



World Health
Organization

REGIONAL OFFICE FOR **Europe**

Country profiles on environmental health inequality

A supplement to
*Environmental health
inequalities in Europe.
Second assessment report*





World Health
Organization

REGIONAL OFFICE FOR **Europe**

Country profiles on environmental health inequality

A supplement to
*Environmental health
inequalities in Europe.
Second assessment report*

ABSTRACT

Environmental determinants are a major contributor to health and well-being but are not distributed equally. In most countries, disadvantaged population groups tend to be significantly more exposed to environmental risks. Major assessment reports published in 2012 and 2019 reviewed the status of environmental health inequalities within countries in the WHO European Region.

This report is a supplement to the second assessment report and presents country profiles on environmental health inequalities related to housing conditions, basic services, urban environments and transport, work settings and injuries.

The profiles provide information on the changes between the first and the second assessment reports, giving quick and effective insight into the inequality increases or reductions over time for many indicators. Knowledge of national inequality features can support environmental and intersectoral action to identify and protect those who carry a disproportionate environmental burden, thereby contributing to a reduction in health inequalities.

KEYWORDS

ENVIRONMENTAL HEALTH, ENVIRONMENTAL EXPOSURE, HEALTH STATUS DISPARITIES, SOCIOECONOMIC FACTORS, RISK FACTORS, RISK ASSESSMENT, EUROPE

Address requests about publications of the WHO Regional Office for Europe to:

Publications
WHO Regional Office for Europe
UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark.

Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate, on the Regional Office website (<http://www.euro.who.int/pubrequest>).

Authors: Firmino Machado, Matthias Braubach, Friederike Reichel, Marco Martuzzi

© World Health Organization 2019

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited, as indicated below. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. Country profiles on environmental health inequality. A supplement to Environmental health inequalities in Europe. Second assessment report. Copenhagen: WHO Regional Office for Europe; 2019. Licence: [CC BY-NC-SA 3.0 IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/igo).

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by WHO to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall WHO be liable for damages arising from its use.

Printed in Germany

Layout and design: Imre Sebestyén/Unit Graphics

Contents

Introduction	4
Methodology for the country profiles	5
Overview and source data	5
Computation of the country profiles	7
Interpretation of the country profiles	7
Coverage of indicators	9
Country profiles for all Member States in the WHO European Region	10
Albania	11
Andorra	12
Armenia	13
Austria	14
Azerbaijan	15
Belarus	16
Belgium	17
Bosnia and Herzegovina	18
Bulgaria	19
Croatia	20
Cyprus	21
Czechia	22
Denmark	23
Estonia	24
Finland	25
France	26
Georgia	27
Germany	28
Greece	29
Hungary	30
Iceland	31
Ireland	32
Israel	33
Italy	34
Kazakhstan	35
Kyrgyzstan	36
Latvia	37
Lithuania	38
Luxembourg	39
Malta	40
Monaco	41
Montenegro	42
Netherlands	43
North Macedonia	44
Norway	45
Poland	46
Portugal	47
Republic of Moldova	48
Romania	49
Russian Federation	50
San Marino	51
Serbia	52
Slovakia	53
Slovenia	54
Spain	55
Sweden	56
Switzerland	57
Tajikistan	58
Turkey	59
Turkmenistan	60
Ukraine	61
United Kingdom	62
Uzbekistan	63
References	64

Introduction

Since 2010, the WHO Regional Office for Europe has put specific emphasis on the equity dimensions of its work on environment and health. This is documented in the Parma Declaration, in which the Member States of the WHO European Region committed to act on socioeconomic and gender inequalities in the human environment and related health outcomes, and mitigate environmental health risks to children and other vulnerable groups (WHO Regional Office for Europe, 2010).

This commitment of the Member States led to the first WHO assessment of environmental health inequalities in Europe, published in 2012. It was based on 14 indicators of inequalities in relation to housing, injuries and environmental conditions (WHO Regional Office for Europe, 2012). In 2019, WHO published its second assessment report on environmental health inequalities in Europe, which provides a wide range of data and indicators on the magnitude of inequalities in environmental risk exposure and injuries related to housing, urban settings, workplaces and basic services (WHO Regional Office for Europe, 2019). The data for the report are drawn from international databases coordinated by WHO, European Union or United Nations agencies.

The publication of the second assessment report enables Member States to compare the magnitude of inequality for a range of environmental indicators, and identify in which areas, and for what population groups, inequalities have increased or decreased. Knowledge of the inequality trends over time is a substantial requirement for environmental governance and allows equity-sensitive decision-making to protect those that are most vulnerable to, or most affected by environmental risks.

This country profile report represents a supplement to the second assessment report on environmental health inequalities in Europe. It pulls together data from both assessment reports and presents it by country, showing the magnitude of inequalities over time. The country profiles therefore give Member States an overview of national trends and patterns of environmental health inequalities without the need to compare the individual data and figures from both assessment reports. The country profiles therefore help to identify national environmental inequality priorities to be further investigated at country level, using national and more detailed data and making a judgment

whether the inequalities represent differences that are acceptable or unavoidable, or inequities to be tackled because they are unfair and avoidable¹.

The country profiles also highlight the environmental domains in which reductions in inequalities have already been achieved, indicating that successful policies have been implemented to reduce the environmental burden of the most vulnerable or most affected population groups.

As in both assessment reports, the country profiles are based on data compiled from international datasets. The lack of data within the profiles is therefore not an indication of a complete lack of evidence and statistics, since national data sources were not systematically reviewed. However, lack of data on inequalities in environmental exposure and injuries is an important challenge for countries, affecting not only environmental management and health systems but also social cohesion.

Consequently, countries are recommended to analyse their country profile, identify the national priorities and use national data sources to:

- confirm and validate the international data on inequalities and provide further national evidence that could help in the interpretation of inequalities and the planning of mitigation measures; and
- identify and assess the magnitude of environmental and injury inequalities when no international data are available, providing insight into potential equity challenges and raising awareness of this important dimension.

¹ For a more detailed explanation of the difference between inequity and inequality, please see <https://www.who.int/hia/about/glos/en/index1.html>

Methodology for the country profiles

Overview and source data

A one-page country profile was assembled for each Member State in the WHO European Region to present the available data on the changes in magnitude of environmental health inequalities over recent years. The country profiles present a total of 17 indicators and 33 stratifications, comparing data from the first assessment report (mainly based on data reported in 2008/2009) and the second assessment report (mainly based on data reported in 2016), highlighting whether the inequality gap has increased or decreased for each environmental risk and injury outcome.

For some inequality indicators, comparability over time is not possible or restricted; this is the case where methodology or definitions have changed since the first assessment report in 2012, or indicator data only became available after the first assessment report. In such cases, data for the earlier reporting year(s) have been accessed and downloaded and thus may not fully reflect the data presented in the 2012 report. This is particularly

the case for injury-related inequality data, as the reporting years are very different for individual countries, and the scope and definitions applied by the WHO mortality database have changed. Other examples are definition changes for water and sanitation, while for air pollution only recent inequality data are available and no comparison with older values is possible.

Another factor influencing data availability is the participation of countries in international surveys; this is visible for e.g. Croatia and North Macedonia, as they have recently joined EU-coordinated data collection mechanisms and thus data were available for the 2019 assessment report but not for the 2012 report. Overall, data availability is restricted for countries in the eastern part of the Region, where only very few indicators can be implemented.

Table 1 provides an overview of comparability over time of all indicators covered in the second assessment report.

Table 1: Comparability of environmental health inequality indicators

Housing and basic services	Comparability
Access to less than basic drinking-water services	The definition of indicators on drinking-water service quality has changed between the 2012 and 2019 assessment reports. However, the current definition has been applied for survey data from previous years. The comparison of data on drinking-water therefore uses 2005 and 2015 data based on the current definition, and does not rely on the data from the 2012 report for comparison.
Access to less than basic sanitation services	Access to sanitation services was not covered in the 2012 assessment report but consistent data are available over the last 15 years. The comparison of data on sanitation service quality therefore uses 2005 and 2015 data based on the current service level definition.
Lack of a flush toilet in dwelling	Data fully comparable when available for two reporting years. Data on lowest versus highest income only available from the 2019 assessment report.
Lack of a bath or shower in dwelling	Data fully comparable when available for two reporting years.
Overcrowding	Data fully comparable when available for two reporting years. Data on lowest versus highest income only available from the 2019 assessment report.
Dampness in the home	Data fully comparable when available for two reporting years.
Inability to keep the home adequately warm	Data fully comparable when available for two reporting years.
Inability to keep the home adequately cool in summer	Data fully comparable when available for two reporting years.
Energy poverty	Energy poverty was not covered in the 2012 assessment report but consistent data are available over the last 10 years. The comparison of energy poverty data relies on 2008 and 2016 data from Eurostat.

Urban and environmental exposures	Comparability
Self-reported noise annoyance	Data fully comparable when available for two reporting years. Data on lowest versus highest income and by household type only available from the 2019 assessment report.
Difficulty accessing recreational or green areas	Data have been taken from the European Quality of Life Survey but are not fully comparable due to a change of answer formats. The data are thus displayed for information purposes, noting that the changes between reporting years can be largely driven by the method changes.
Risk factors in workplaces	Risk factors in workplaces were not covered in the 2012 assessment report. The country profiles rely on 2013 data from Eurostat but cannot provide comparison with previous years. Intrinsic risk factors relate to work movements, postures and weight-lifting as well as intense visual concentration; extrinsic risk factors relate to exposure to e.g. chemicals, dust or smoke as well as noise or vibration.
Average air pollution in cities	Air pollution was not covered in the 2012 assessment report. The country profiles rely on air pollution data from WHO (with different last reporting years per country) but cannot provide comparison with previous years.
Chemical exposure	Chemical exposure is not reflected in the country profiles as the data presented in the 2019 assessment report are derived from a study and are not representative for the countries.
Contaminated sites	Contaminated sites are not reflected in the country profiles as the data presented in the 2019 assessment report are derived from a national case study and not available for other European countries.
Injuries	Comparability
Work-related fatal injuries	The 2012 assessment report used data for work-related injuries while the 2019 assessment report provides data fatal injuries at work (which are considered more reliable). For the country profiles, fatal work-related injury data from 2008 could be accessed for EU countries to compare with. For non-EU, ILO data on fatal work injuries by sex are used for the country profiles when available (different reporting years).
Fatal road traffic injuries	Fatal road traffic injury data are available and comparable for most countries. Some countries provide comparable data on mortality from all transport injuries instead. Few countries have changed the mortality coding between the 2012 and 2019 assessment reports (moving from transport-related mortality to road traffic-related mortality data) and thus the comparability is restricted; this is highlighted for the respective countries by a footnote.
Fatal poisoning	Data fully comparable when available for two reporting years.
Fatal falls	Data fully comparable when available for two reporting years.

Computation of the country profiles

The country profiles provide information on the following three dimensions:

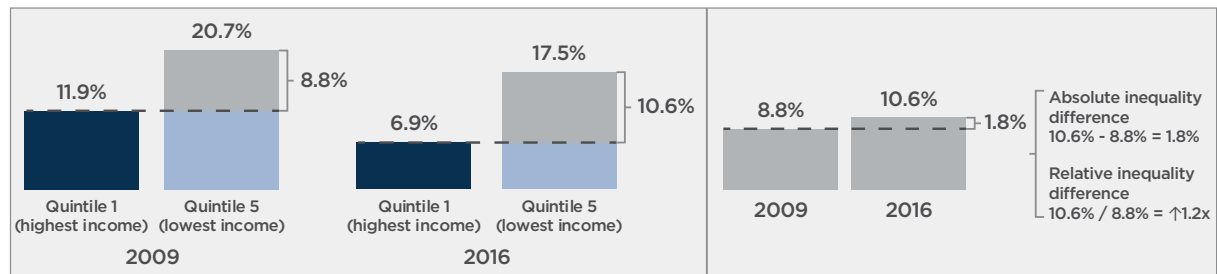
- the direction of change (increase or decrease in the inequality gap);
- the absolute inequality difference (total gap between the two reporting years);
- the relative inequality difference (proportional change from the first to the second report).

Figure 1 illustrates how the changes in environmental health inequalities between the two

assessment reports were calculated. It presents the prevalence of one environmental risk factor within the lowest and highest income quintiles in a given country. In this example, the difference between the income quintiles in 2009 was 8.8%, while the difference in 2016 was 10.6%. This indicates an increase in the magnitude of absolute inequality of 1.8% from 2009 to 2016, although for both income quintiles the overall prevalence declined. This absolute difference of 1.8% represents a relative inequality increase by a factor of 1.2, symbolized by the upward arrow.

Fig. 1. Calculation example of inequality differences by income quintile over time

Indicator: prevalence of an environmental risk factor in a given country
Stratification: income quintiles
Comparison of inequality change from 2009 to 2016



Interpretation of the country profiles

A maximum of 17 indicators are included in each country profile, depending on the available data. Reflecting the structure of this report, they are grouped into three categories: housing and basic services, environmental exposures in urban and occupational settings, and injuries.

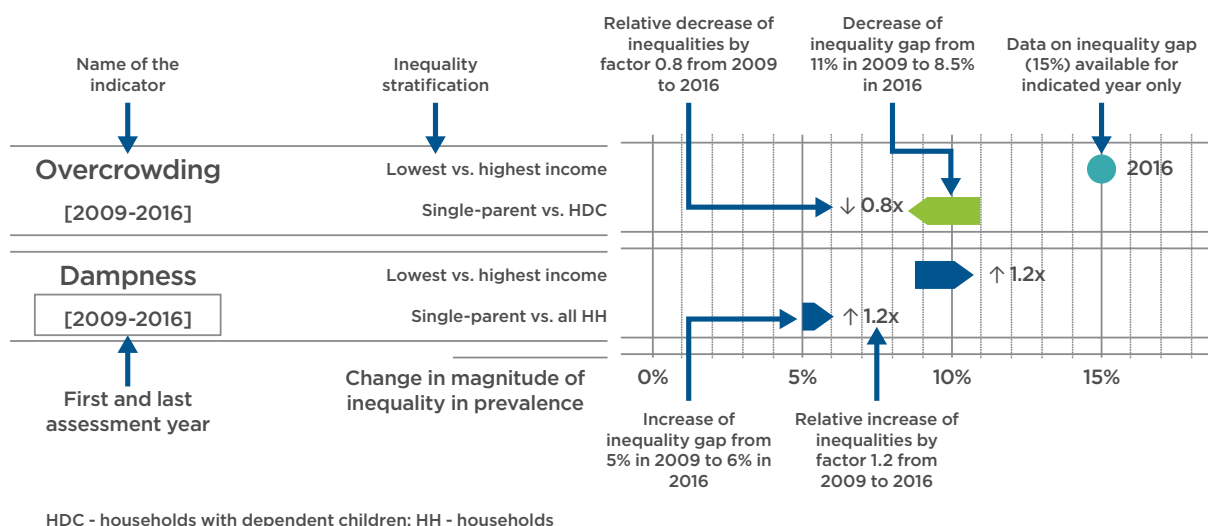
Figure 2 shows the design of the country profiles for the two housing inequality indicators of overcrowding and dampness. The absolute differences in inequality over time are represented by horizontal arrows; these are depicted in green if the inequalities decrease or in blue if they increase. The arrow base represents the inequality gap determined in the first reporting year; the arrowhead represents the gap quantified in the second. The length of the arrow is therefore proportional to the magnitude of the absolute difference in inequalities between the reporting years. To avoid misinterpretation, it should be noted that the percentages on the x-axis represent not the absolute prevalence levels but the difference in prevalence between the

selected population subgroups for the two years. The country profiles therefore provide only an indication of the magnitude of inequality and its change over the years, they do not provide information on the general level of prevalence or exposure. Information on the absolute prevalence levels of risk exposure (or mortality levels for injuries) is set out in detail in the indicator sections in Chapters 3 to 7 of the second assessment report, and the respective sections in the first assessment report.

As indicated in Fig. 2, a relative increase in environmental health inequalities is represented by an up arrow (\uparrow) and a relative decrease by a down arrow (\downarrow). The magnitude of the relative change is represented next to these vertical arrows.

If the data are reported only for one year, it is not possible to compute the inequality difference over time and the inequality gap is represented by a blue circle, with the reporting year indicated next to it.

Fig. 2. Example of country profile design



In the case of outlier values that go beyond a reasonable scale, the corresponding data are provided outside the figure (see Fig. 3). A text box sets out the information on the inequality gaps for the given years.

It is important to note that the calculation of relative inequality is strongly affected by how the comparison of population groups is done: if the environmental risk is compared between “lowest versus highest income quintile”, the exposure level for the lowest income quintile is divided by the exposure level of the highest income quintile. Any situation with a higher exposure level for the lower income group will result in a value higher than 1.0, and any reverse situation in a value lower than 1.0. An increase of 1.2 therefore always reflects a higher exposure level in the population group mentioned first, which is used as a nominator, while the population group mentioned second is used as denominator. However, in some cases the inequalities may be reversed. This means that for a specific indicator, the difference between the population subgroups compared is negative in one reporting year (for example, in one reporting year people with high income may be more affected or exposed than people with low income). Such reversed inequality is reflected by a † symbol when it applies to the first reporting year and by a ‡ symbol when it applies to the second. The same stratification may include both † and ‡ to represent reversed inequalities in both reporting years.

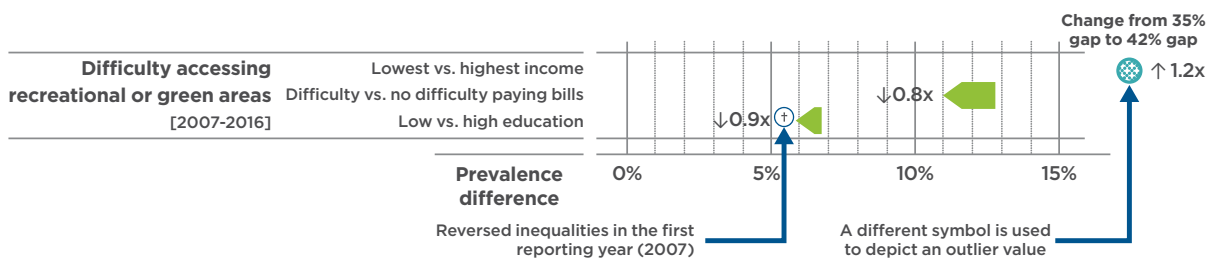
Fig. 3 illustrates such a reverse inequality gap between low and high education subgroups for

difficulty accessing recreational or green areas, which decreased between 2007 and 2016. In 2007 people with higher education reported difficulty more frequently than those with lower education (represented by †), and the difference between the categories was 7%. In 2016 people with higher education reported difficulty less frequently than those with lower education, and the difference between the categories was 6%: no symbol is provided for this reporting year. The green arrow therefore shows that the absolute inequality gap has decreased from 7% to 6% while the † indicates that there was also a change of “inequality direction”, showing that the total change was much stronger than a total difference of only 1% and a relative decrease of inequalities by factor 0.9.

For some indicators, certain stratifications may not be available for all countries. In such cases, no horizontal arrow or circle is displayed, indicating a lack of data. This is particularly the case in countries that do not benefit from EU-coordinated monitoring and surveillance systems; national reporting schemes would have to be explored to identify which environmental inequality indicators would be implementable in a given country.

Finally, it is important to note that the section on injuries is displayed at the bottom of each country profile as it operates on a different scale (showing changes in magnitude of inequality in mortality rather than inequality in prevalence). The indicators in the injuries section show the most recent reporting dates, which may be different according to the country.

Fig. 3. Indication of outlier values and reversed inequalities in country profiles



Coverage of indicators

Each country profile includes a maximum of 17 indicators, depending on the available data. The first section of each profile presents indicators related to housing and basic services; the second section sets out indicators related to urban and occupational settings and environmental

exposures. The profiles conclude with a section on injury indicators, compiling all injury types covered by the assessment report, since mortality rates are used as the unit of comparison for all injury indicators.

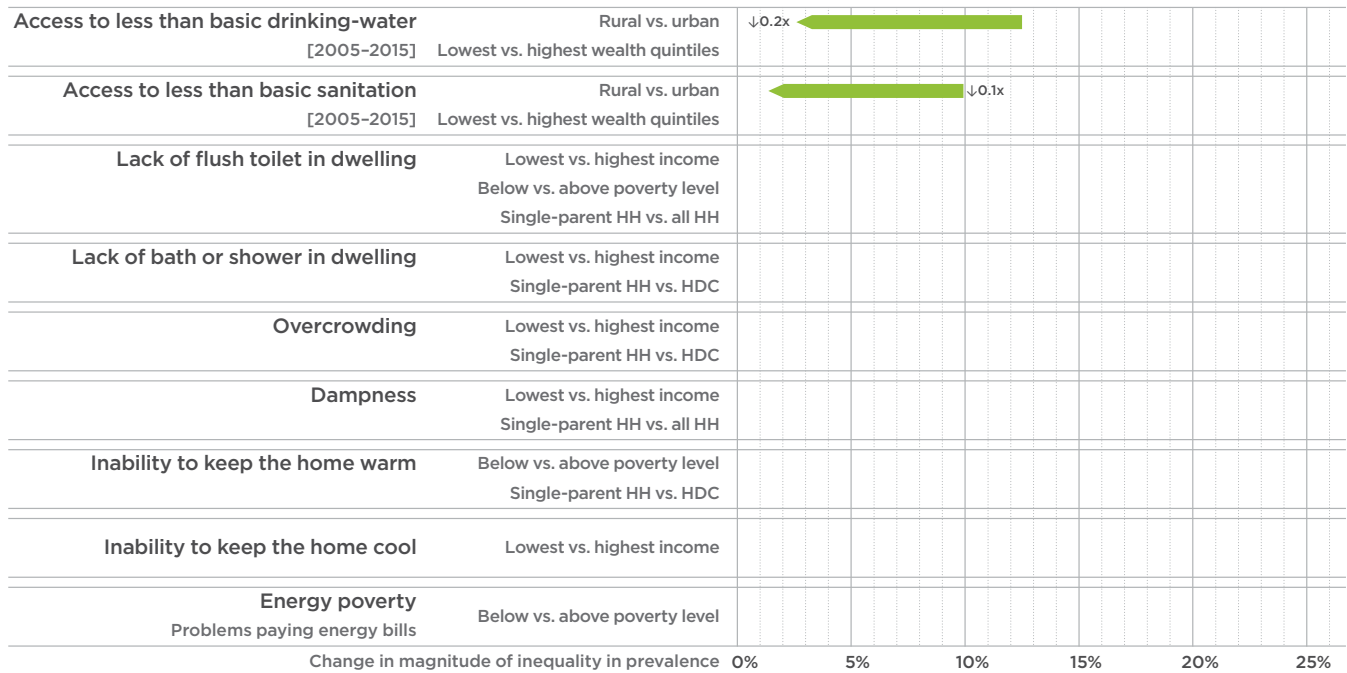
Country profiles for all Member States in the WHO European Region

The country profiles on environmental health inequalities and their development over the last years are shown in the following pages, presenting the countries in alphabetic order. Due to the lack of international databases for the eastern part of the Region, the number of implemented indicators tends to be very low in the respective countries. The same applies to small countries such as Andorra, Monaco or San Marino, which do not participate in EU-coordinated data collection mechanisms.

