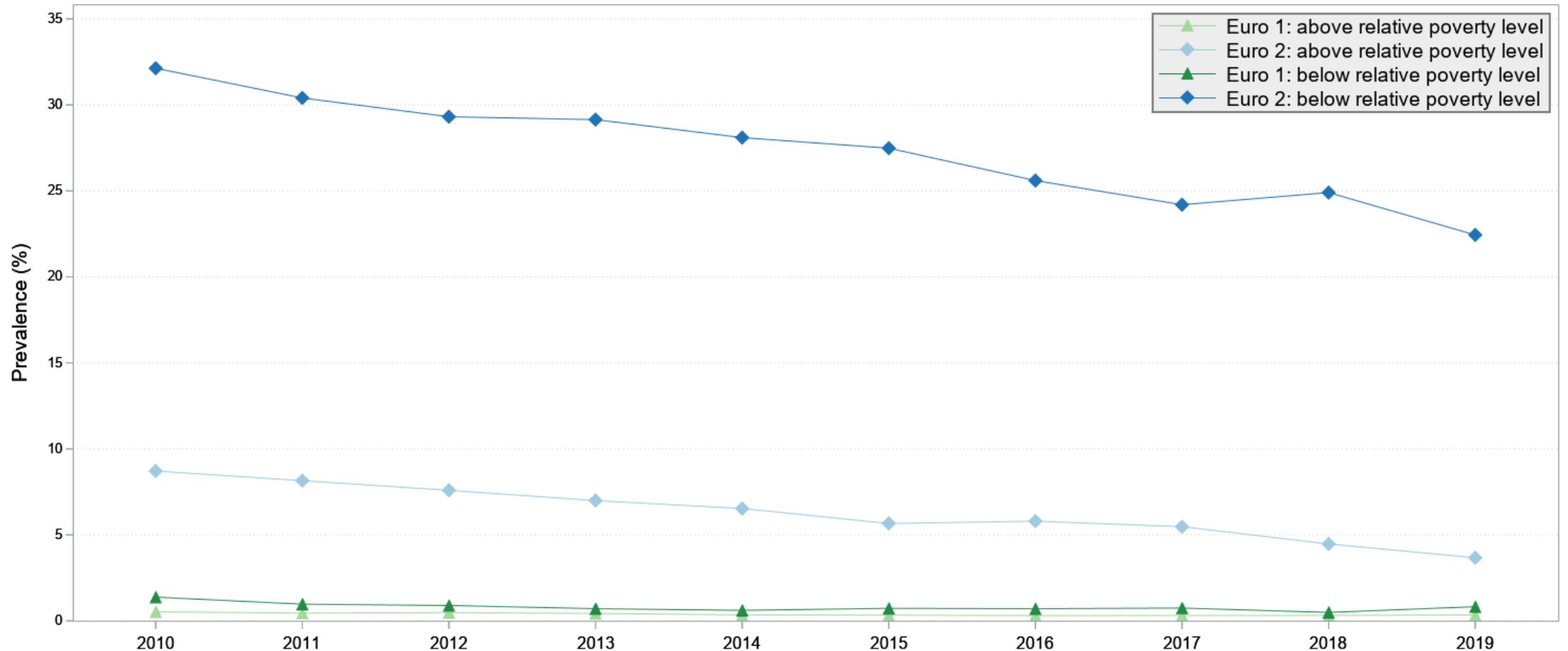
Note: [a] latest available data for Iceland and United Kingdom from 2018;  
Source: Eurostat EU-SILC public access database (7) (latest update 1 July 2021).