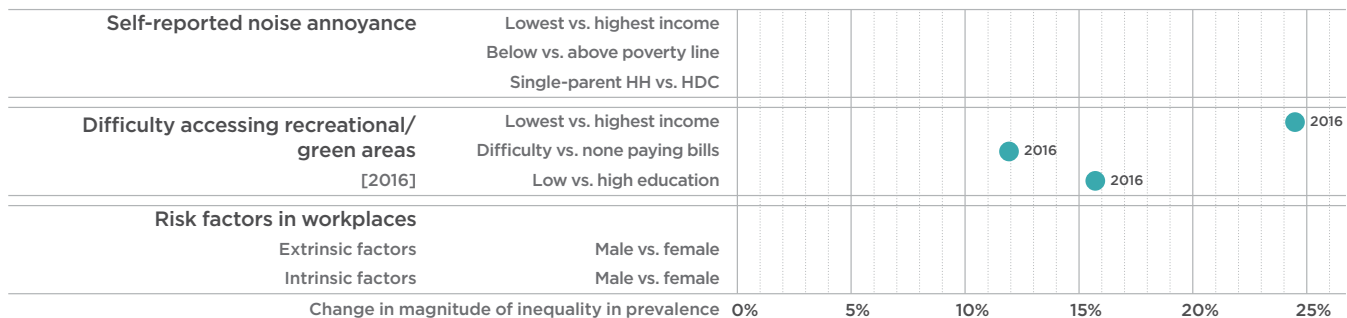
Albania - variation over time of environmental health inequalities



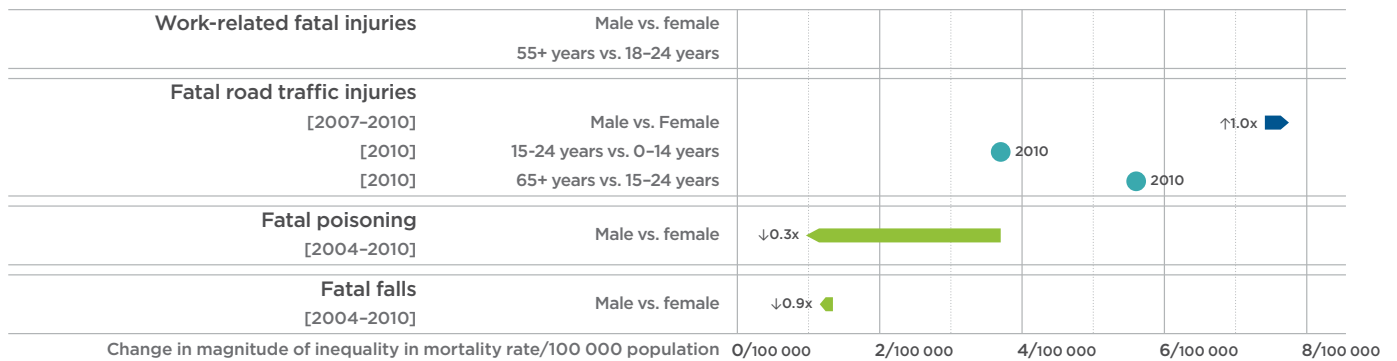
Housing and basic services



Urban and environmental exposures



Injuries

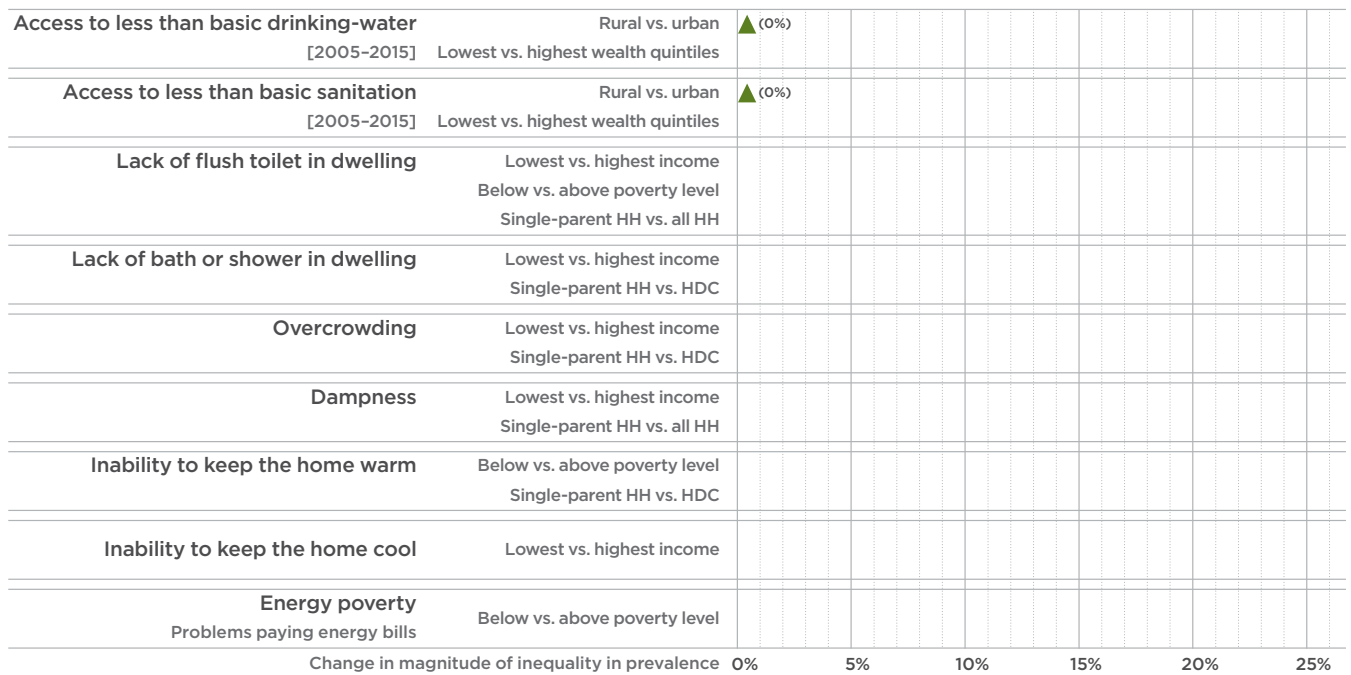


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

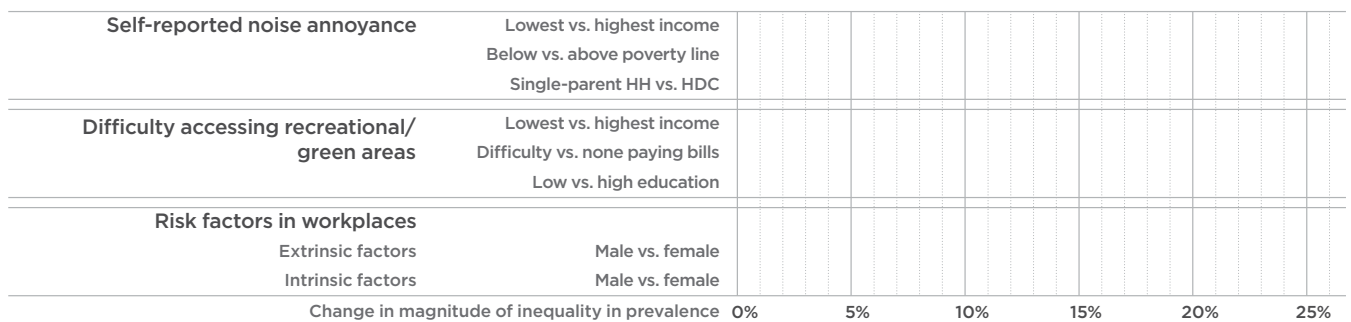
Andorra - variation over time of environmental health inequalities



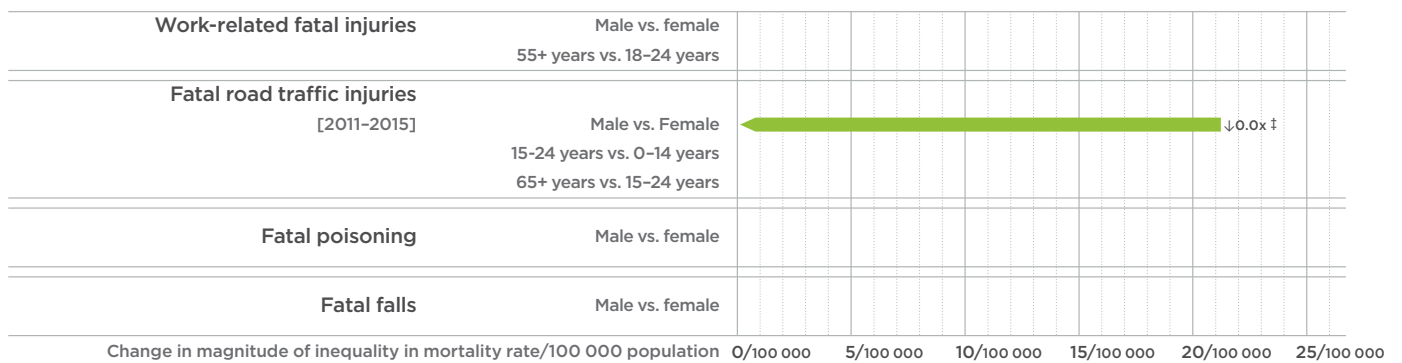
Housing and basic services



Urban and environmental exposures

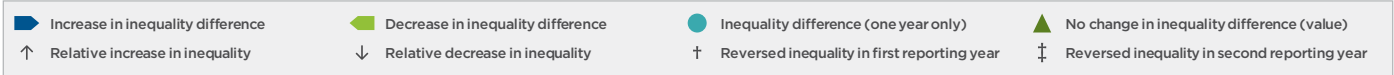


Injuries

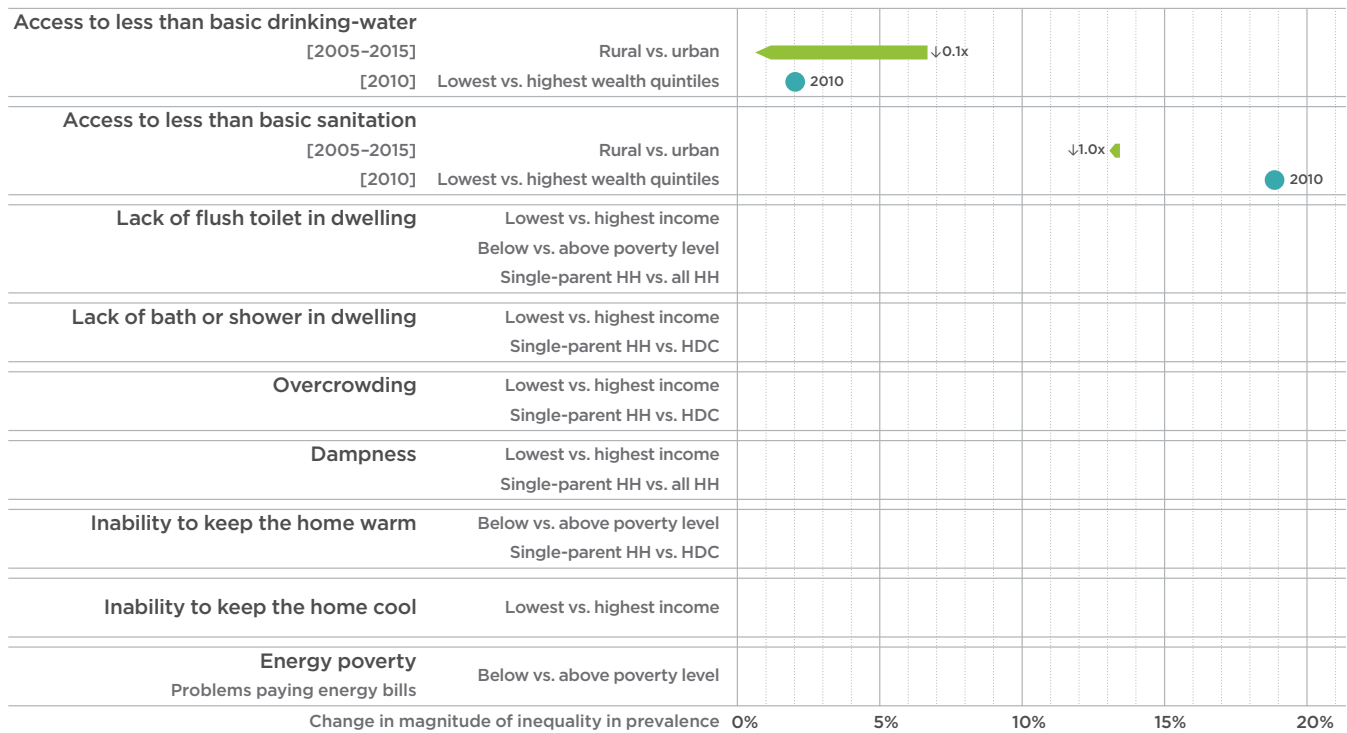


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

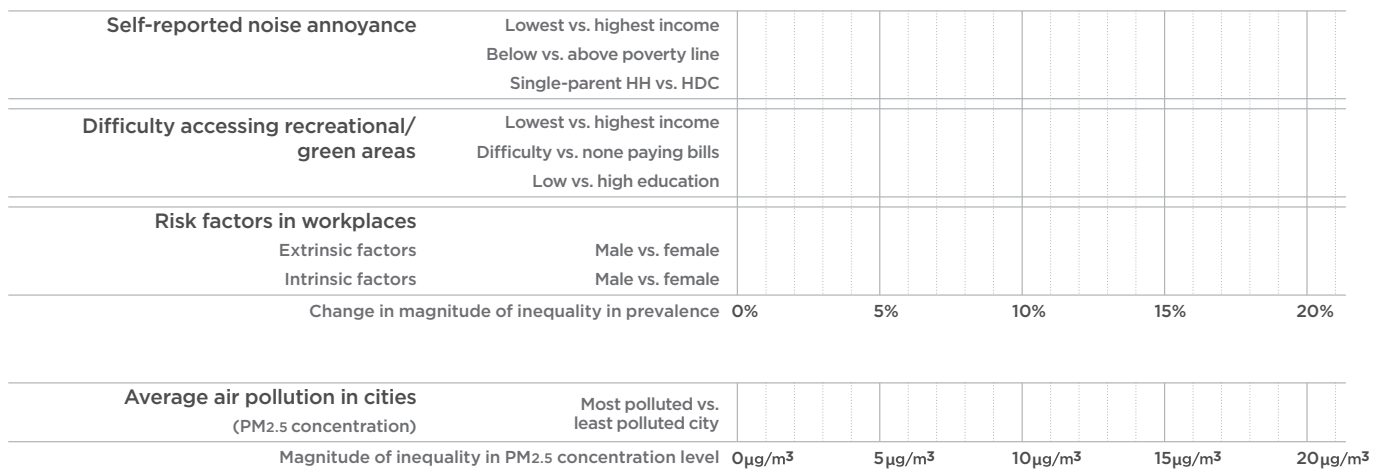
Armenia - variation over time of environmental health inequalities



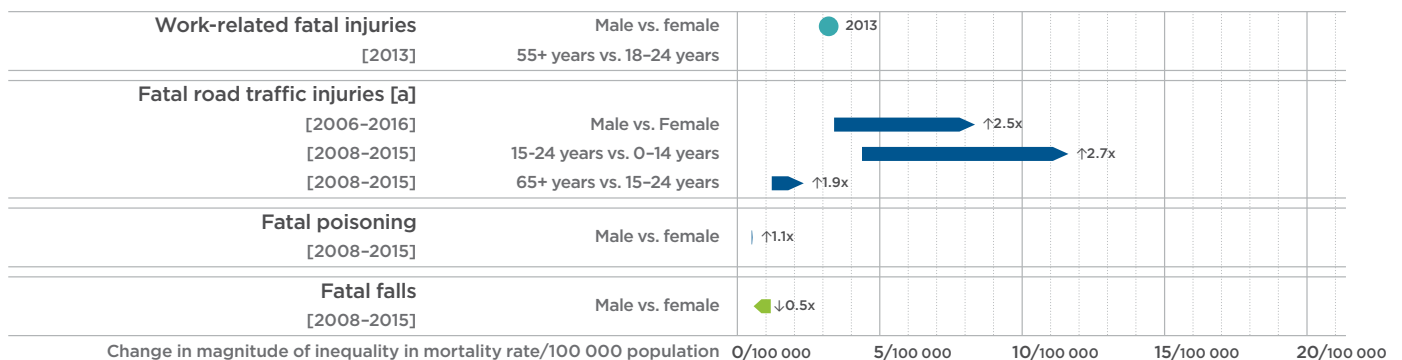
Housing and basic services



Urban and environmental exposures



Injuries

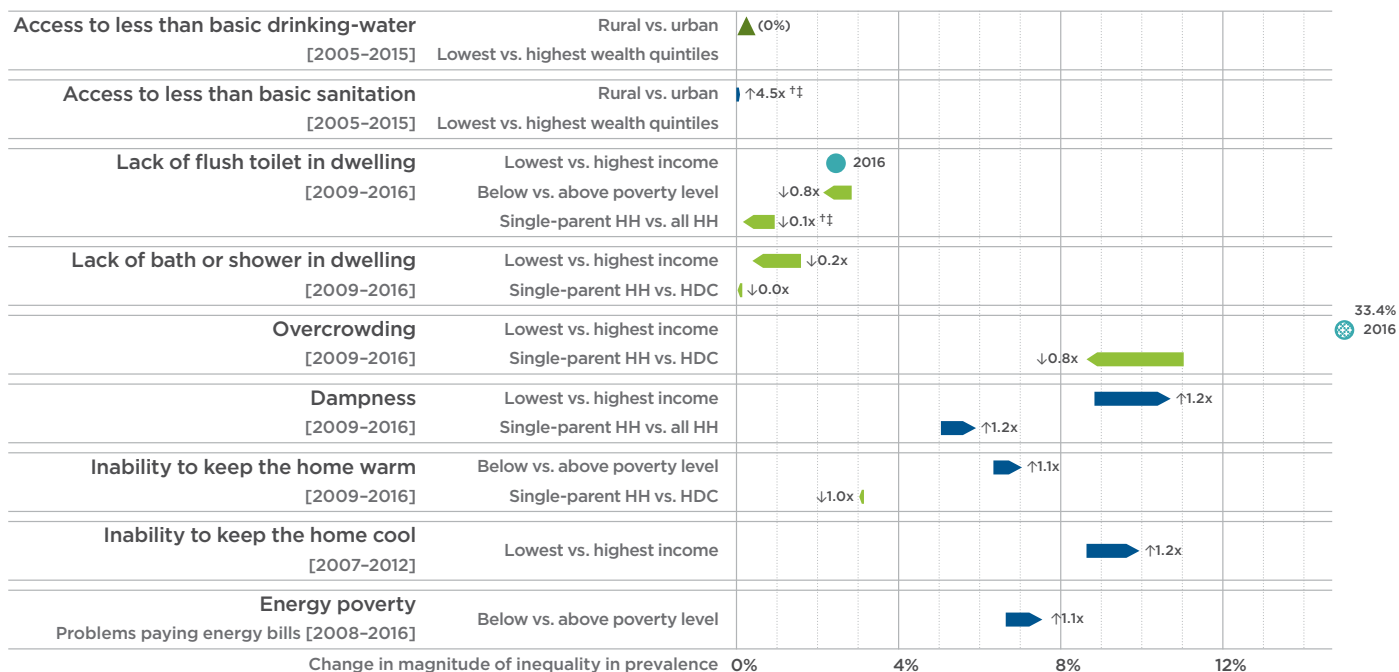


Notes: HDC - households with dependent children; HH - households.
 [a] first year of reporting represents fatal transport injuries.
 An empty row indicates that no country data for that indicator were identified.

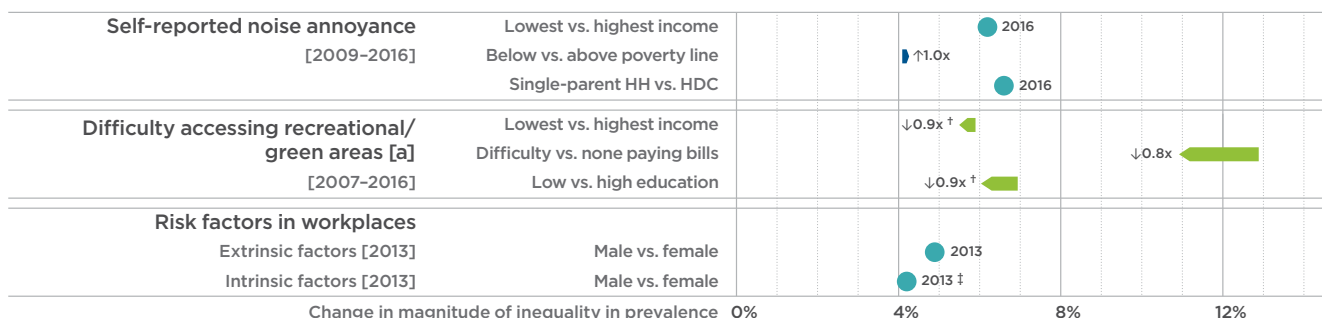
Austria - variation over time of environmental health inequalities



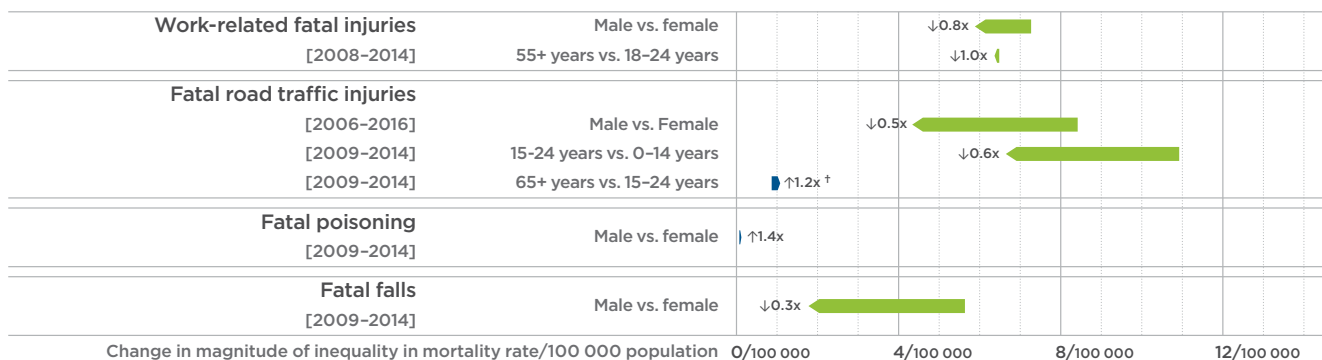
Housing and basic services



Urban and environmental exposures



Injuries

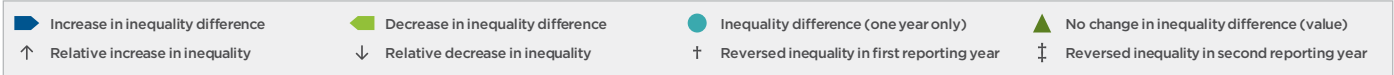


Notes: HDC – households with dependent children; HH – households.

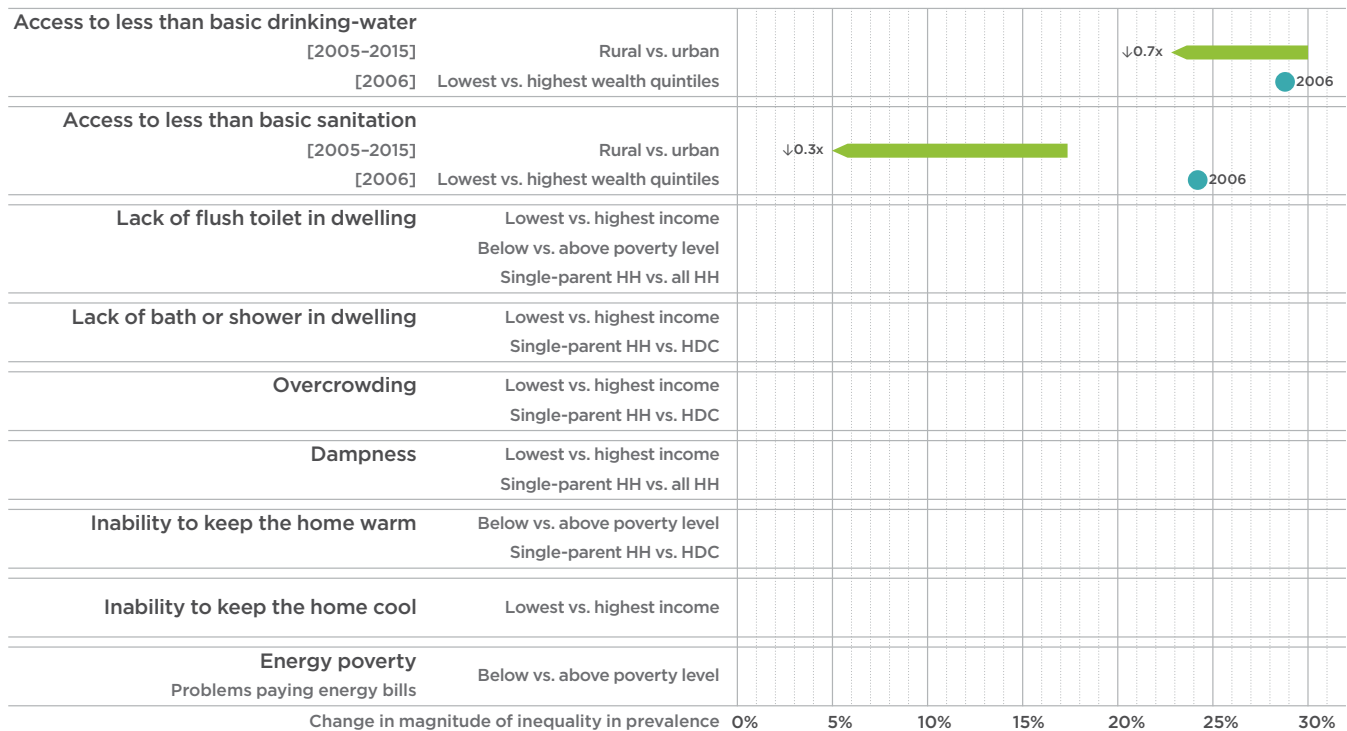
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

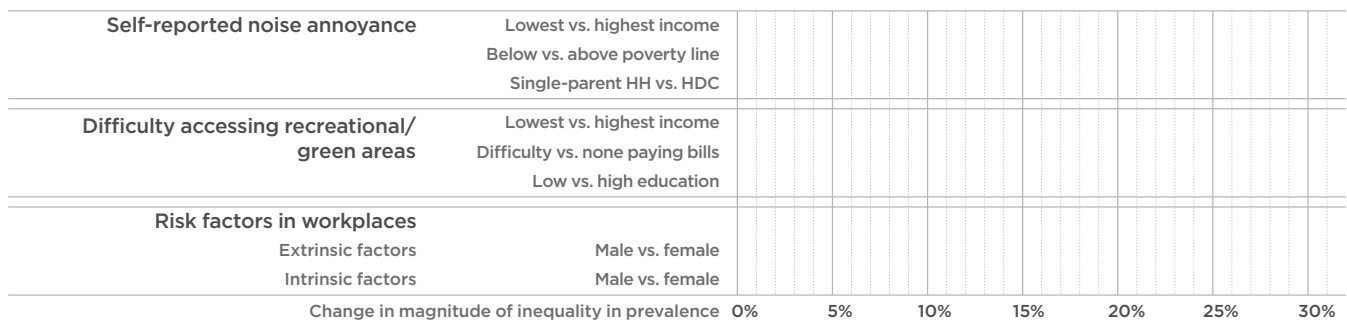
Azerbaijan - variation over time of environmental health inequalities



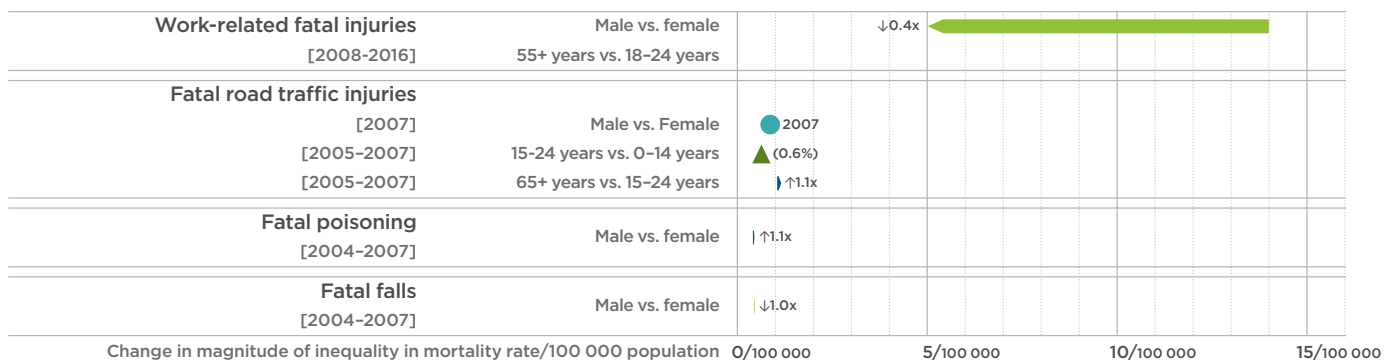
Housing and basic services



Urban and environmental exposures



Injuries

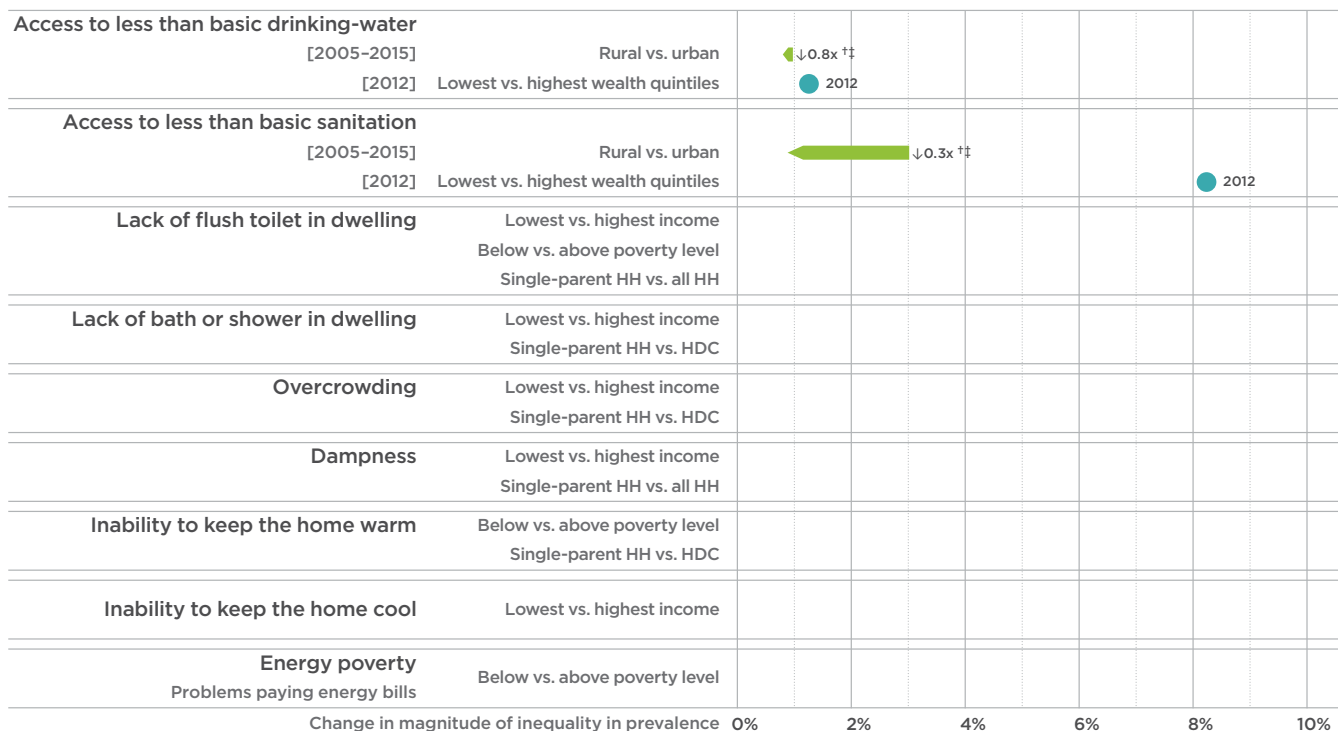


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

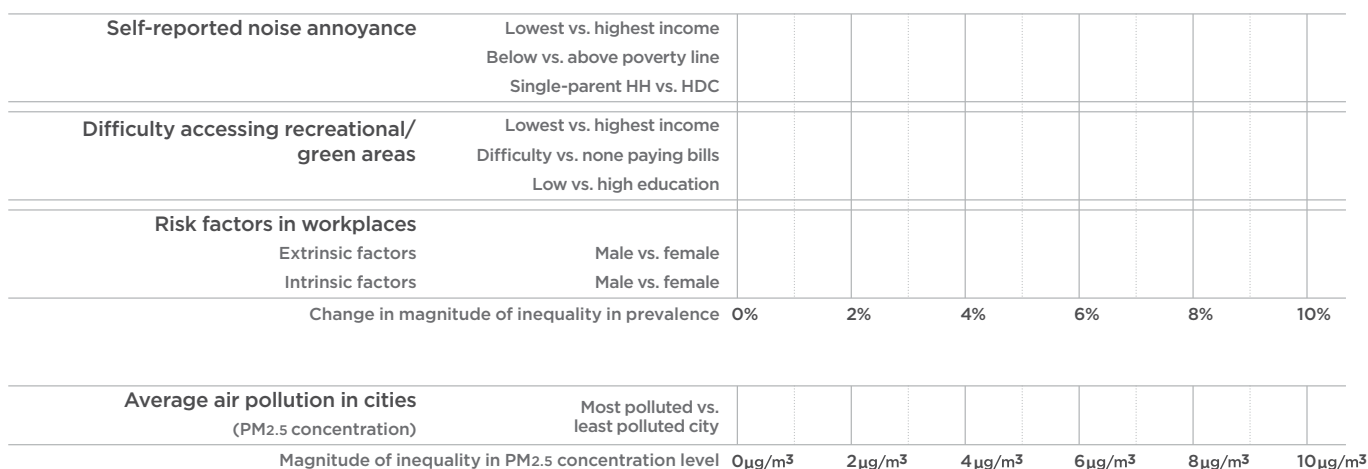
Belarus - variation over time of environmental health inequalities



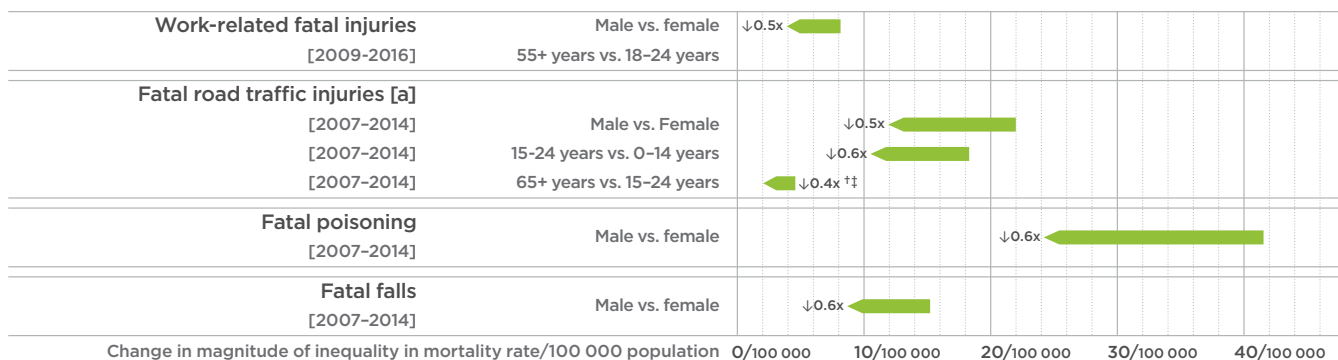
Housing and basic services



Urban and environmental exposures

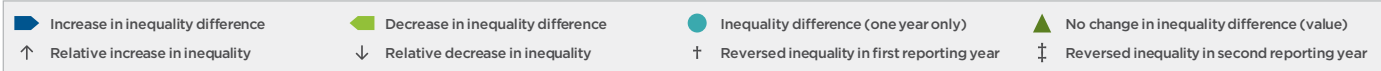


Injuries

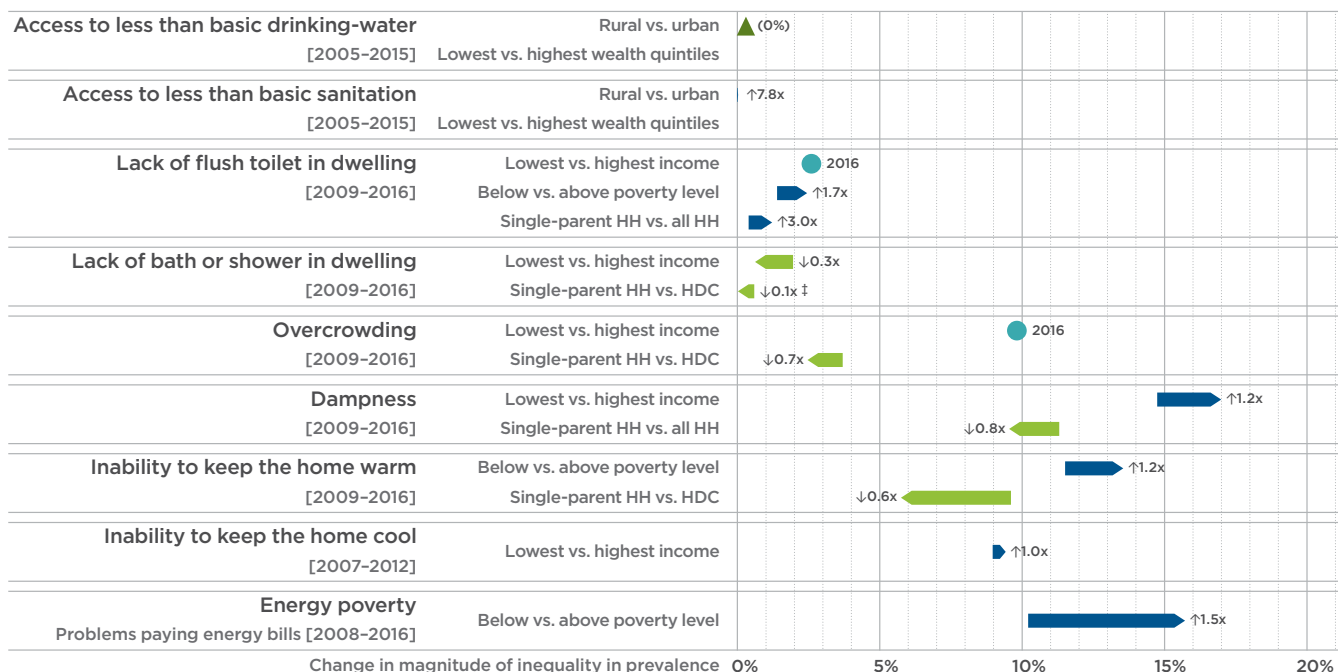


Notes: HDC - households with dependent children; HH - households.
[a] only data on mortality from all transport injuries were available.
An empty row indicates that no country data for that indicator were identified.

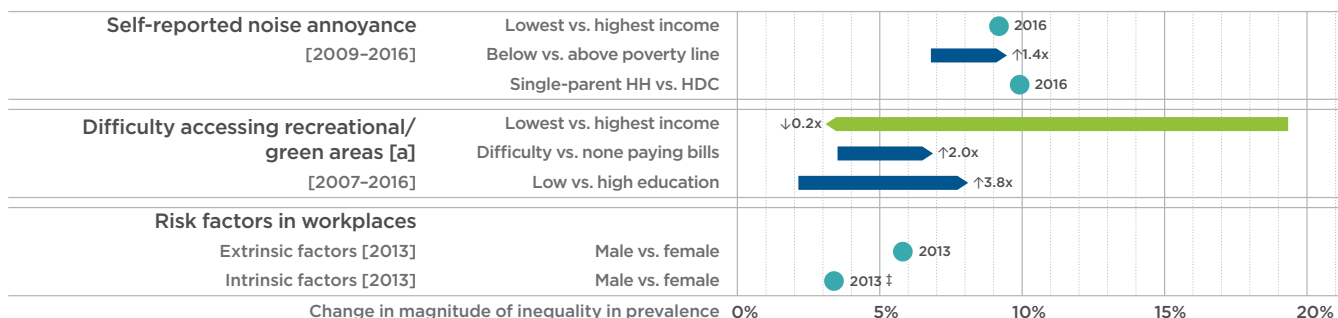
Belgium - variation over time of environmental health inequalities



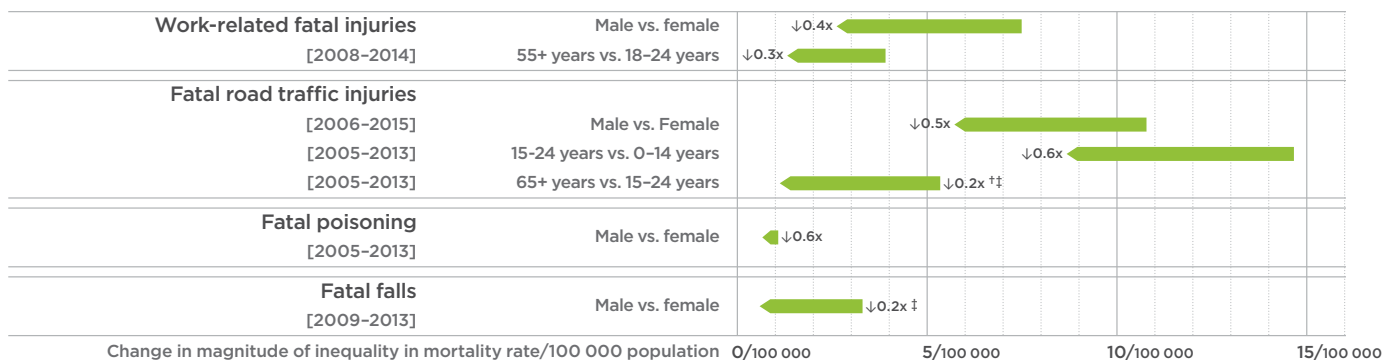
Housing and basic services



Urban and environmental exposures



Injuries

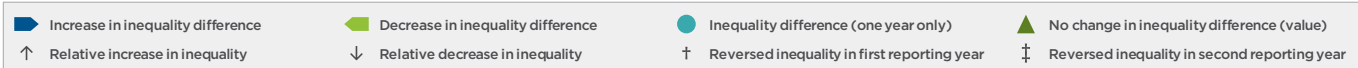


Notes: HDC - households with dependent children; HH - households.

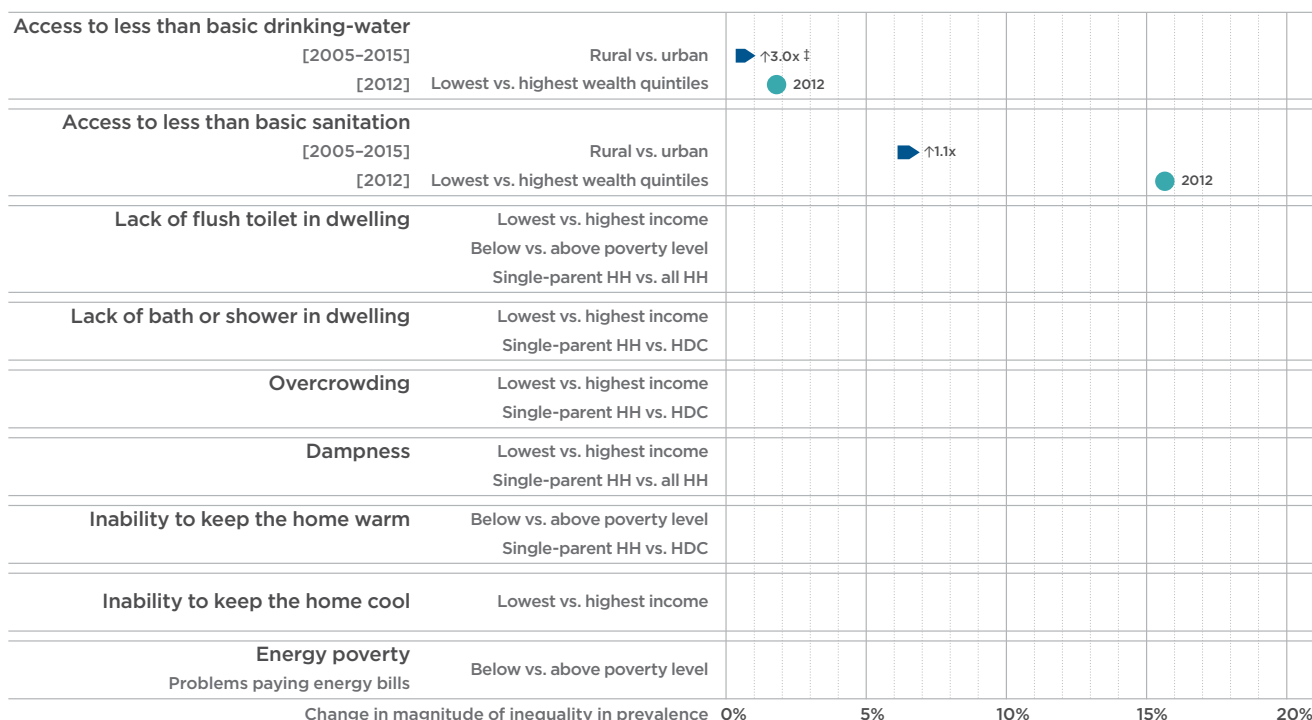
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

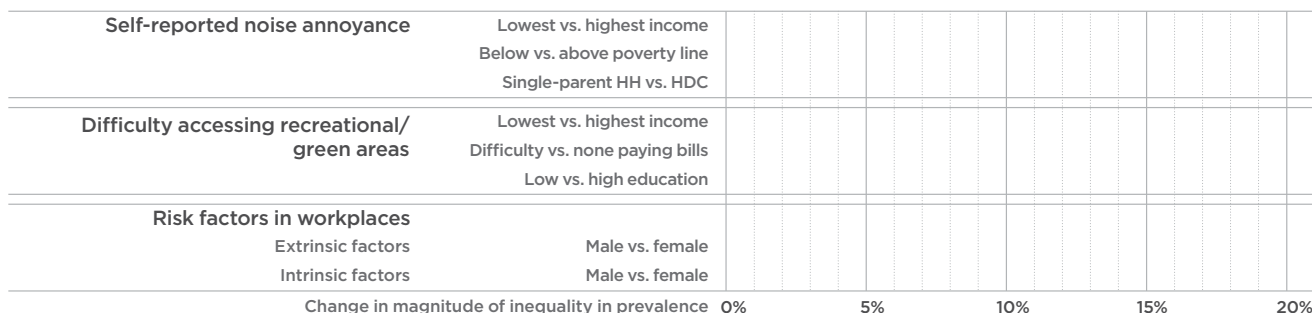
Bosnia and Herzegovina - variation over time of environmental health inequalities



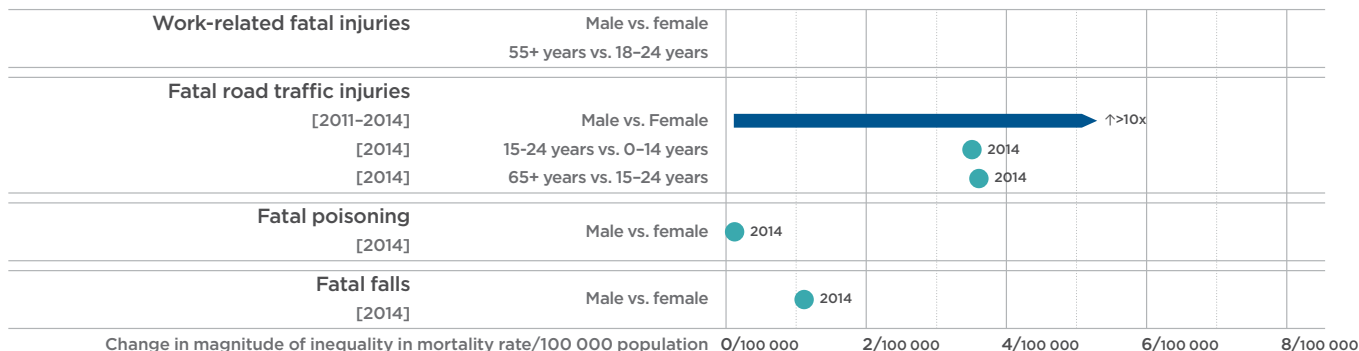
Housing and basic services



Urban and environmental exposures

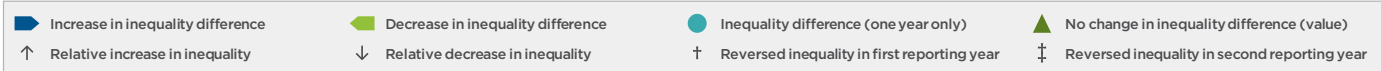


Injuries

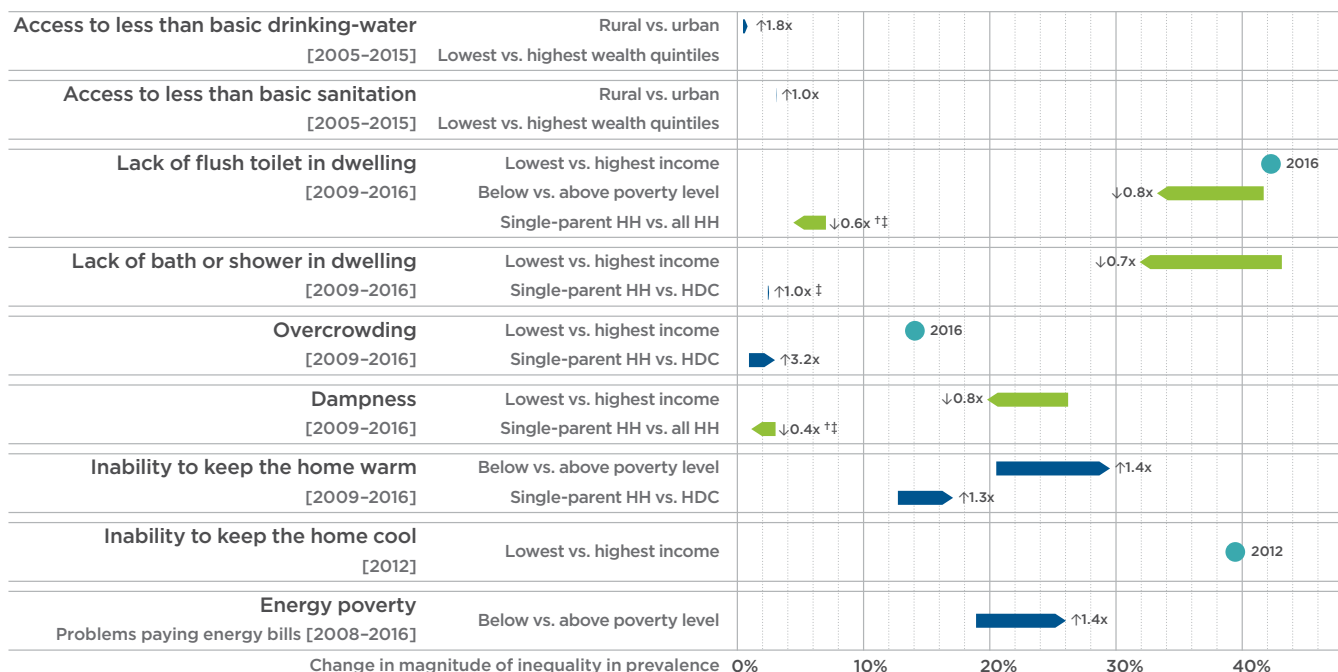


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

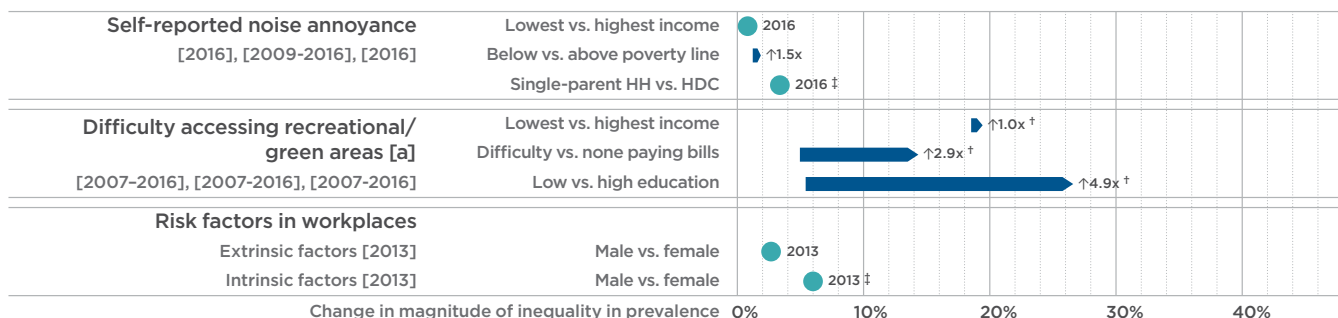
Bulgaria - variation over time of environmental health inequalities



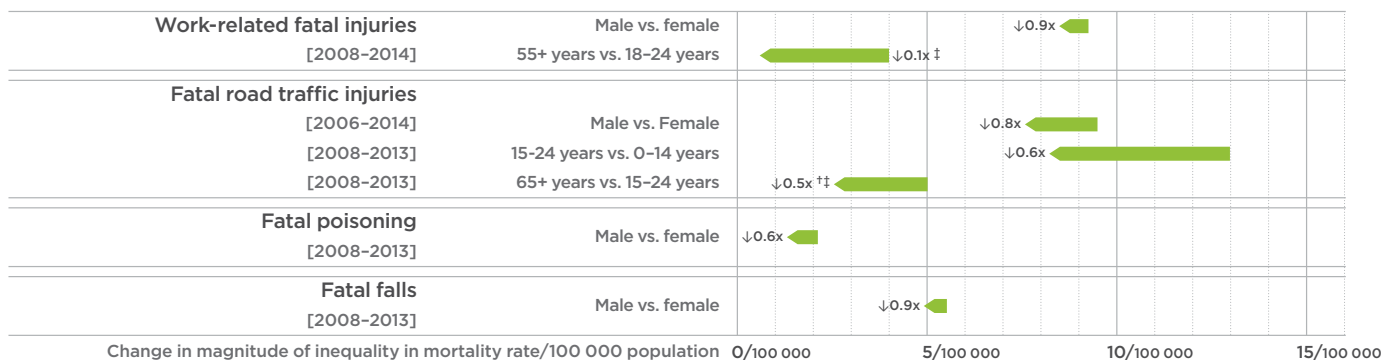
Housing and basic services



Urban and environmental exposures



Injuries

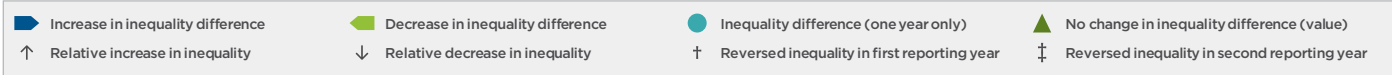


Notes: HDC - households with dependent children; HH - households.