**Social gradient:**  
Prevalence of dampness  
in the home by income  
quintile

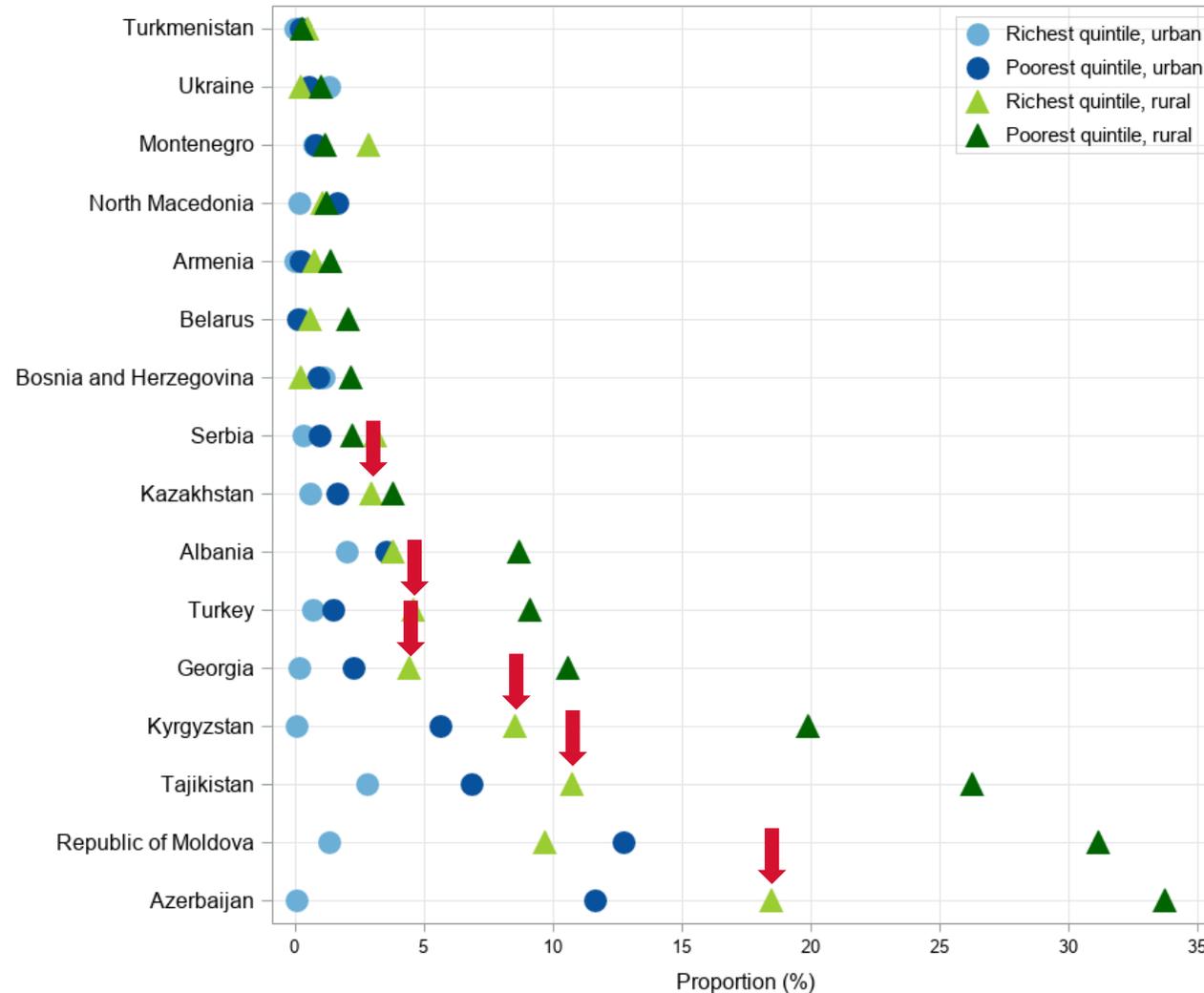
Note: [a] latest available data for Iceland and United Kingdom from 2018.  
Source: Eurostat EU-SILC production database; unpublished data (latest update 1 July 2021).