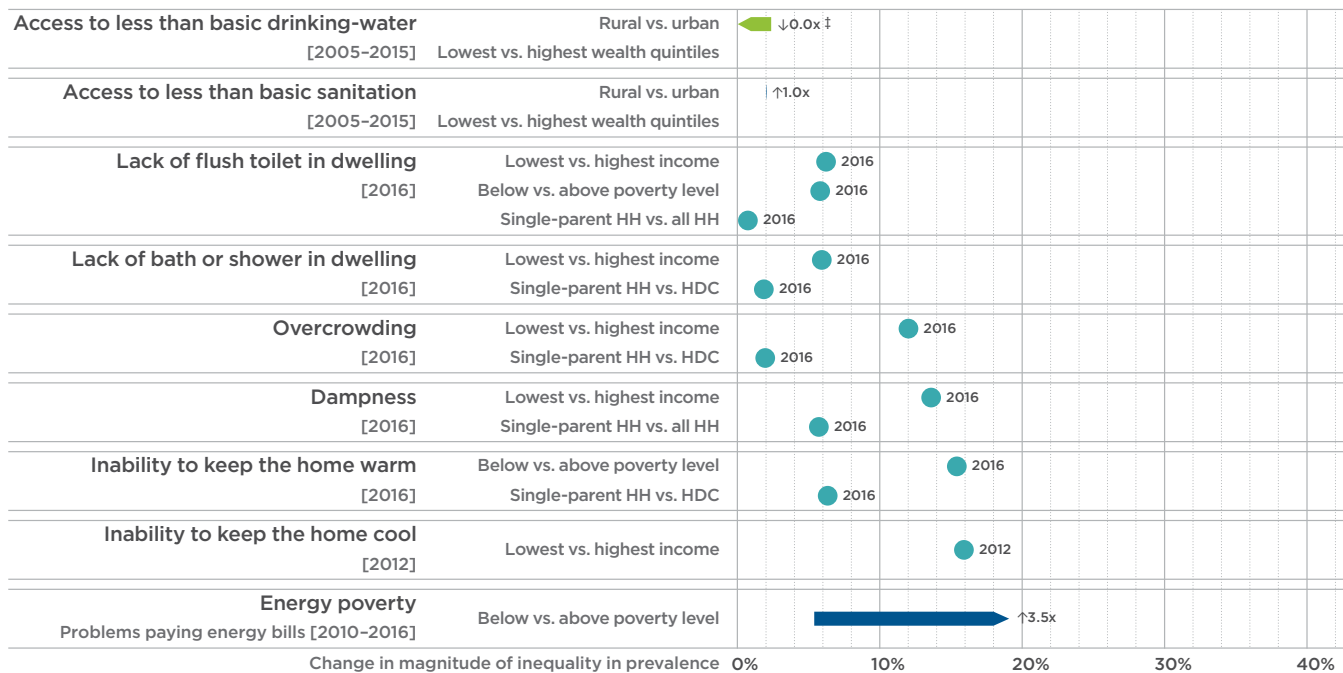
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

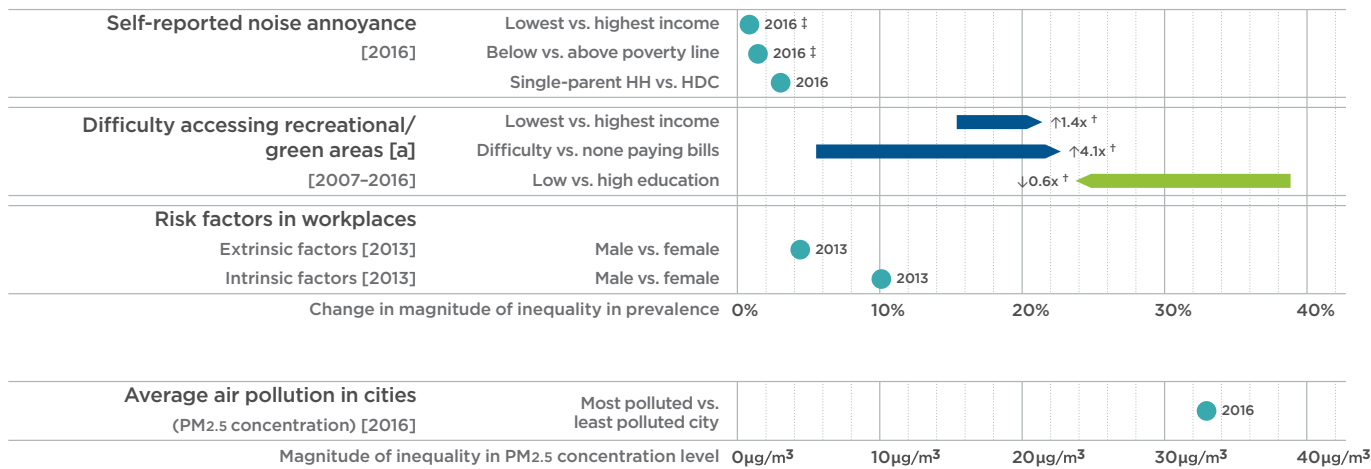
Croatia - variation over time of environmental health inequalities



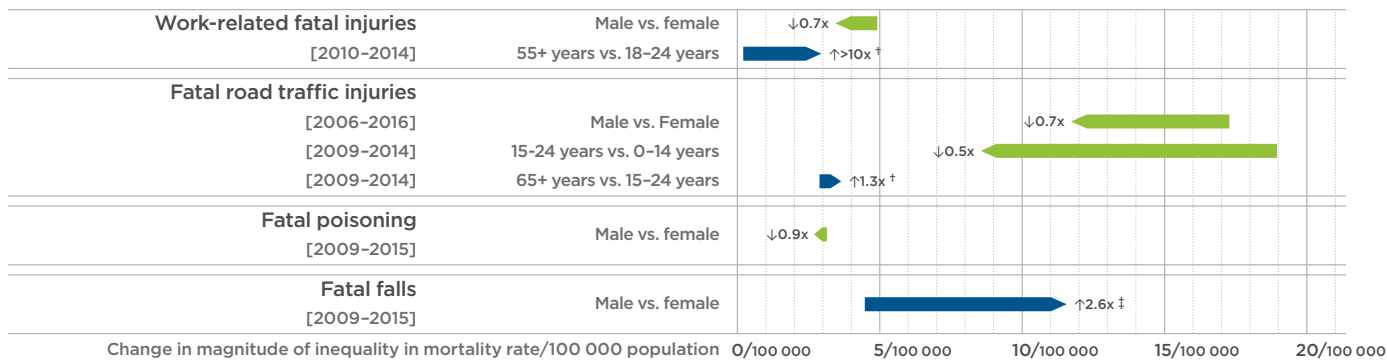
Housing and basic services



Urban and environmental exposures



Injuries

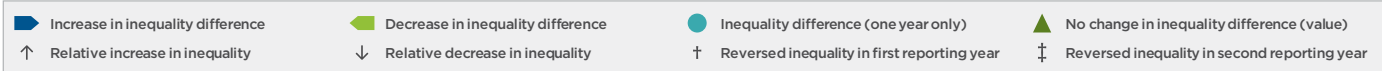


Notes: HDC - households with dependent children; HH - households.

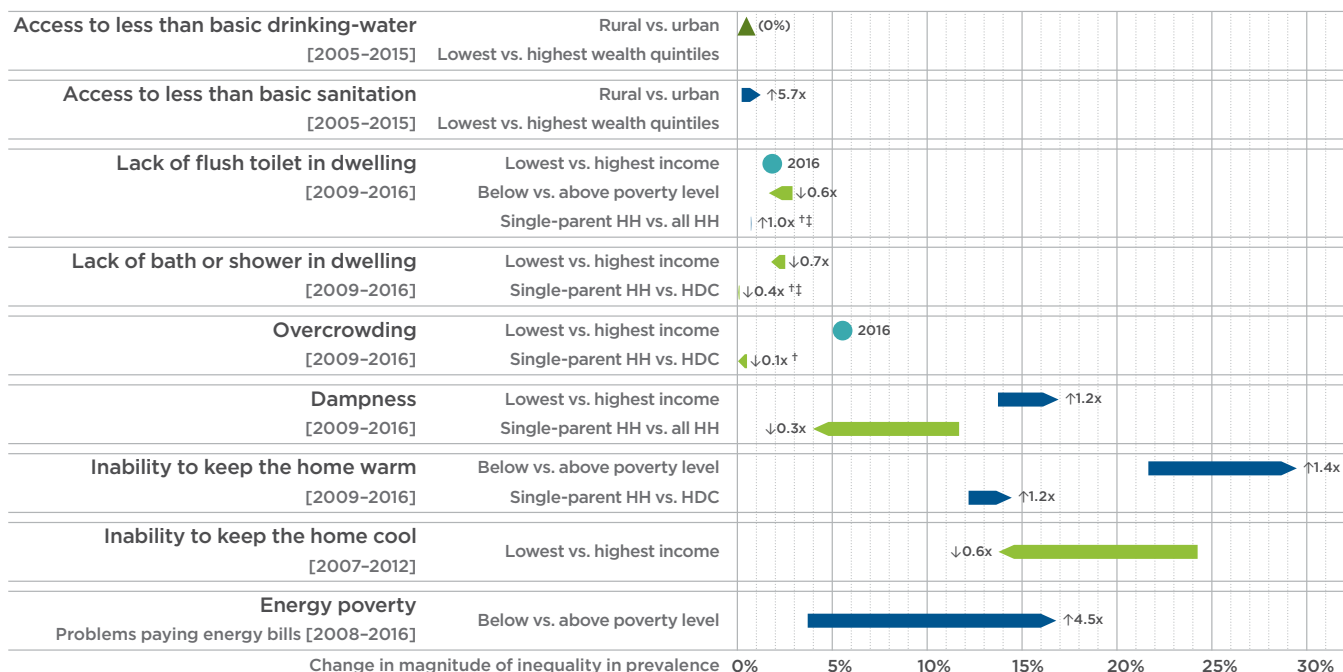
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

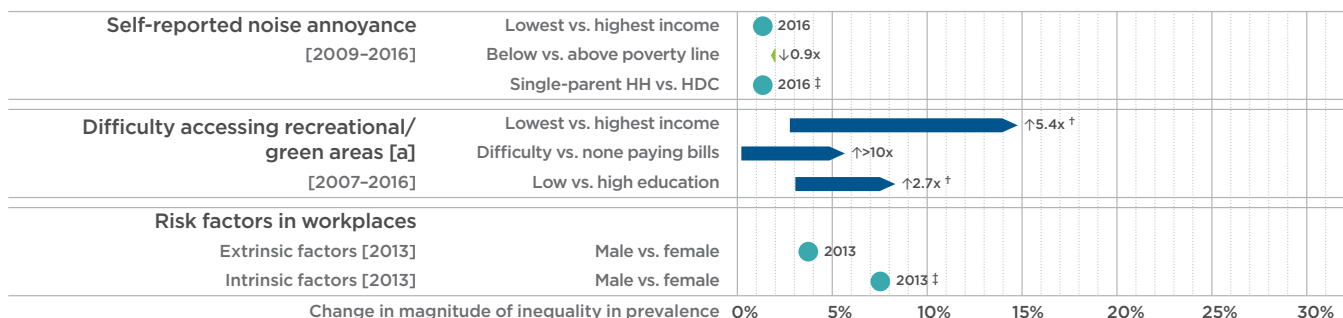
Cyprus - variation over time of environmental health inequalities



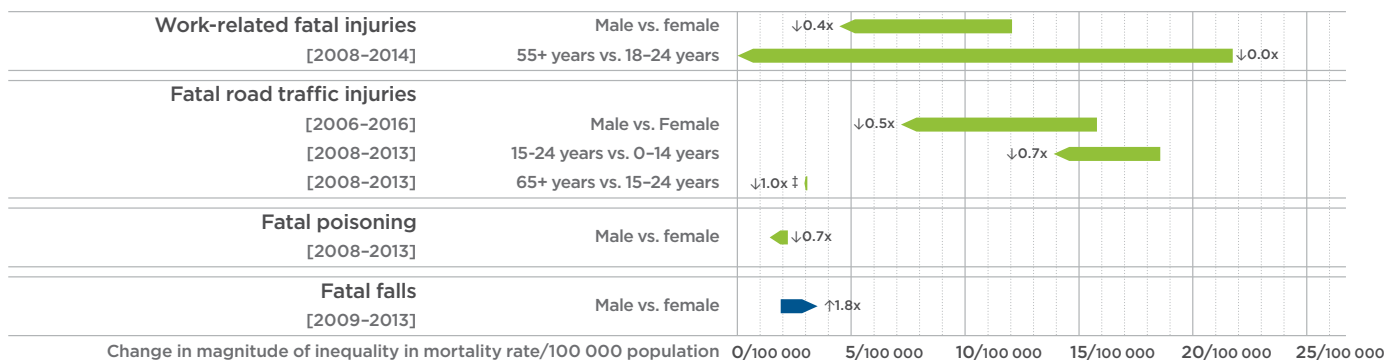
Housing and basic services



Urban and environmental exposures



Injuries



Notes: HDC - households with dependent children; HH - households.

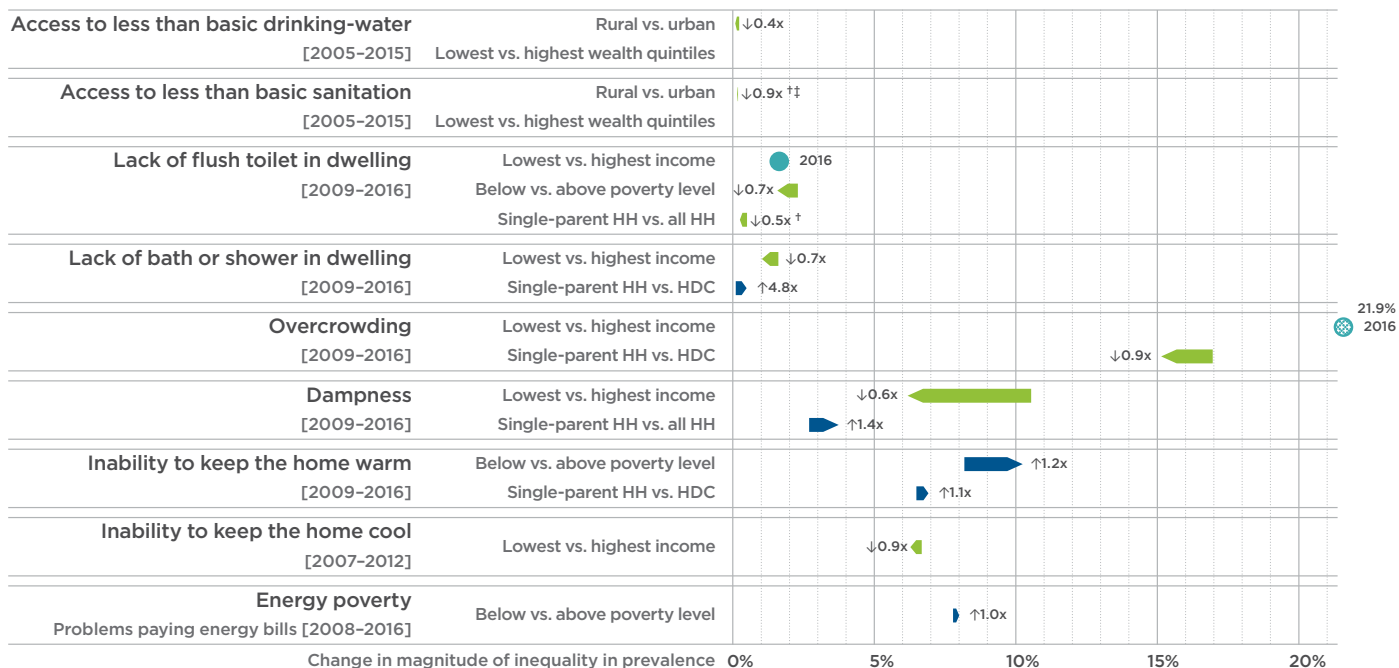
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

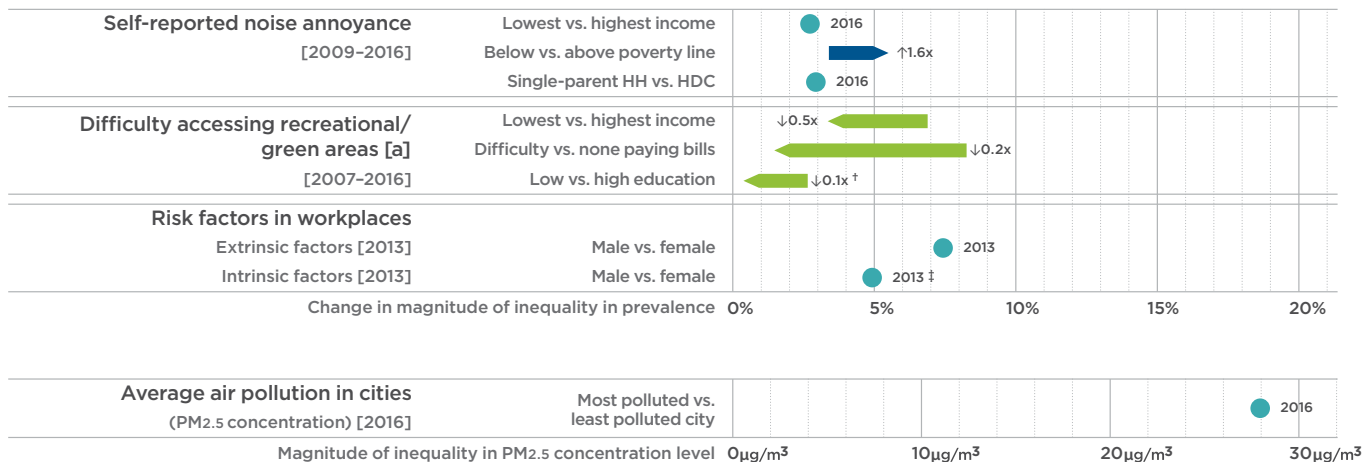
Czechia - variation over time of environmental health inequalities



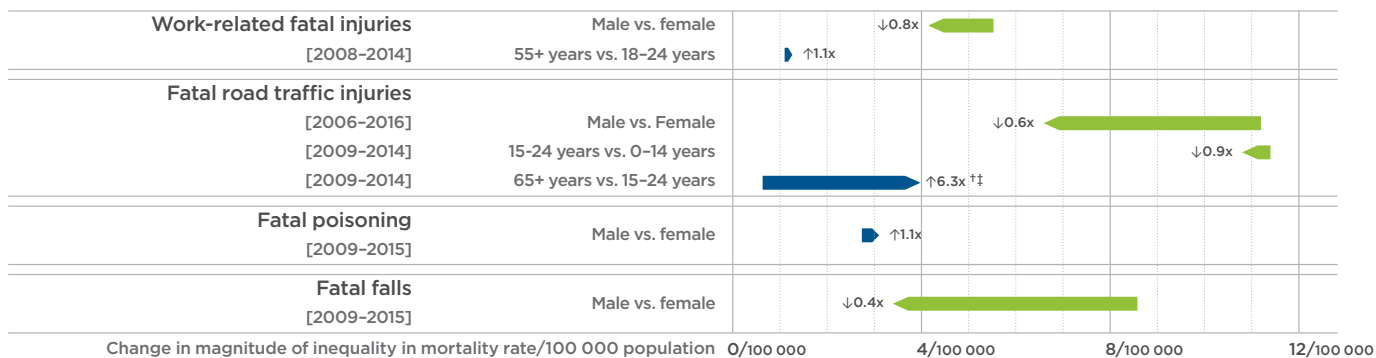
Housing and basic services



Urban and environmental exposures



Injuries

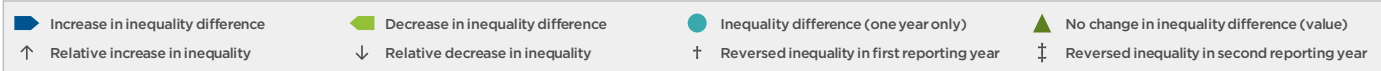


Notes: HDC – households with dependent children; HH – households.

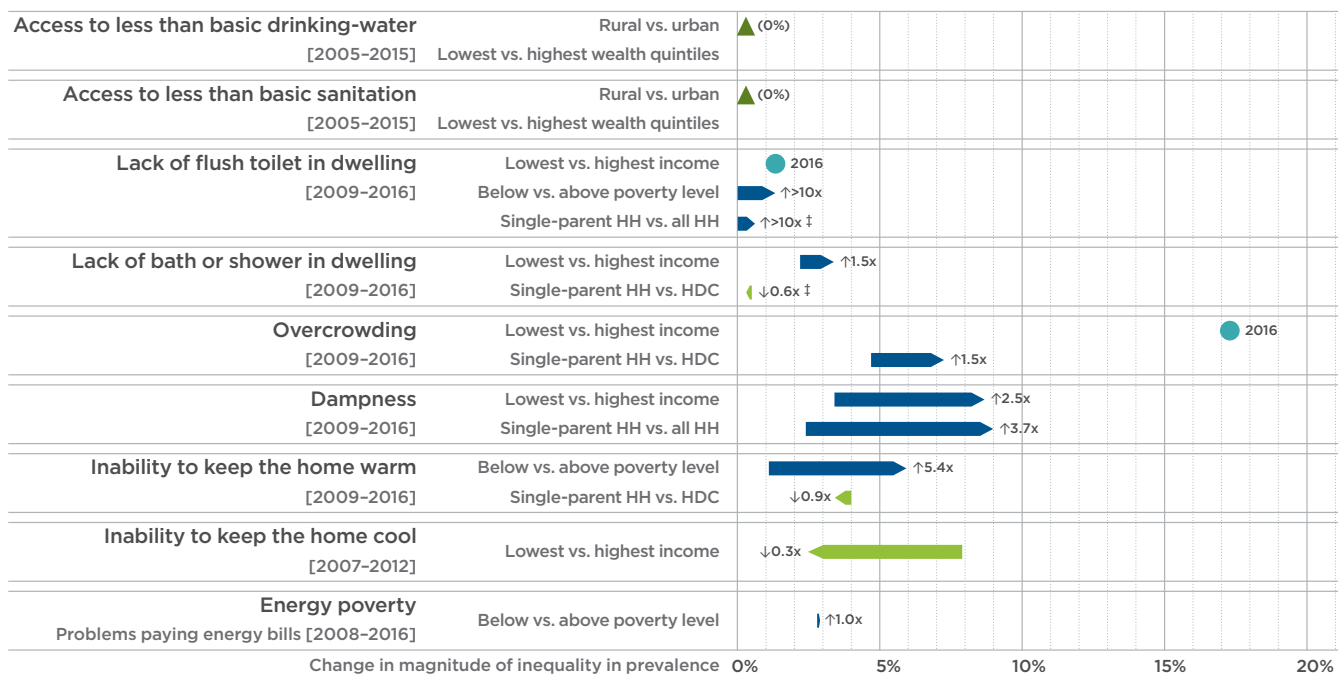
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

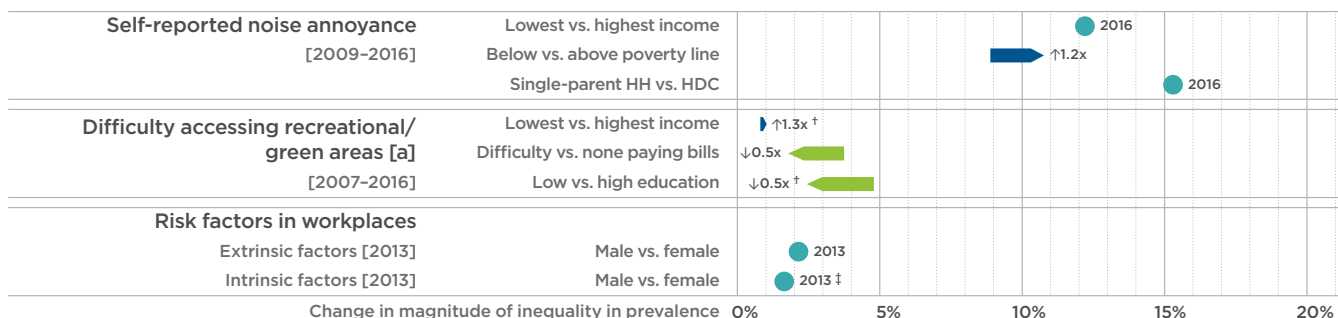
Denmark - variation over time of environmental health inequalities



Housing and basic services



Urban and environmental exposures



Injuries

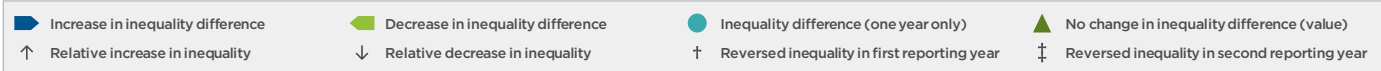


Notes: HDC - households with dependent children; HH - households.

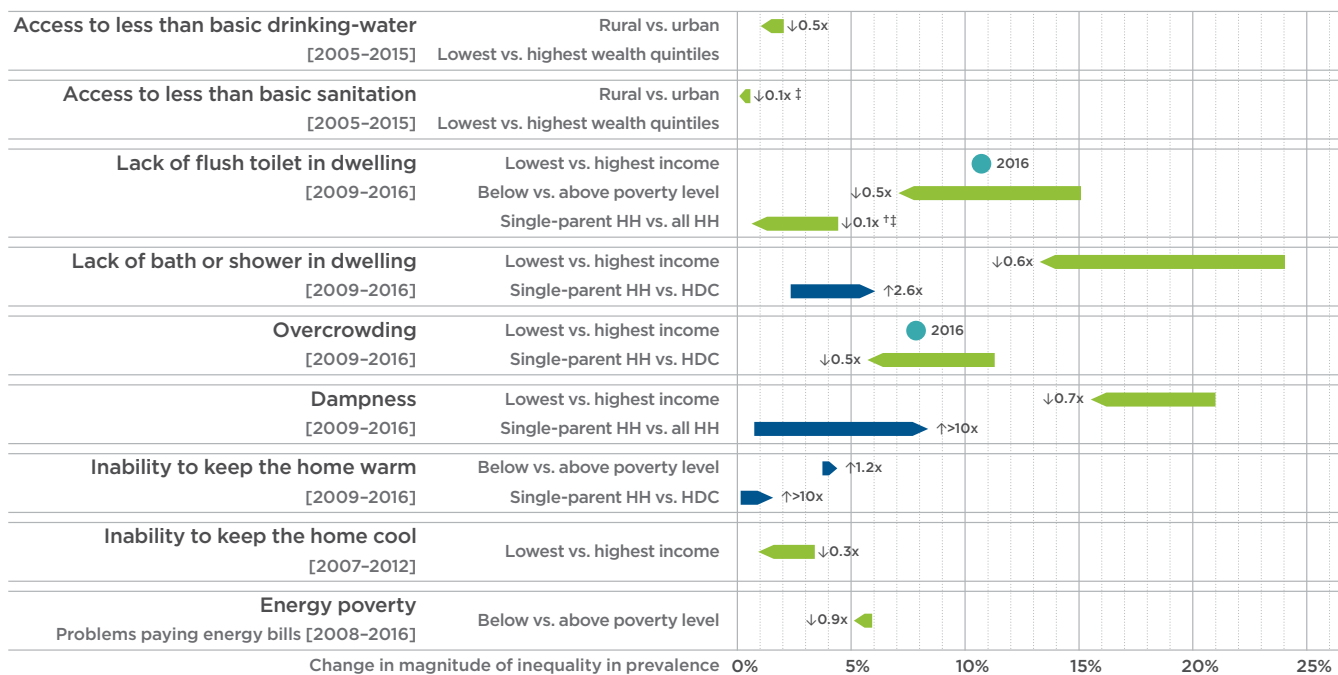
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

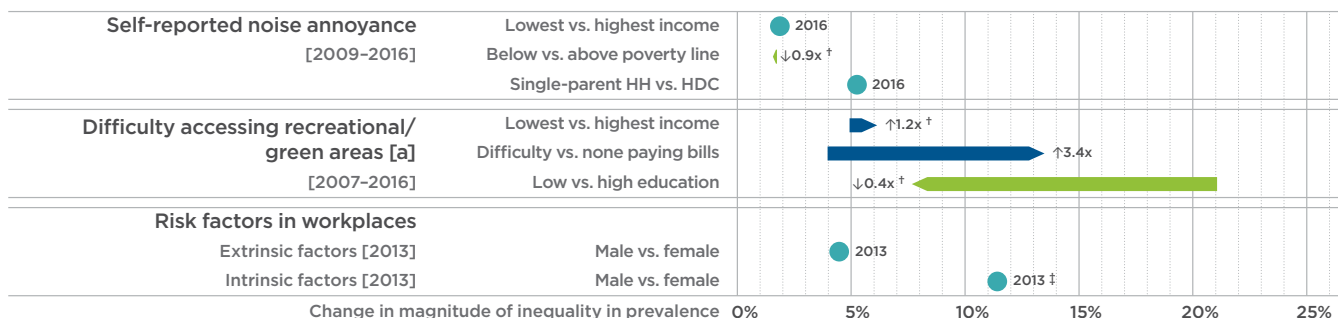
Estonia - variation over time of environmental health inequalities



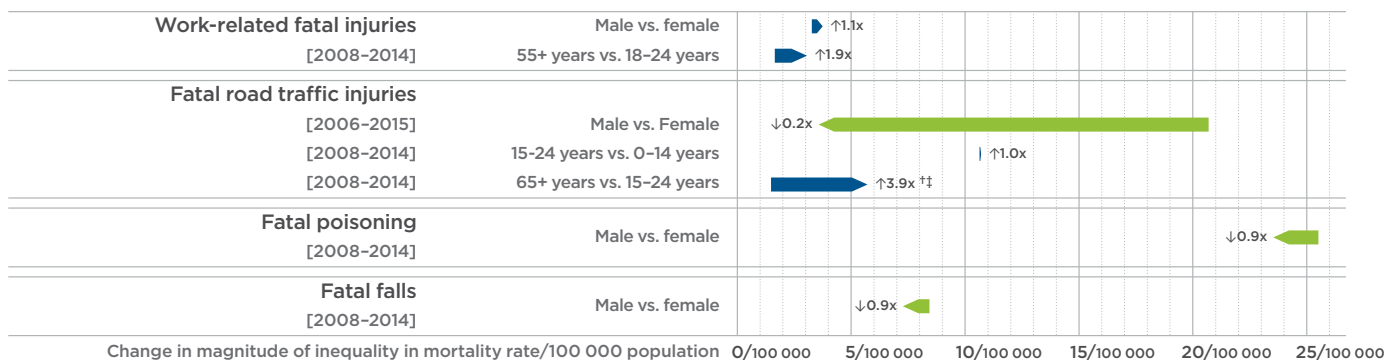
Housing and basic services



Urban and environmental exposures

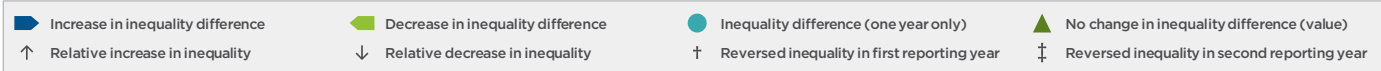


Injuries

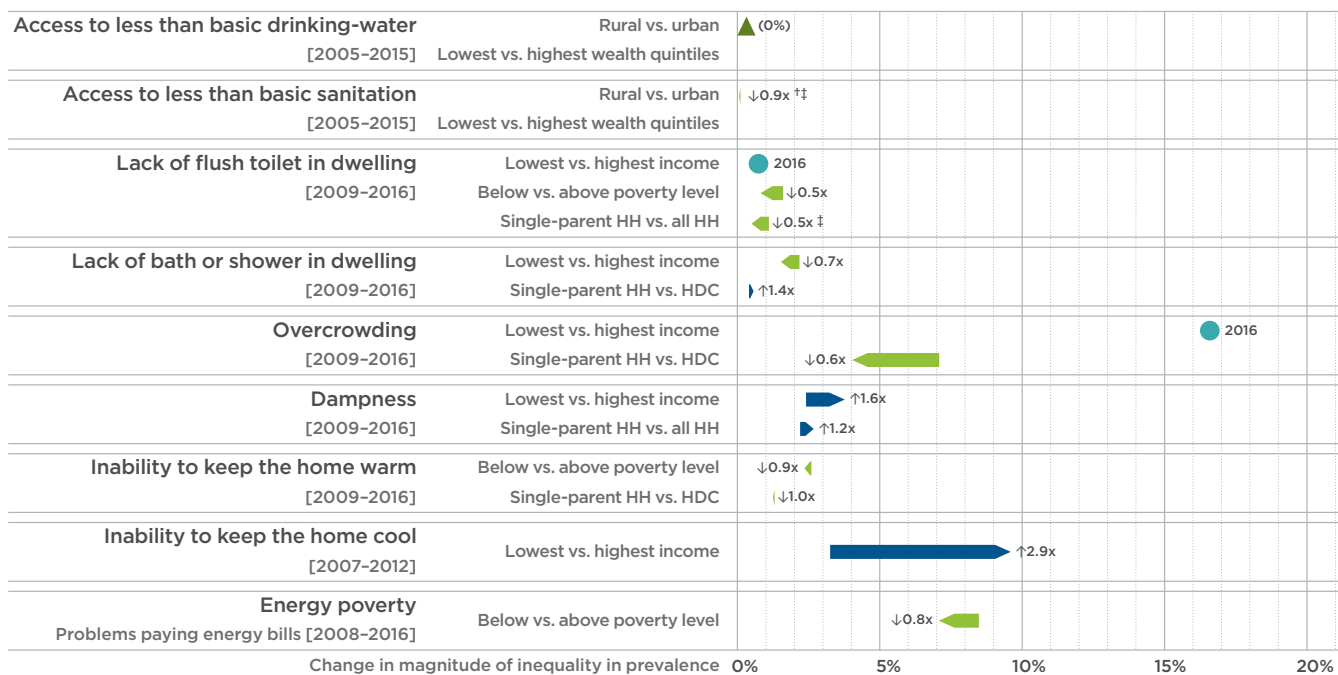


Notes: HDC - households with dependent children; HH - households.
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.
An empty row indicates that no country data for that indicator were identified.

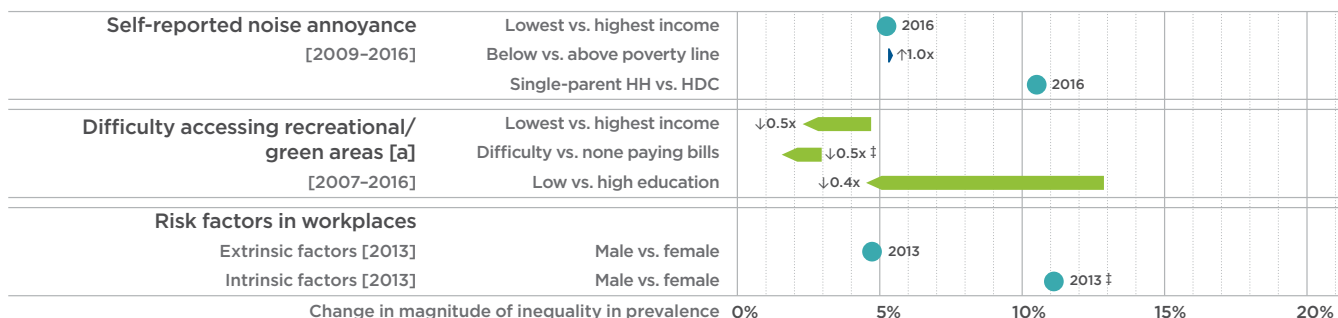
Finland - variation over time of environmental health inequalities



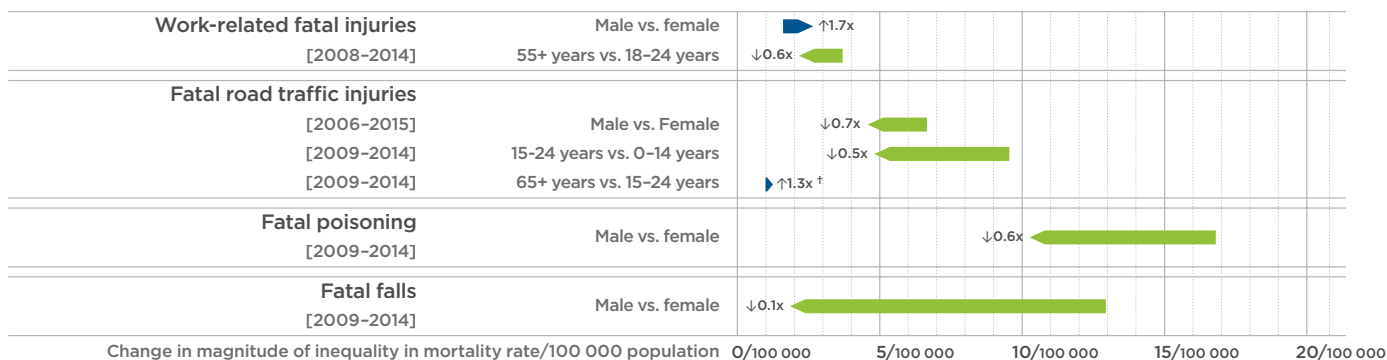
Housing and basic services



Urban and environmental exposures



Injuries

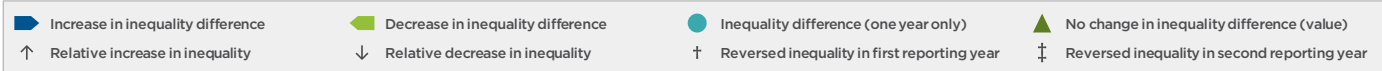


Notes: HDC - households with dependent children; HH - households.

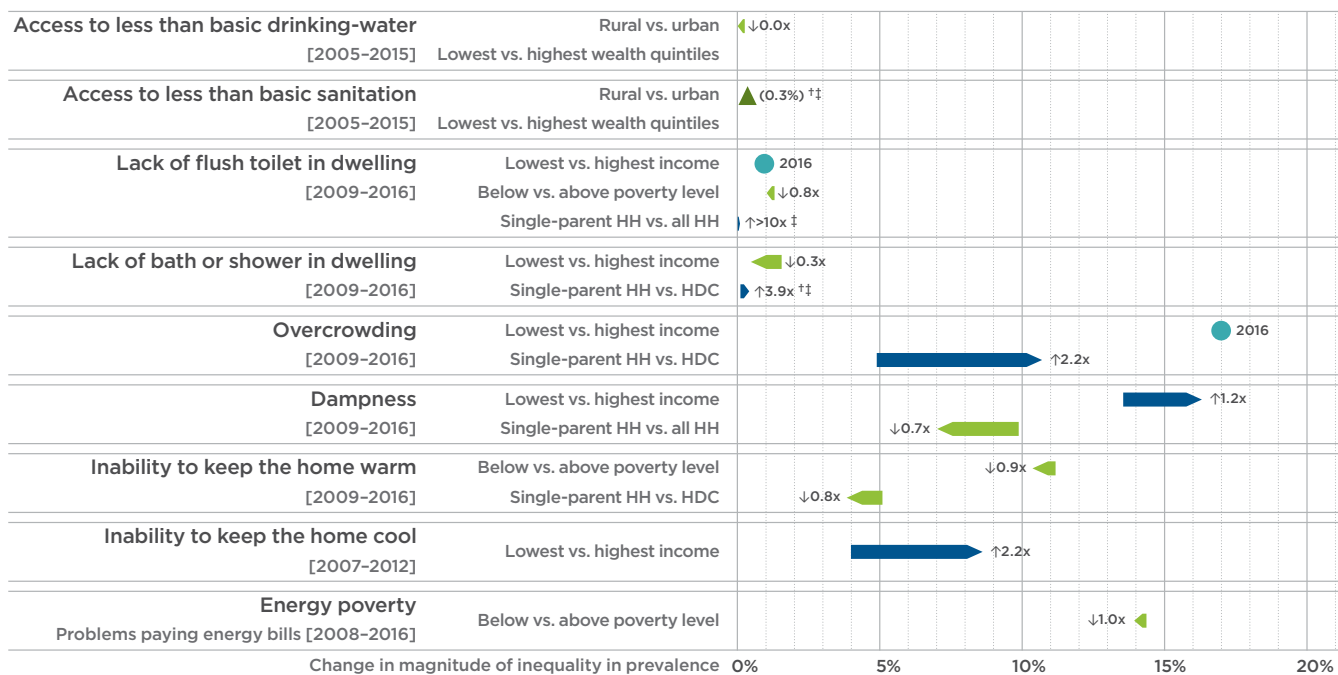
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

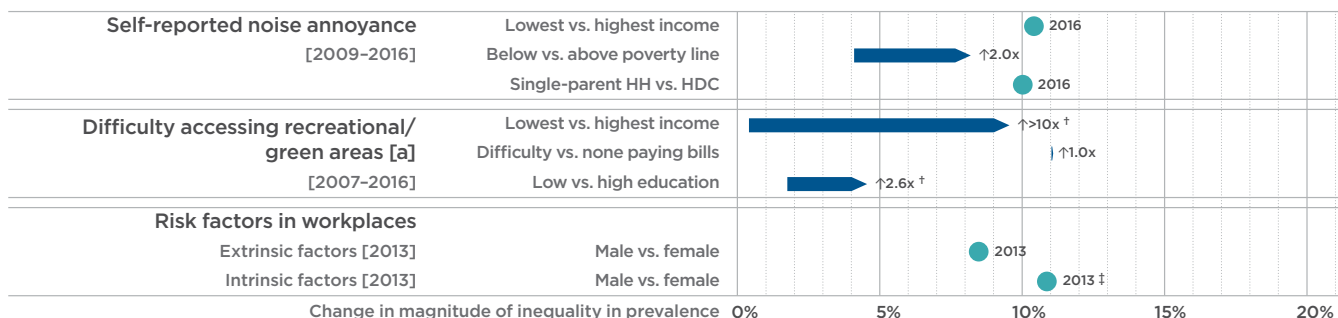
France - variation over time of environmental health inequalities



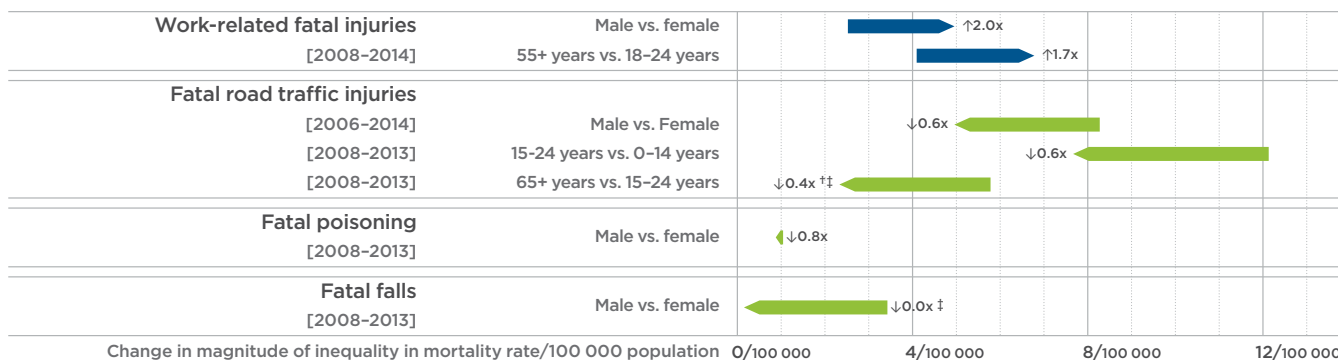
Housing and basic services



Urban and environmental exposures



Injuries

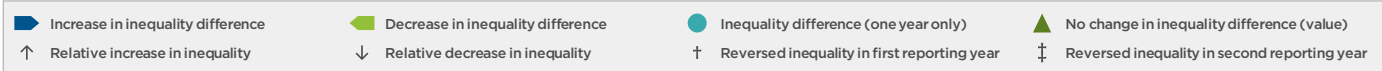


Notes: HDC - households with dependent children; HH - households.

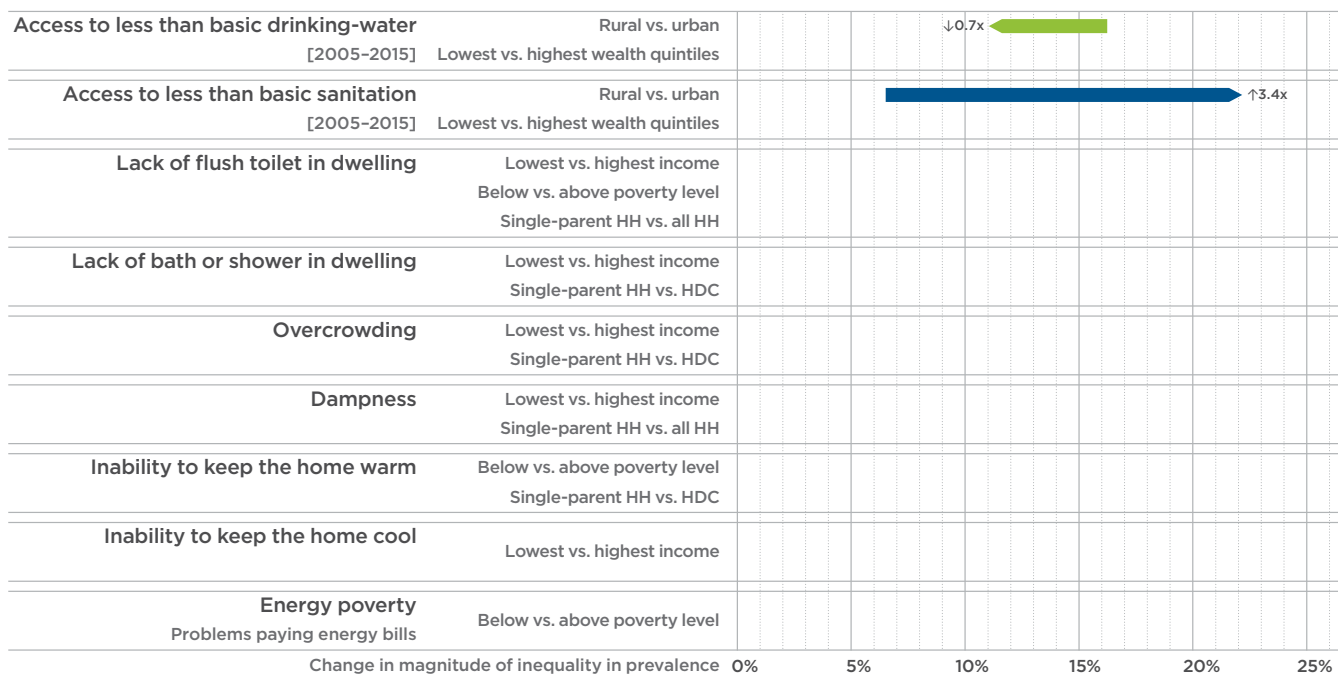
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

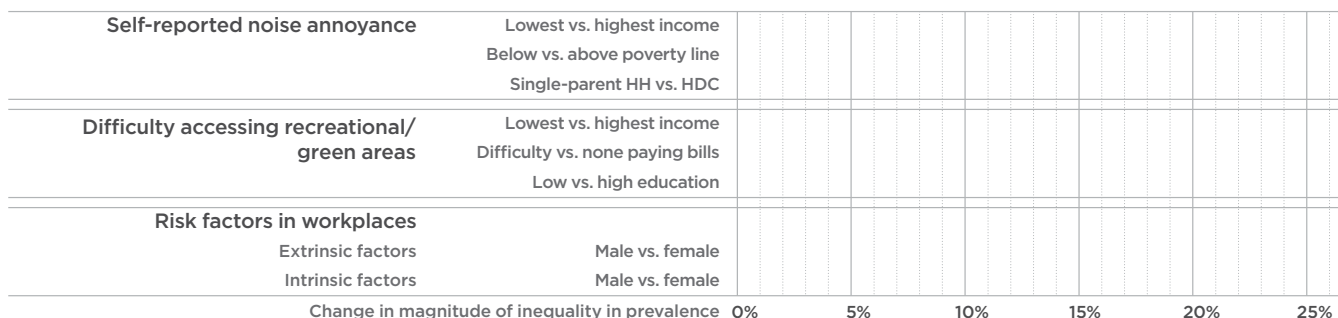
Georgia - variation over time of environmental health inequalities