## Time trend: Prevalence of lack of a flush toilet in the dwelling by relative poverty level



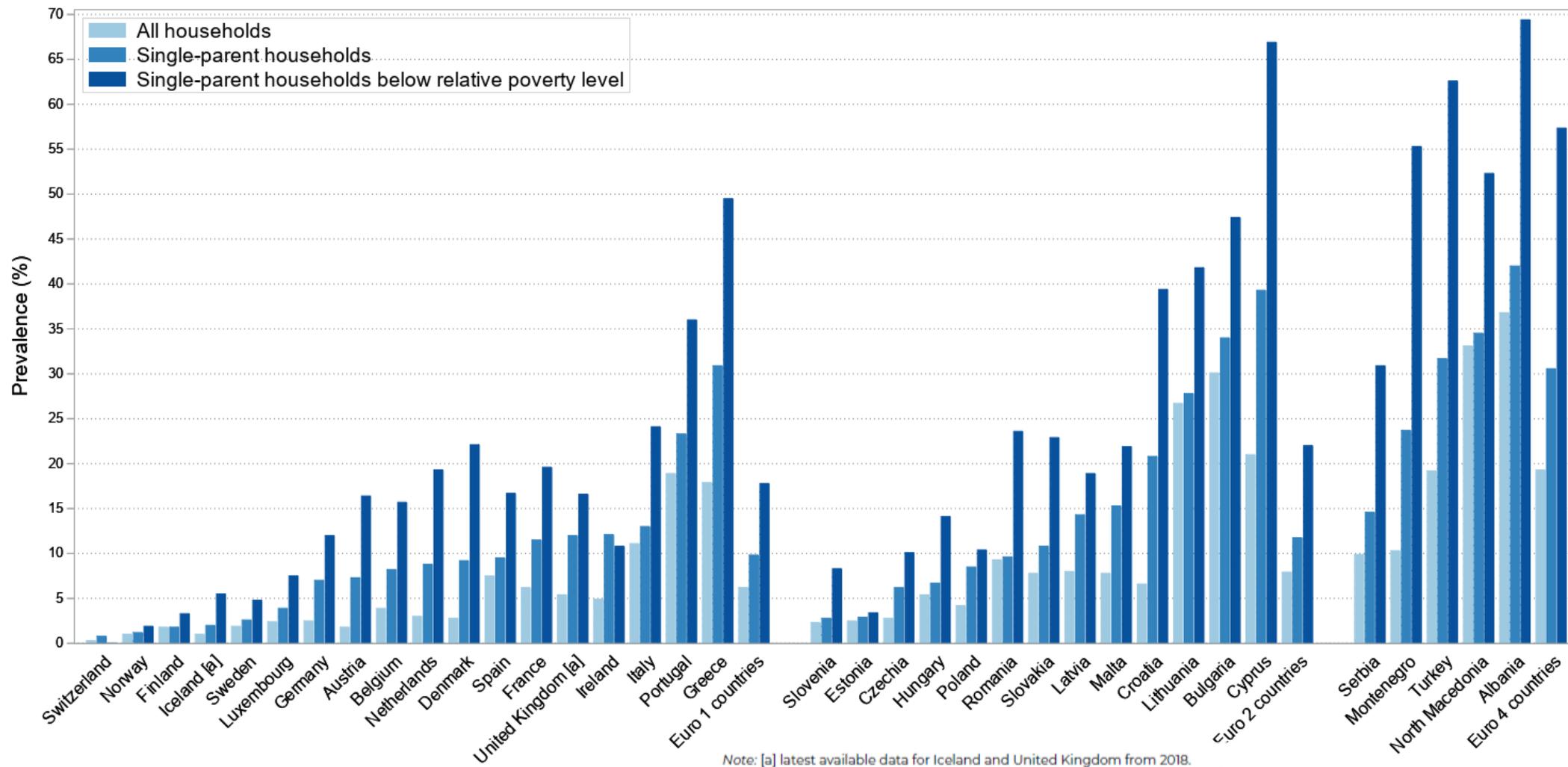
Notes: no Euro 4 data available; Euro1 figures for 2019 exclude Iceland and United Kingdom due to lack of data  
Source: Eurostat EU-SILC public access database (6) (latest update 1 July 2021).

## Combination of material and spatial indicators: Proportion of urban and rural populations using less than basic drinking-water services by wealth quintile