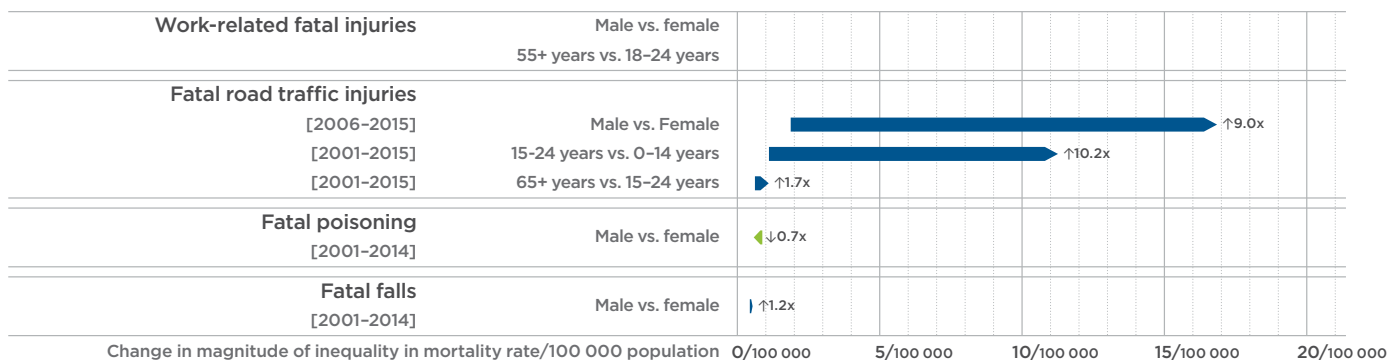
Housing and basic services



Urban and environmental exposures

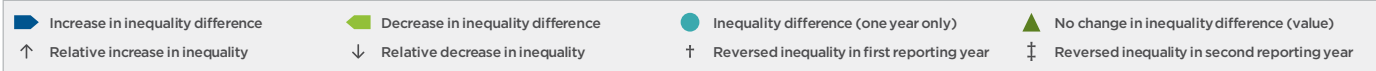


Injuries

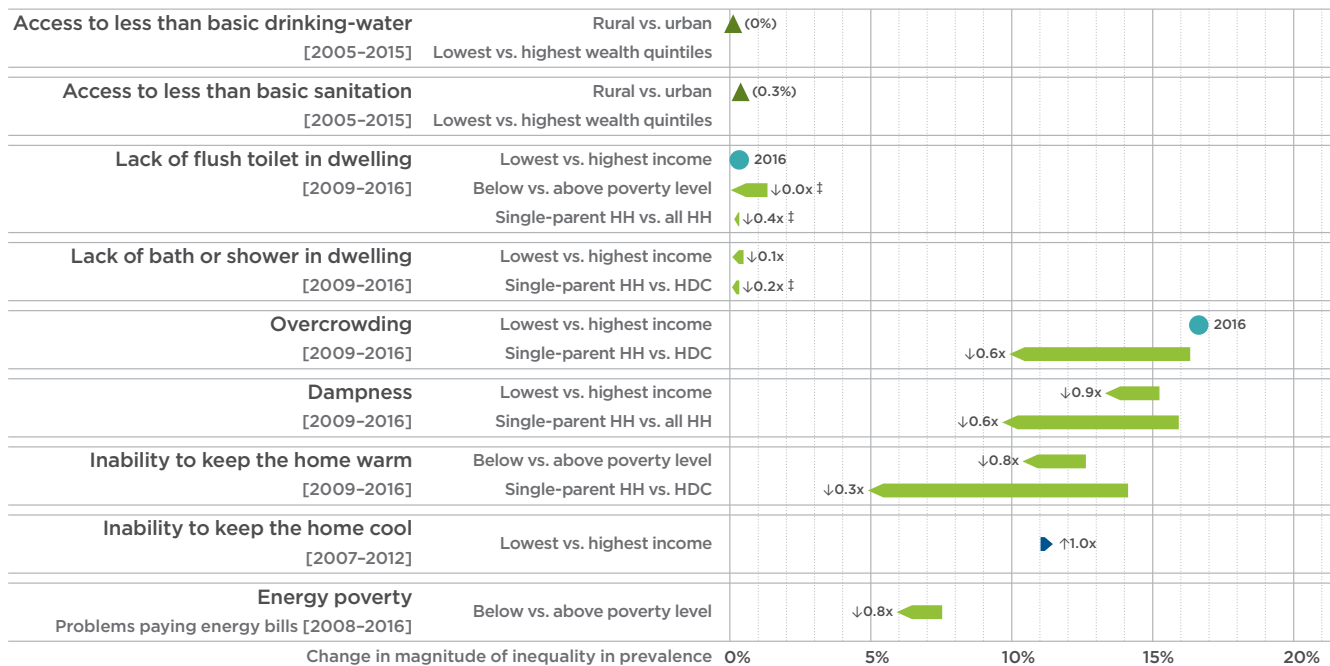


Notes: HDC - households with dependent children; HH - households. An empty row indicates that no country data for that indicator were identified.

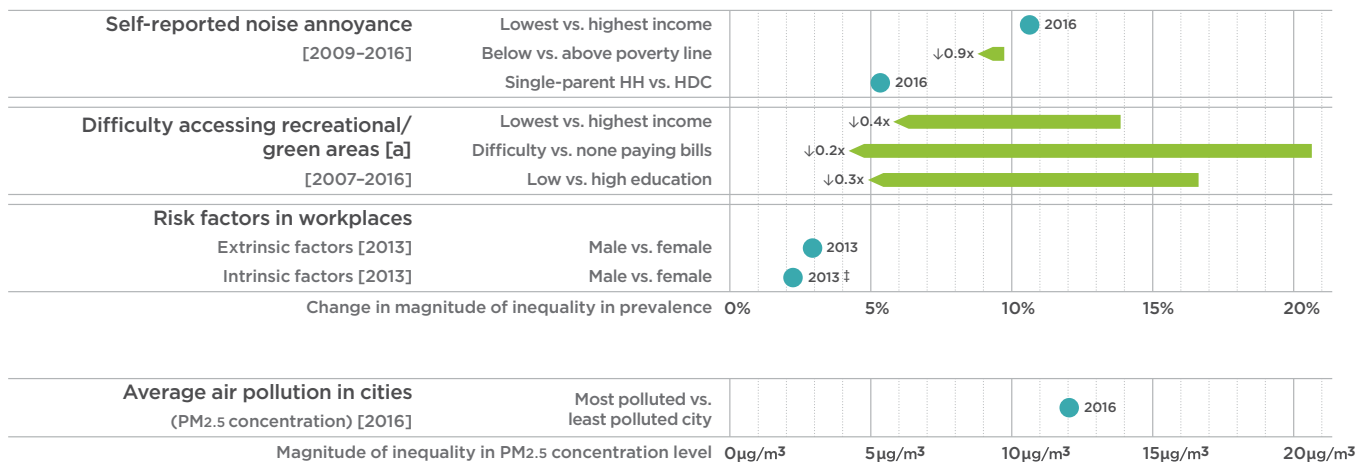
Germany - variation over time of environmental health inequalities



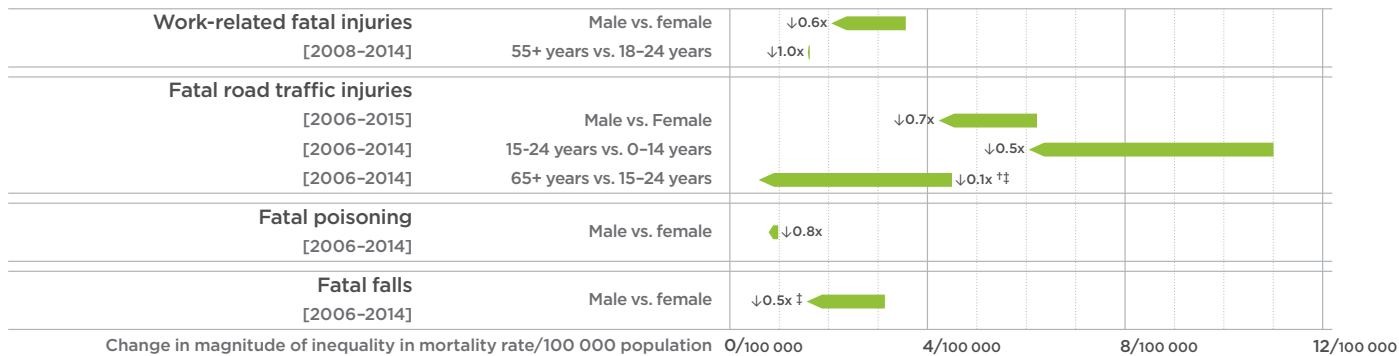
Housing and basic services



Urban and environmental exposures



Injuries

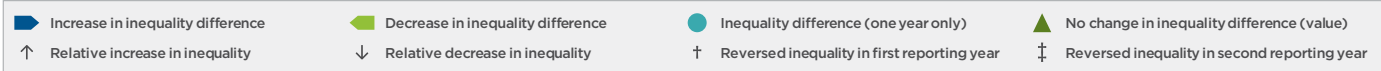


Notes: HDC - households with dependent children; HH - households.

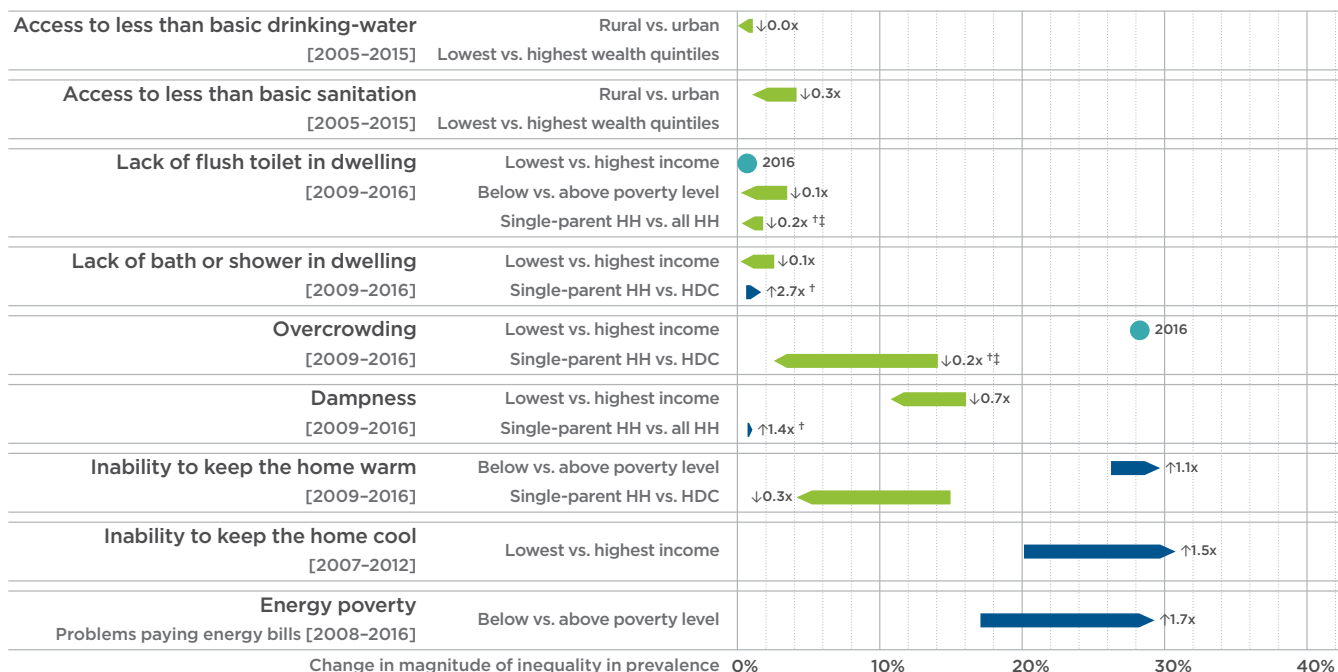
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

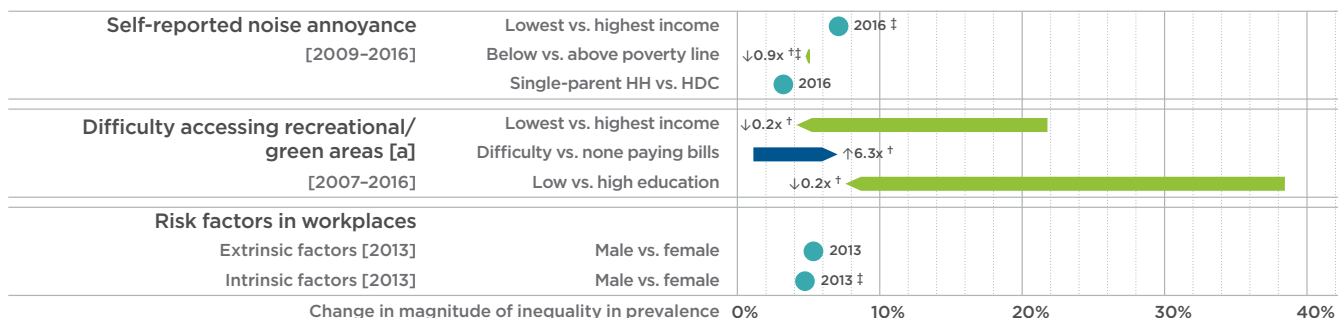
Greece - variation over time of environmental health inequalities



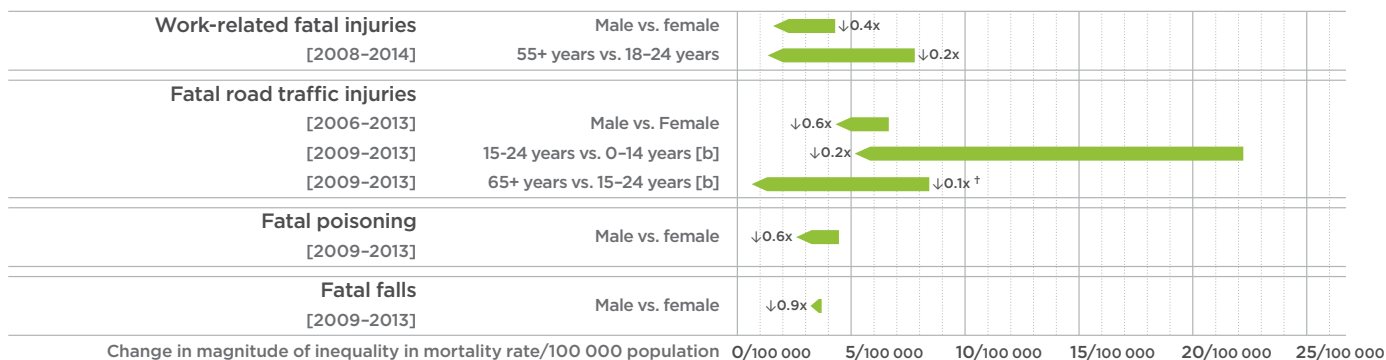
Housing and basic services



Urban and environmental exposures



Injuries



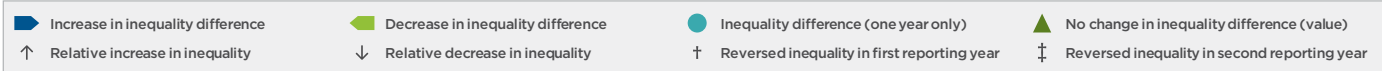
Notes: HDC - households with dependent children; HH - households.

[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

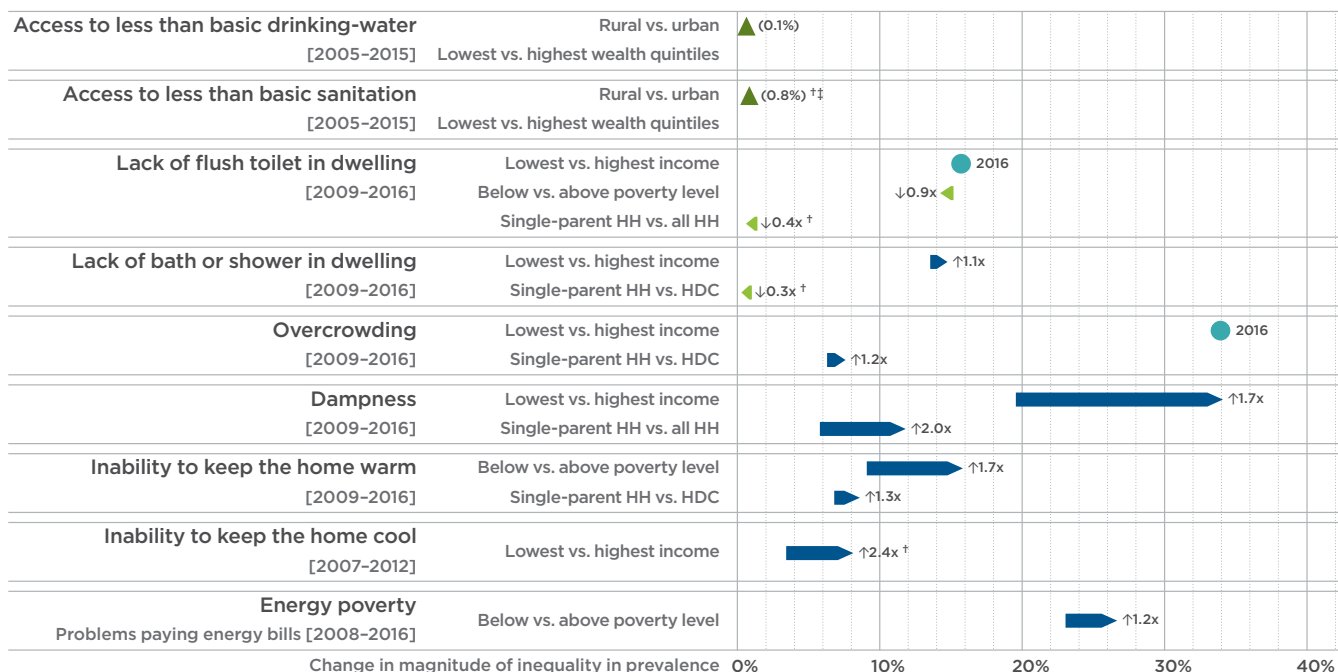
[b] first year of reporting represents fatal transport injuries.

An empty row indicates that no country data for that indicator were identified.

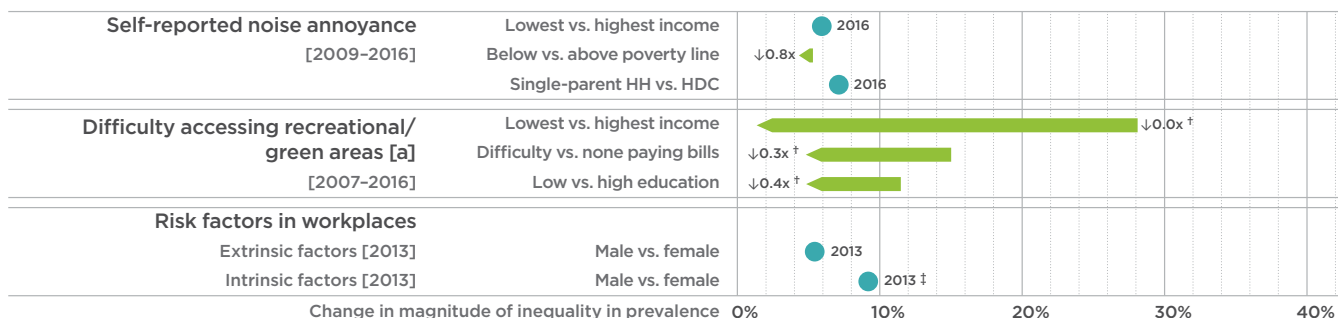
Hungary - variation over time of environmental health inequalities



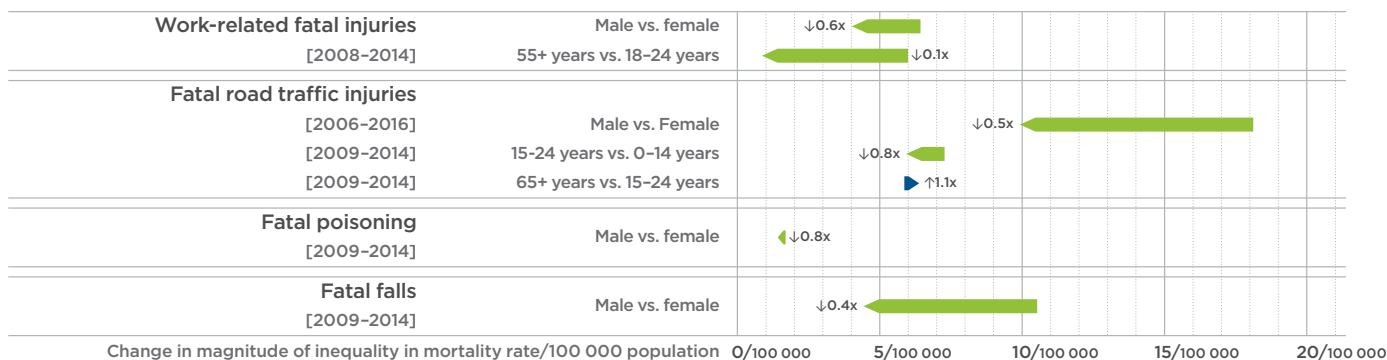
Housing and basic services



Urban and environmental exposures



Injuries

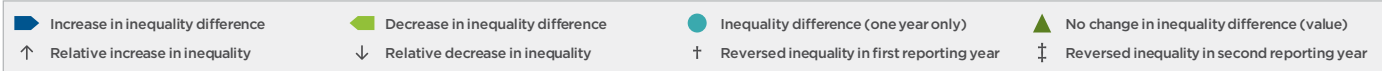


Notes: HDC - households with dependent children; HH - households.

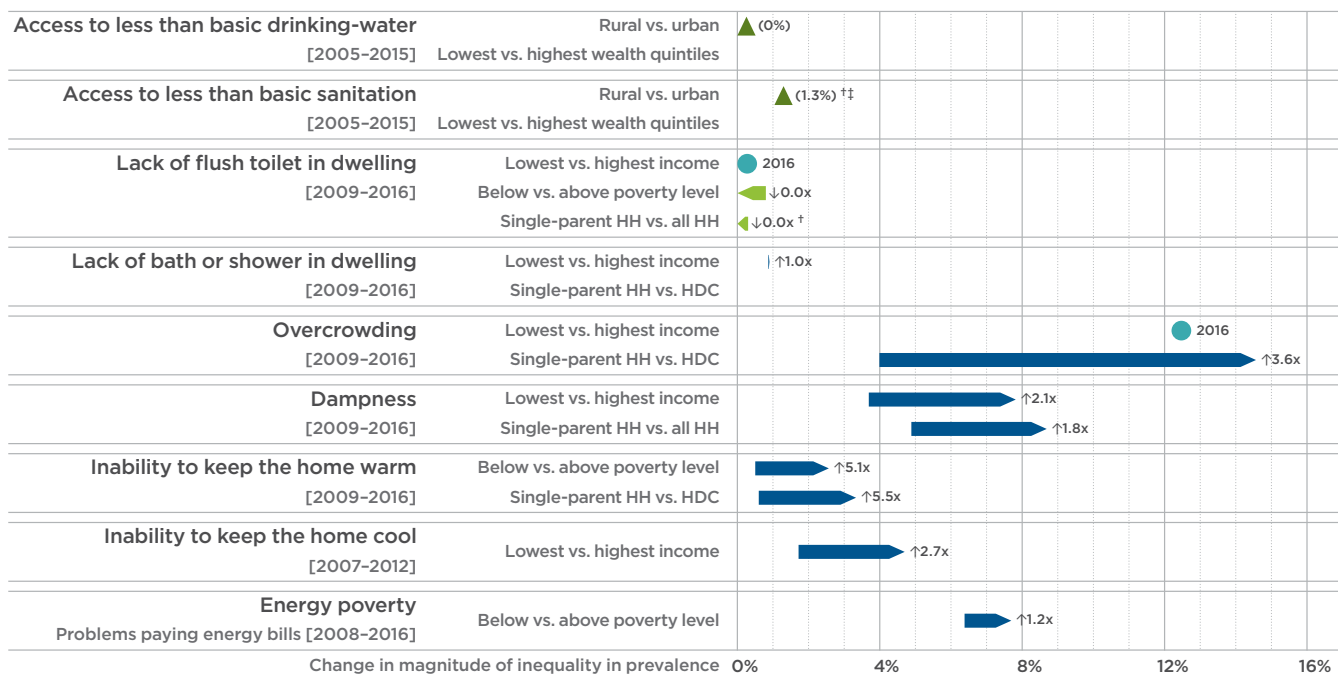
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

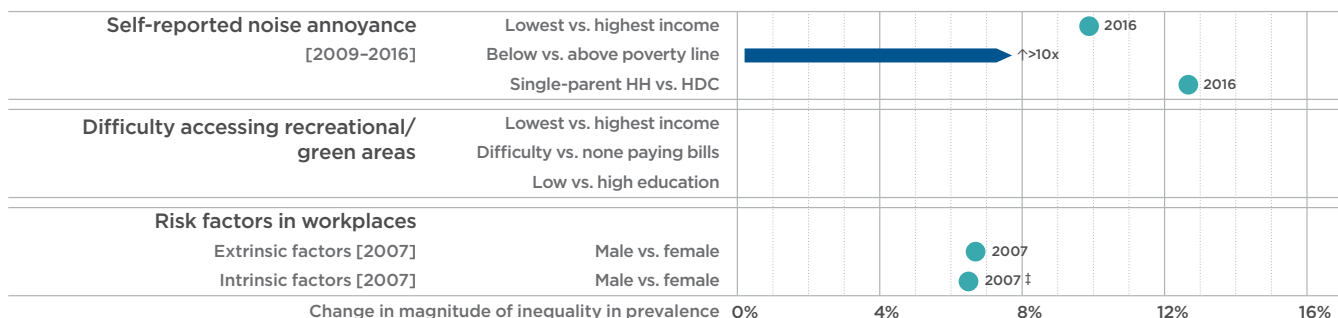
Iceland - variation over time of environmental health inequalities



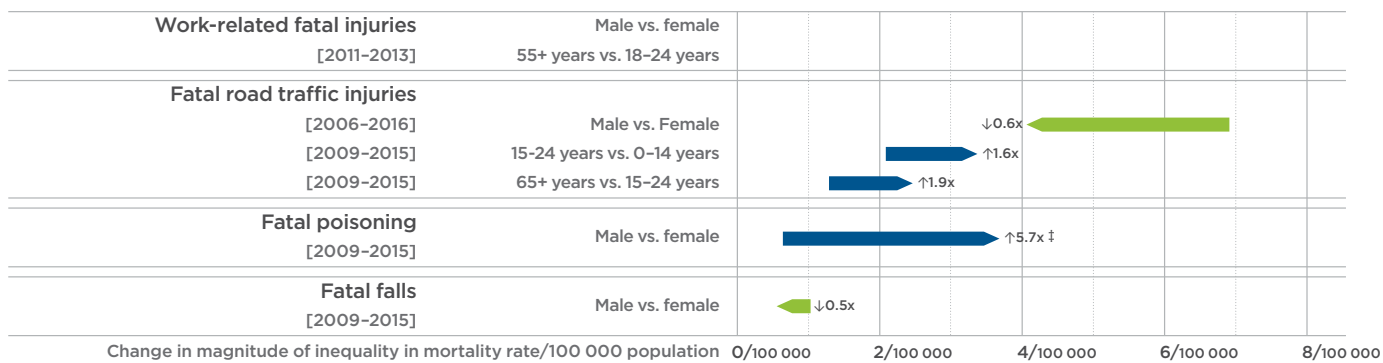
Housing and basic services



Urban and environmental exposures

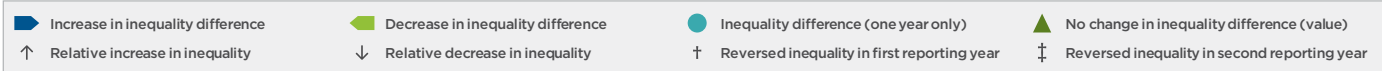


Injuries

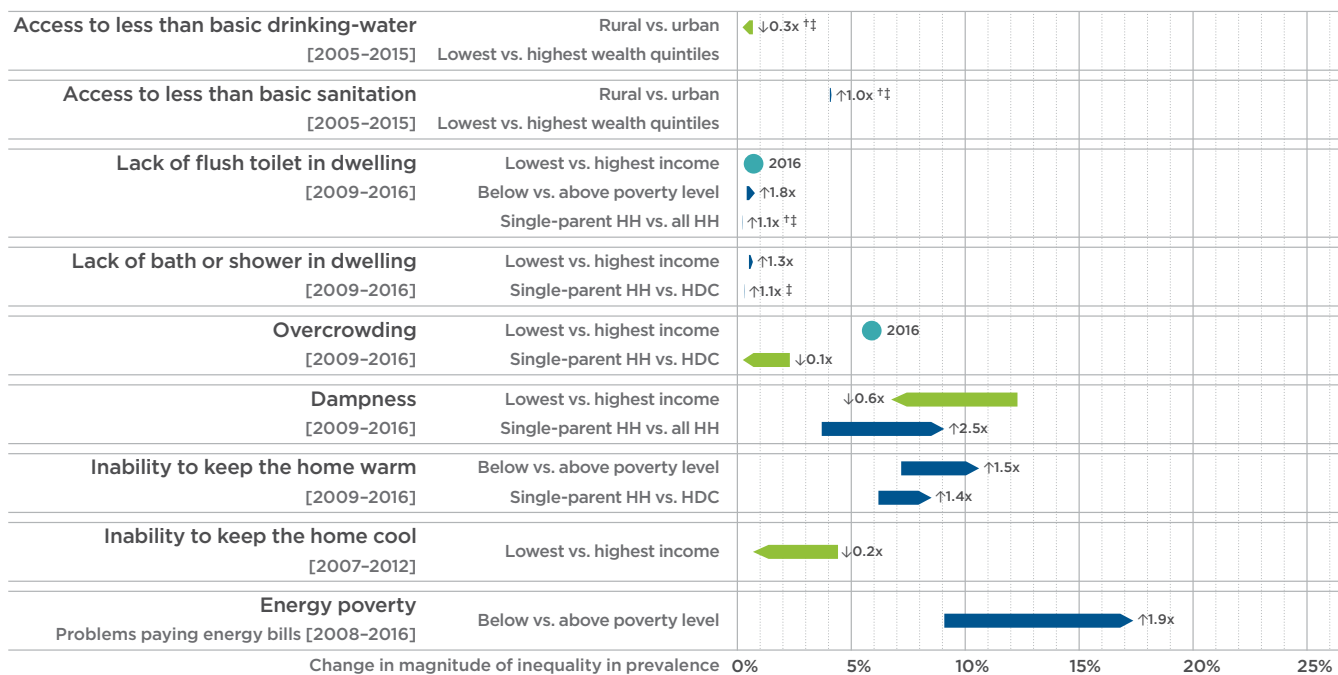


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

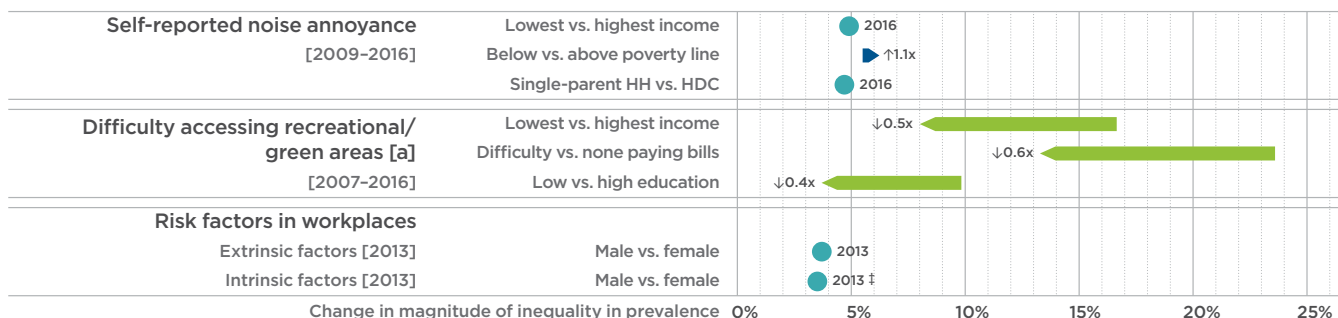
Ireland - variation over time of environmental health inequalities



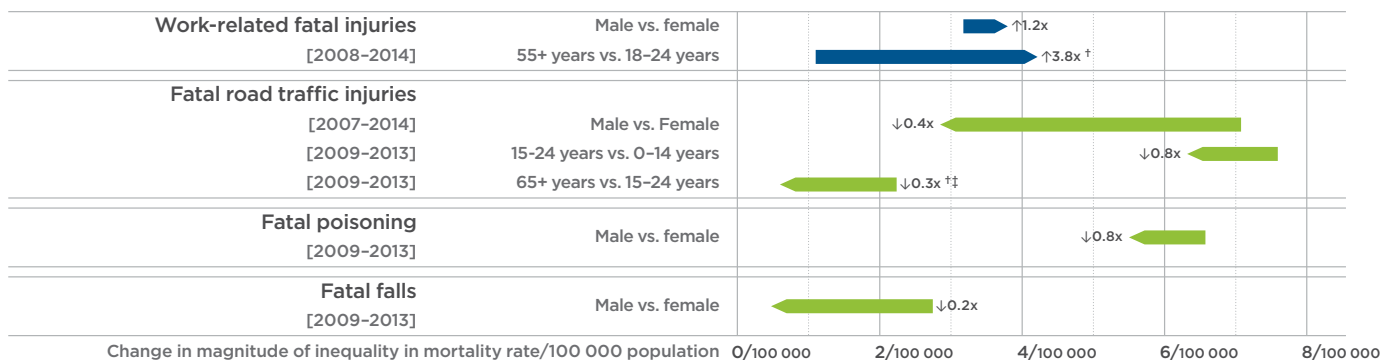
Housing and basic services



Urban and environmental exposures



Injuries

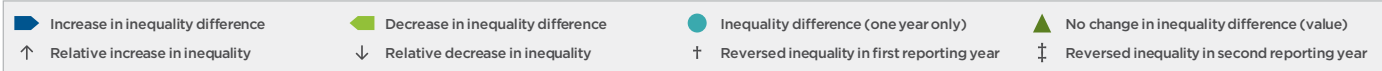


Notes: HDC - households with dependent children; HH - households.

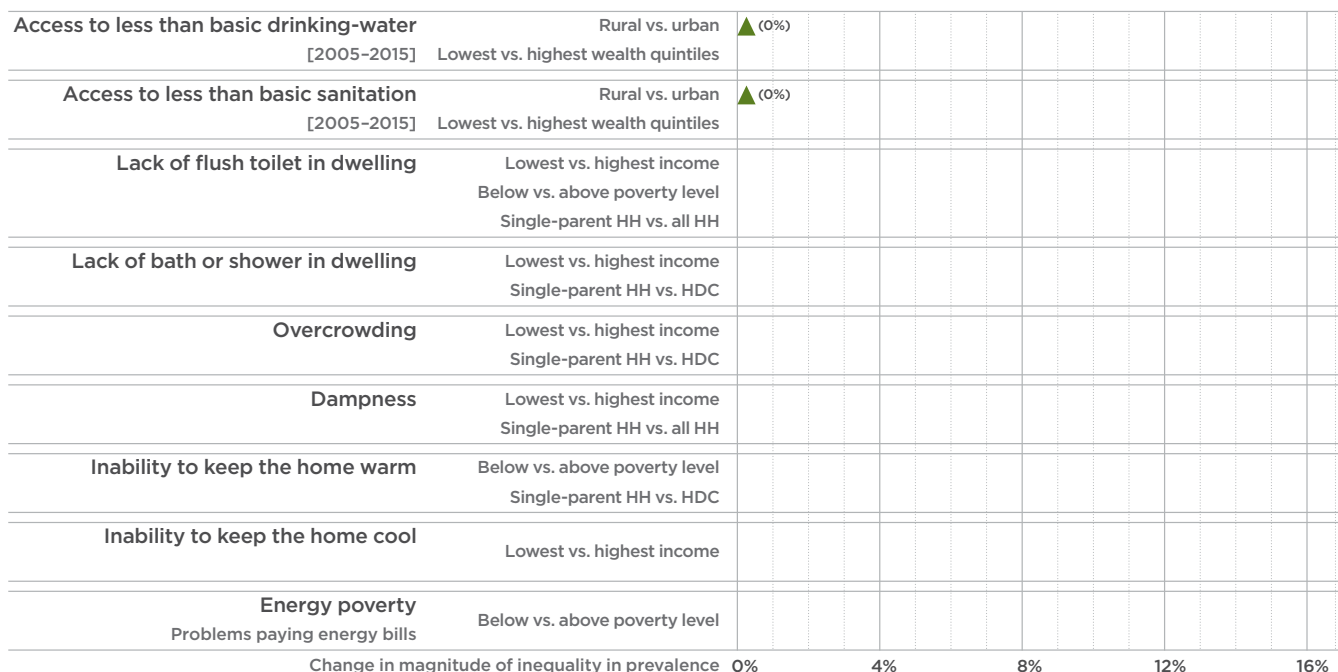
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

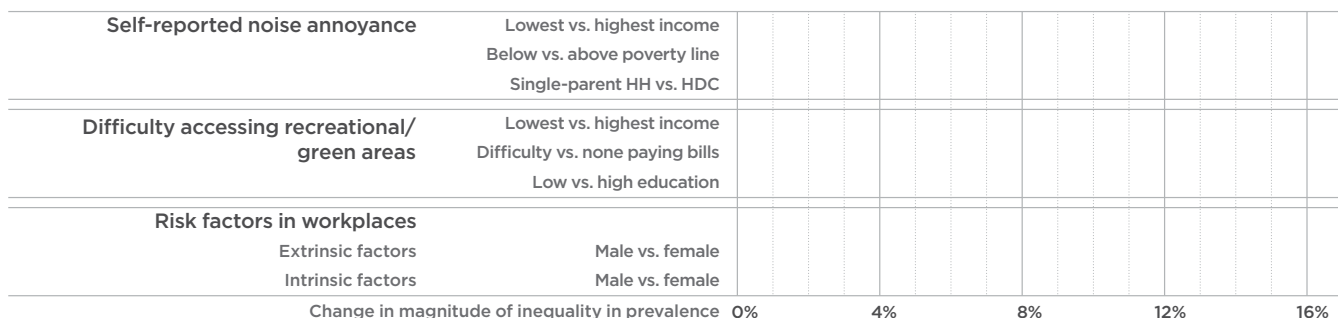
Israel - variation over time of environmental health inequalities



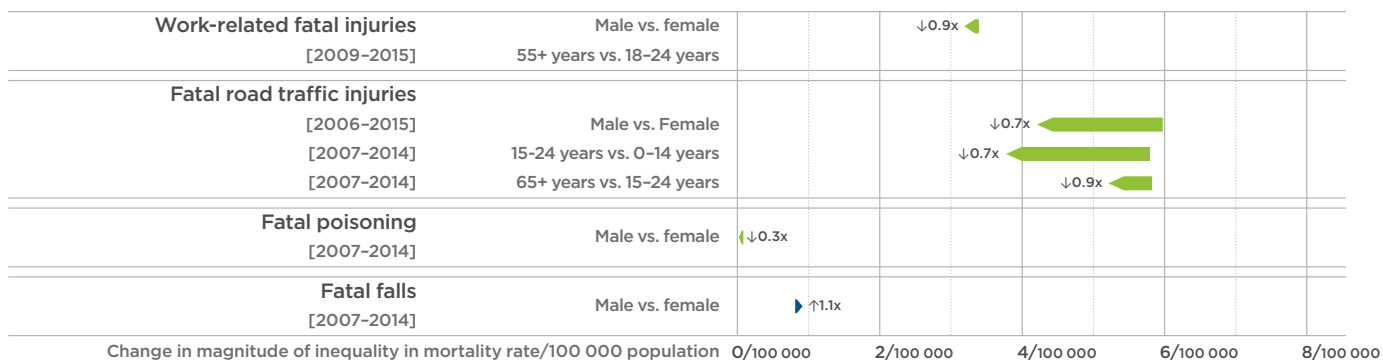
Housing and basic services



Urban and environmental exposures



Injuries

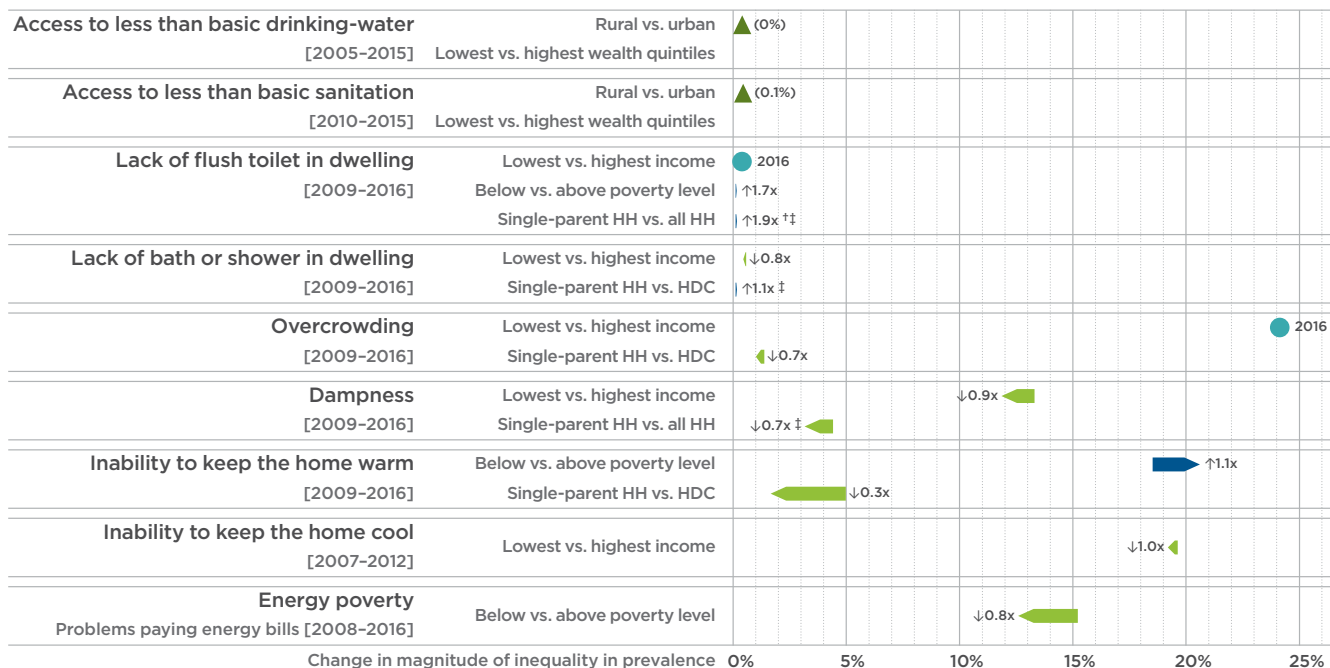


Notes: HDC - households with dependent children; HH - households. An empty row indicates that no country data for that indicator were identified.

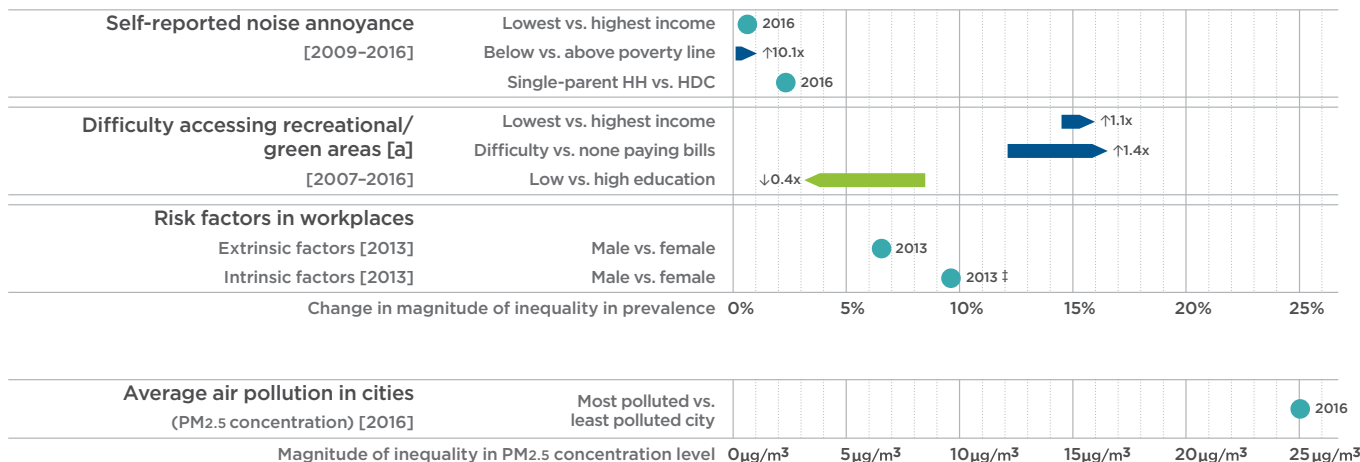
Italy - variation over time of environmental health inequalities



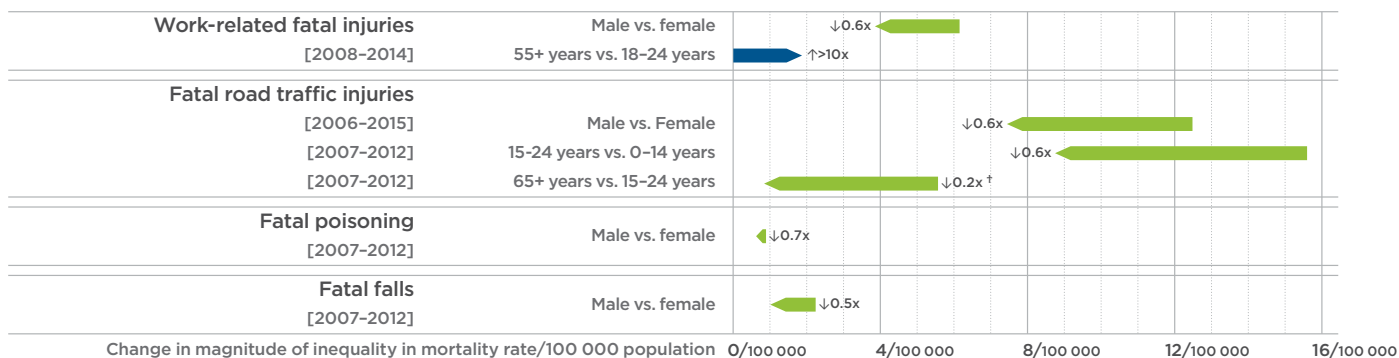
Housing and basic services



Urban and environmental exposures



Injuries

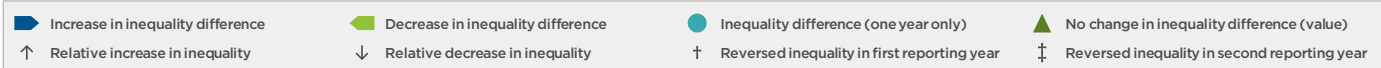


Notes: HDC – households with dependent children; HH – households.

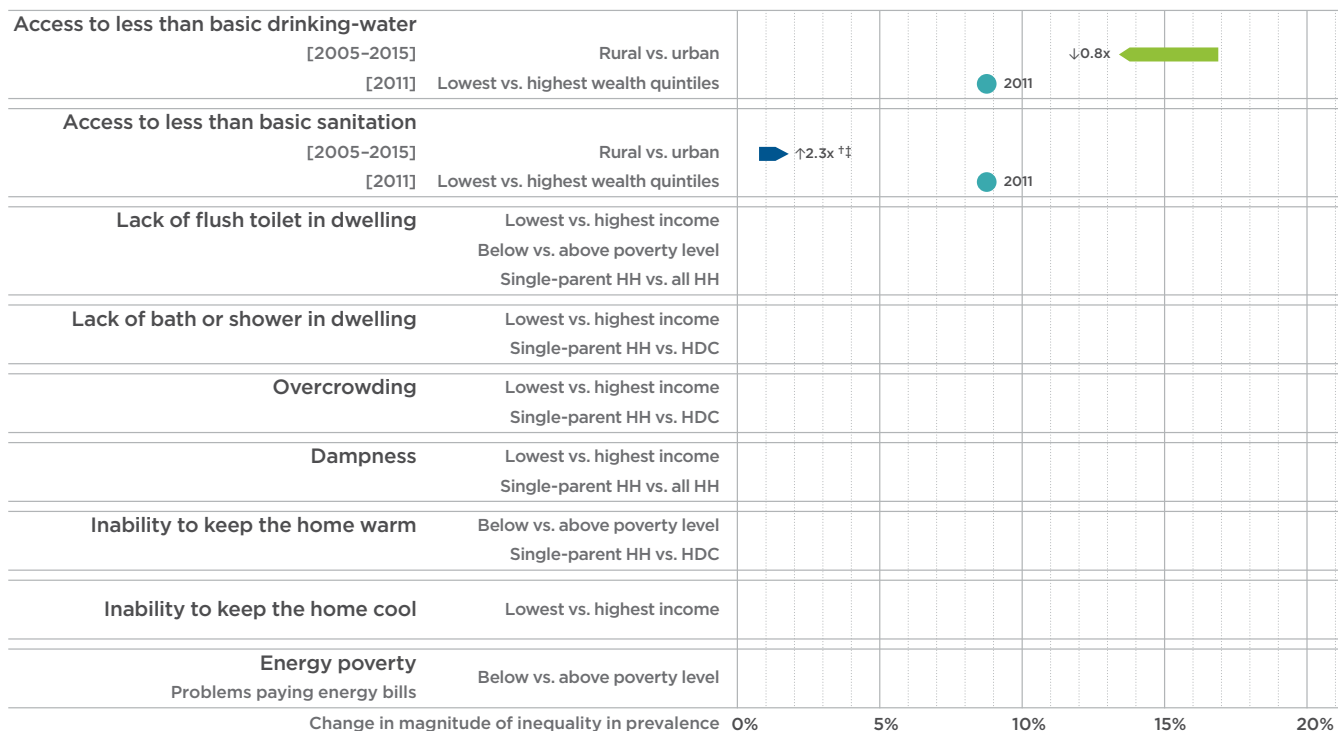
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