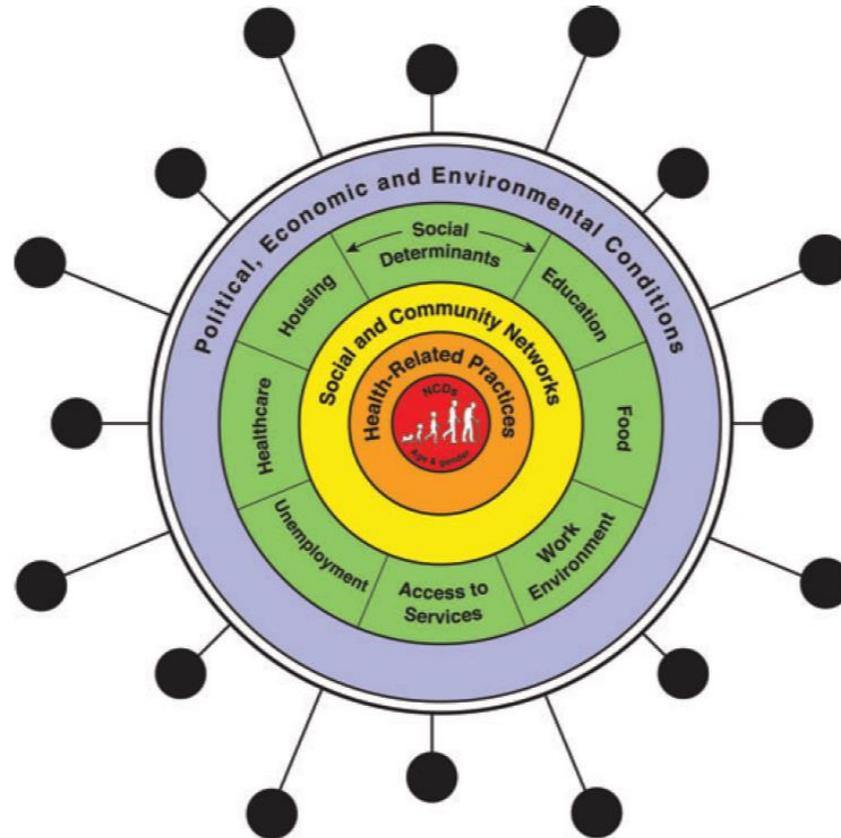


Note: last year of reporting ranges from 2018 to 2020, except Azerbaijan (2010).  
Source: WHO/UNICEF JMP global database (2), accessed 1 July 2021.

## Combination of household type and poverty indicators: Prevalence of inability to keep the home adequately warm by household type and poverty level



# Putting an equity lens on the COVID-19 pandemic: Relevance of environmental health inequalities



The syndemic of COVID-19  
and the social determinants of health

[Bambra et al., J Epidemiol Community Health 2020]  
Figure: [https://eprints.ncl.ac.uk/file\\_store/production/271416/AFFC564C-D2CF-4466-BE56-272E33F9132A.pdf](https://eprints.ncl.ac.uk/file_store/production/271416/AFFC564C-D2CF-4466-BE56-272E33F9132A.pdf)

# Relevance of environmental health inequalities during the COVID-19 pandemic

## Measures to protect against infection

## Inequalities in environmental health risks



Distance

Overcrowding



Hygiene

Lack of a bath or shower, no access to at least basic drinking-water and sanitation services



Photo by Matt Seymour on Unsplash

Lockdown  
or quarantine

Adverse housing conditions  
Low quality of the living environment

# Evidence for action



## Inequalities in lack of a flush toilet in the dwelling

### Suggested mitigation actions are:

- ensuring that all new residential buildings have a functional flush toilet in each dwelling;
- promoting public housing programmes that provide affordable housing (including social housing and affordable housing) for the most vulnerable groups;
- providing targeted financial support for housing with a flush toilet;
- establishing national standards for implementing targeted mitigation actions;
- considering regulatory measures to ensure access to basic amenities.

## Inequalities in inability to keep the home adequately warm

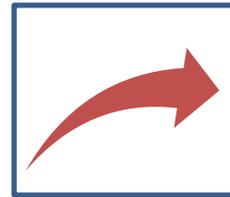
### Suggested mitigation actions are:

- implementing effective financial mechanisms associated with, for example, fuel regulation, minimum wage enhancements and earned income tax credits to increase the accessibility and affordability of clean energy for poor households and to alleviate energy poverty;
- providing financial support mechanisms – such as social tariffs or heating grants – targeting specific household types that disproportionately demonstrate inability to maintain warmth in the home, such as low-income or single-parent homes;
- enhancing investment in energy-efficient housing – specifically targeting improvement of housing stock segments with inadequate heating and insulation characteristics, and enabling residents to remain in their homes despite potential rent increases;
- requiring landlords and building owners to upgrade existing housing to minimum heating and insulation standards, and making these standards known to residents;
- introducing social tariffs for energy supply and considering a legal ban on disconnecting households from energy supply in the case of payment arrears.

## Key messages



Environmental exposure levels mostly decline



Inequalities in exposure often remain / increase



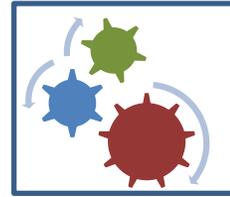
Risk can be 10 times higher for disadvantaged



Different inequality patterns require tailored action



No inequality data is a key challenge



Intersectoral action across all sectors is needed

# Outlook

- Updating the environmental health inequality indicators regularly
- Developing new indicators (as evidence allows)
- Estimating the health impact of environmental inequalities

# Thank you!

<https://www.uni-bremen.de/en/who-collaborating-centre-for-environmental-health-inequalities/>

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## WHO Collaborating Centre for Environmental Health Inequalities