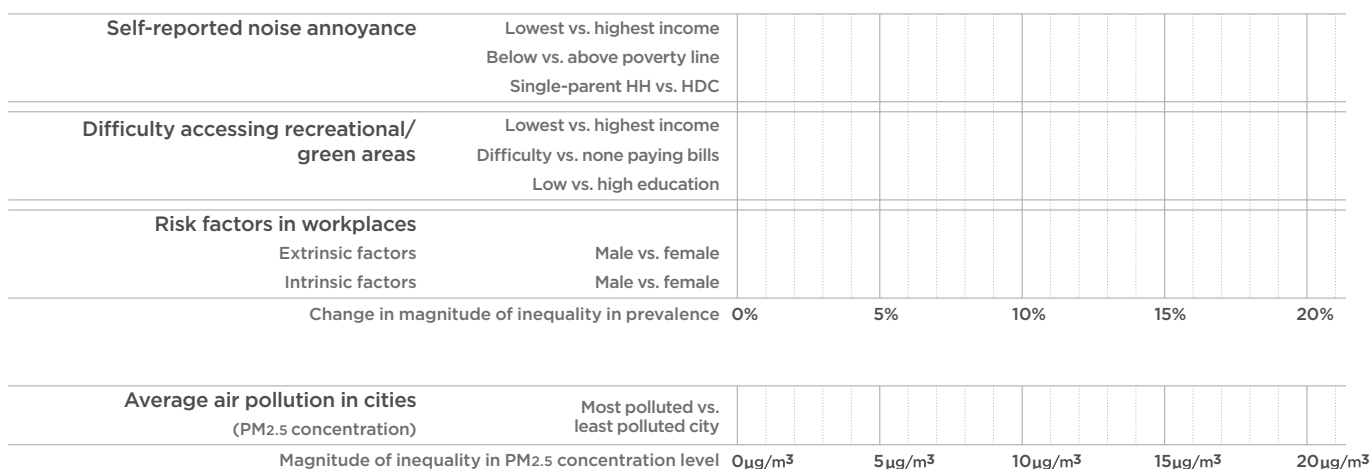
Kazakhstan - variation over time of environmental health inequalities



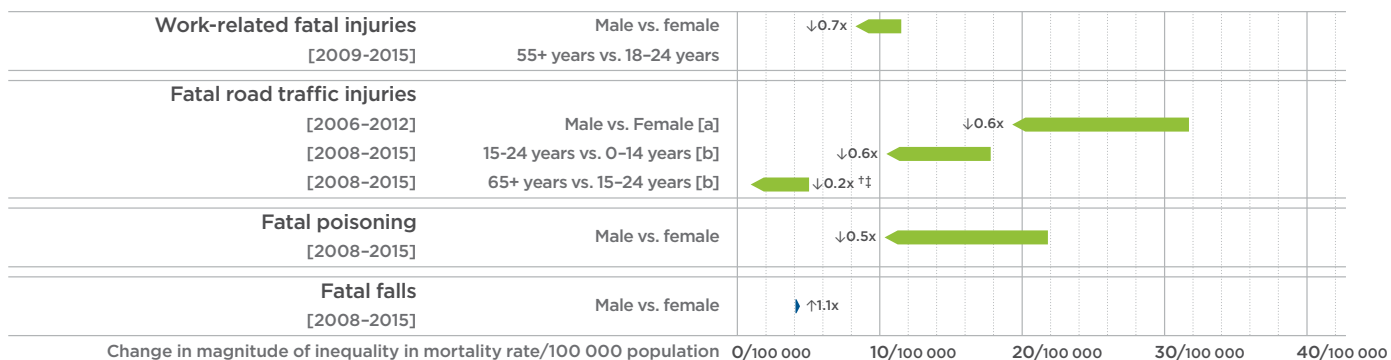
Housing and basic services



Urban and environmental exposures

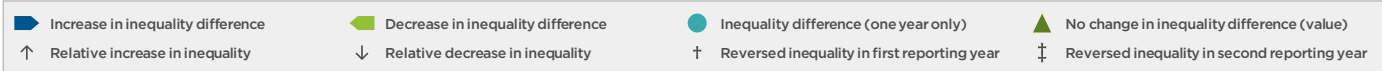


Injuries

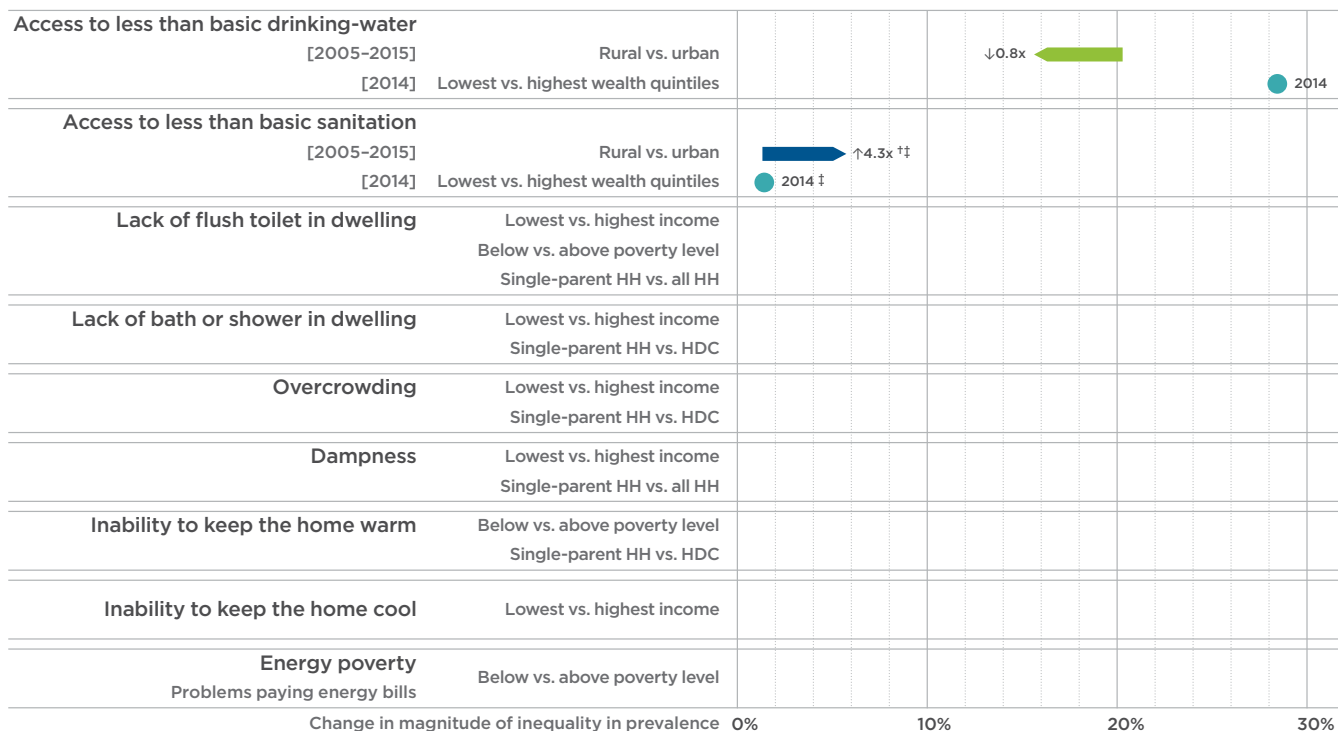


Notes: HDC - households with dependent children; HH - households.
 [a] both reporting years represent fatal transport injuries.
 [b] first year of reporting represents fatal transport injuries.
 An empty row indicates that no country data for that indicator were identified.

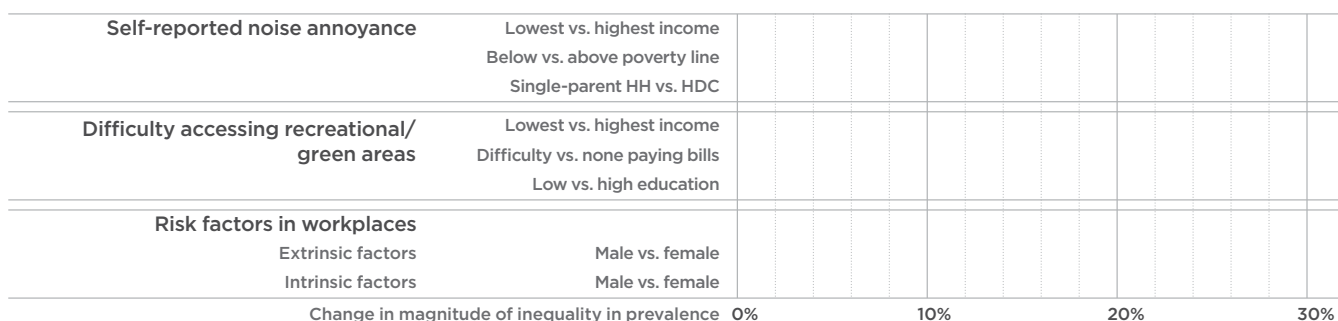
Kyrgyzstan - variation over time of environmental health inequalities



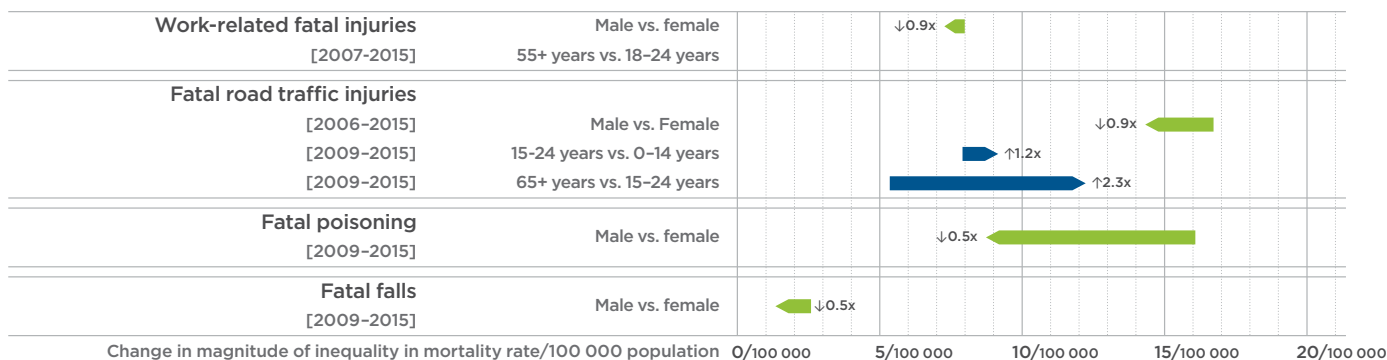
Housing and basic services



Urban and environmental exposures

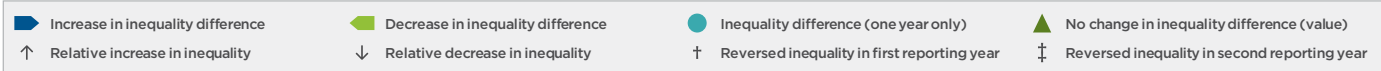


Injuries

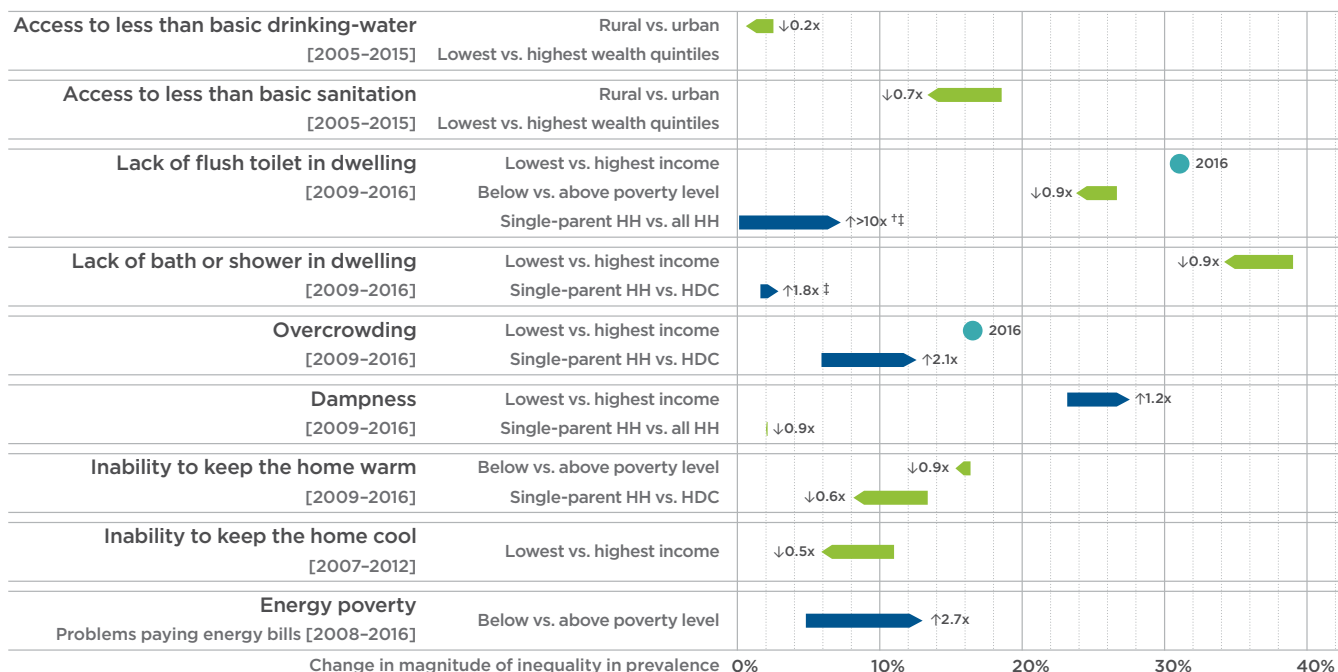


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

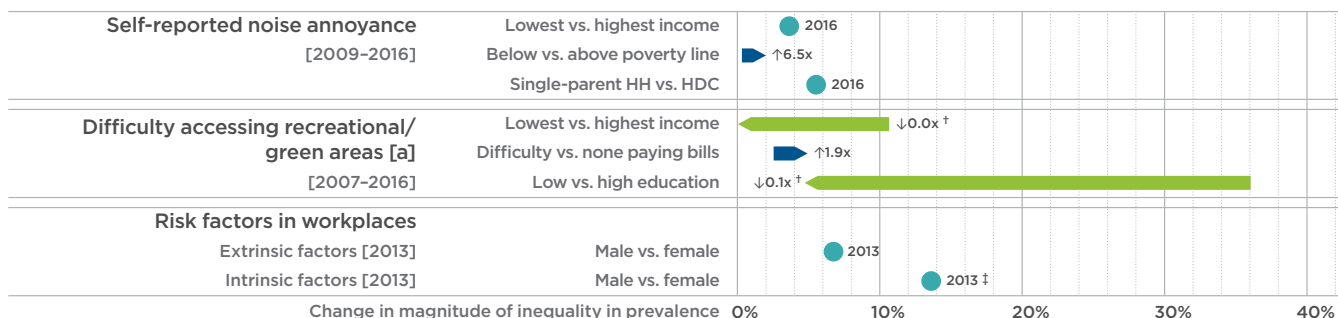
Latvia - variation over time of environmental health inequalities



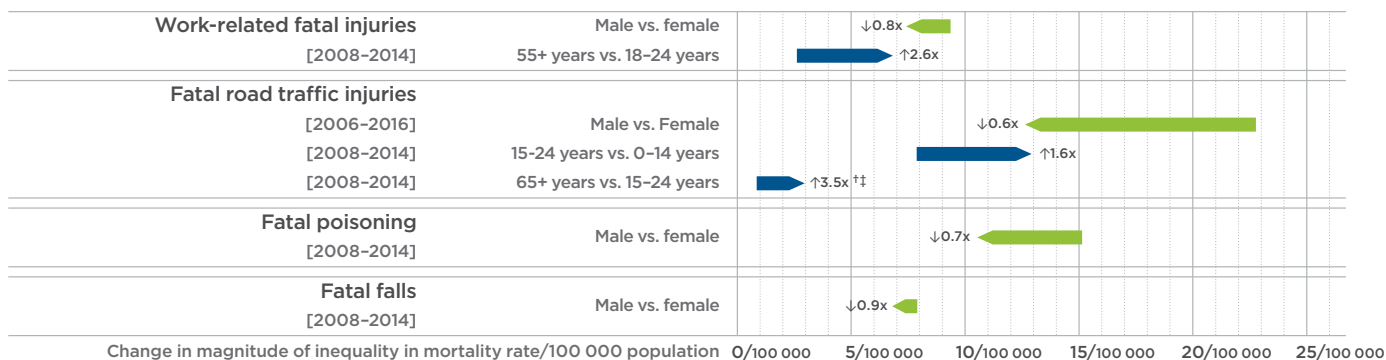
Housing and basic services



Urban and environmental exposures



Injuries

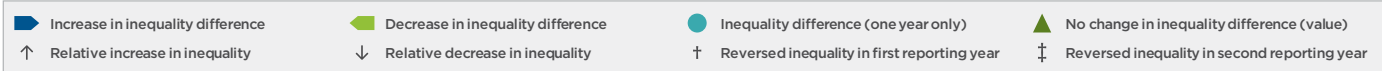


Notes: HDC - households with dependent children; HH - households.

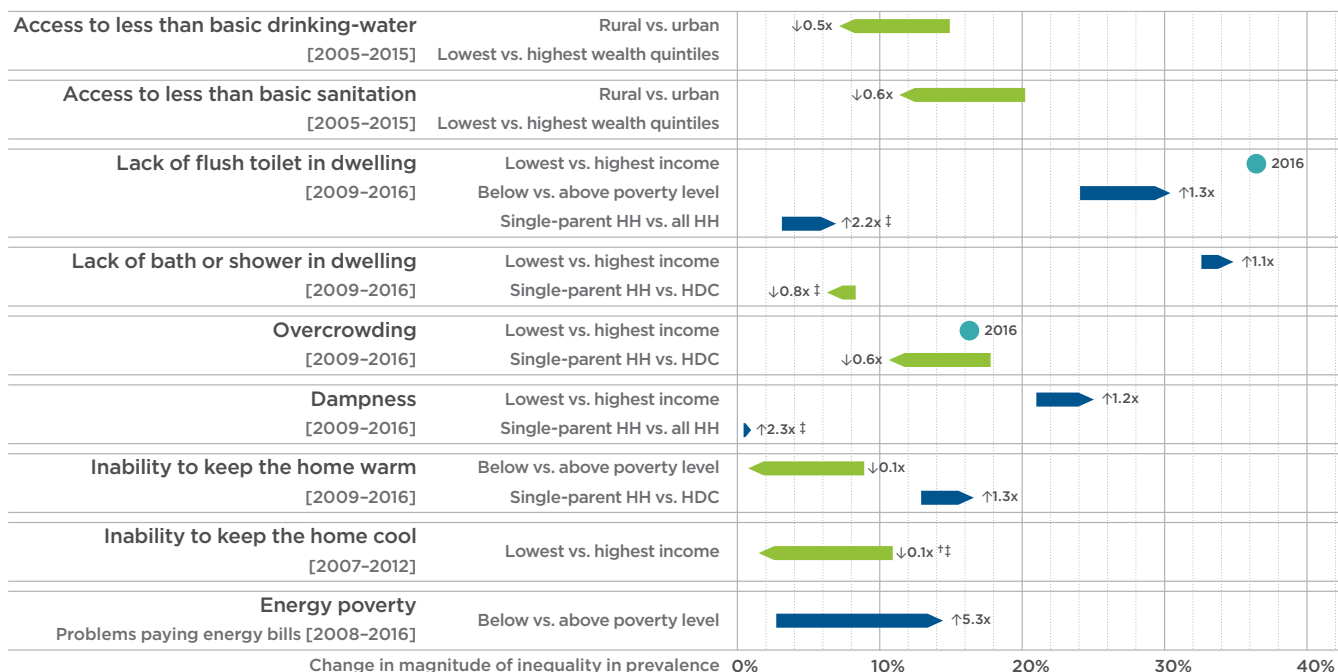
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

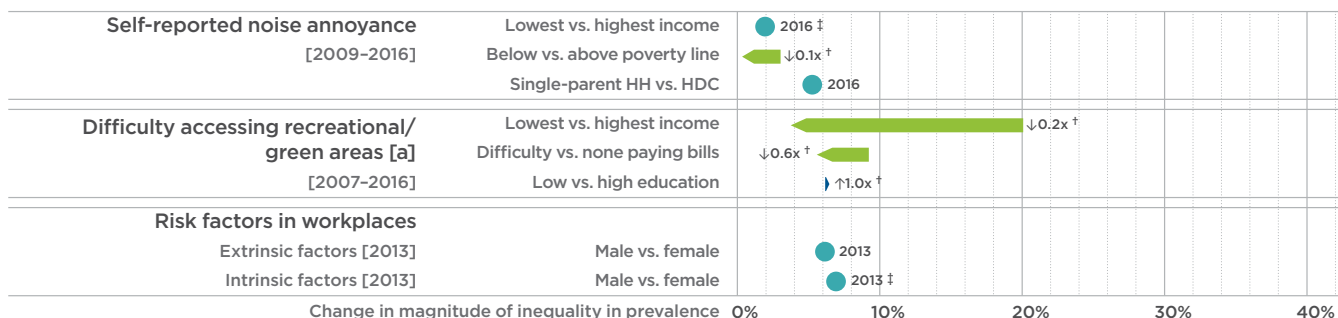
Lithuania - variation over time of environmental health inequalities



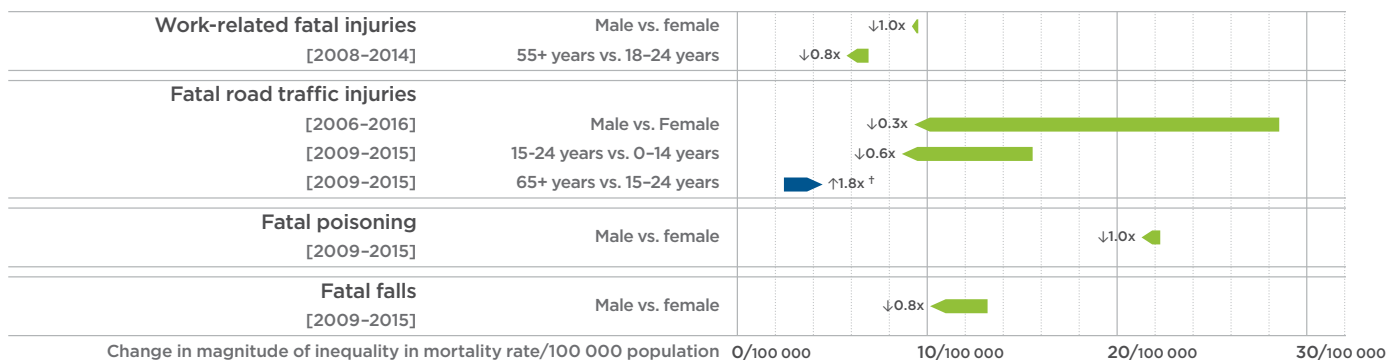
Housing and basic services



Urban and environmental exposures



Injuries

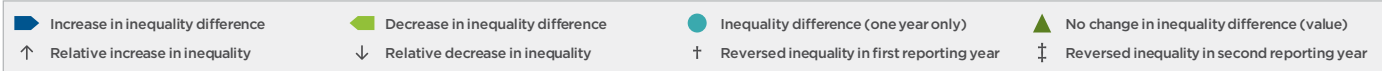


Notes: HDC - households with dependent children; HH - households.

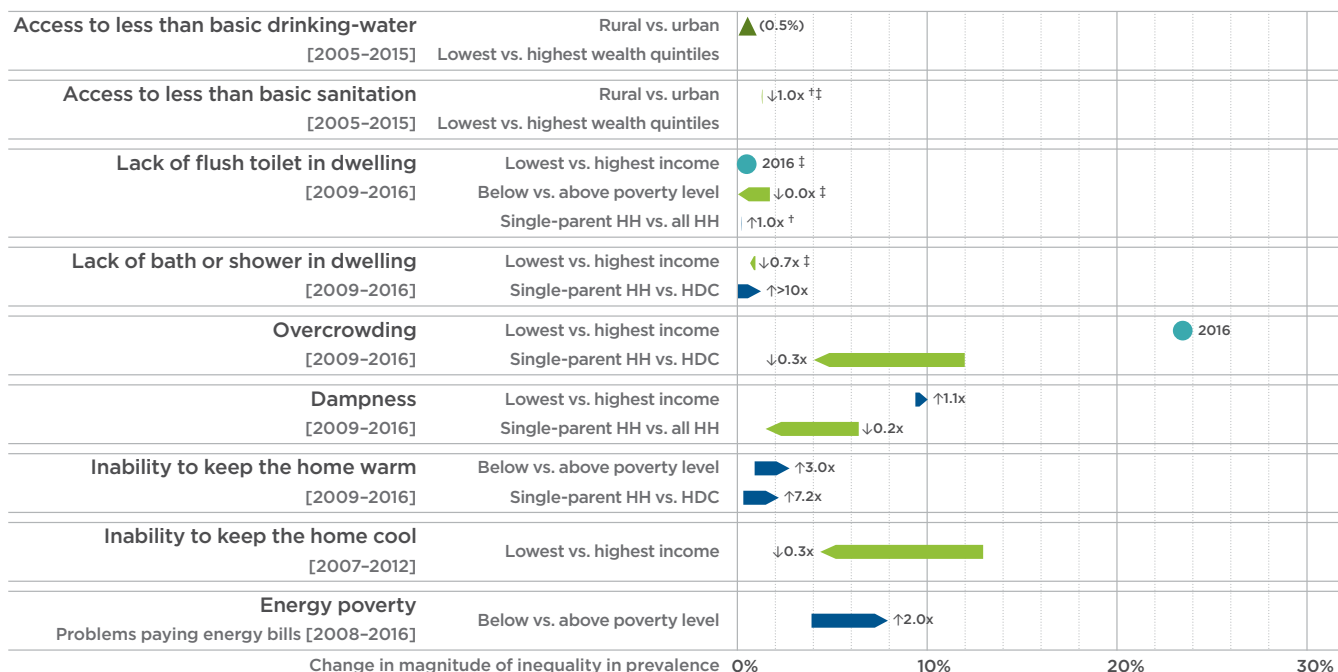
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

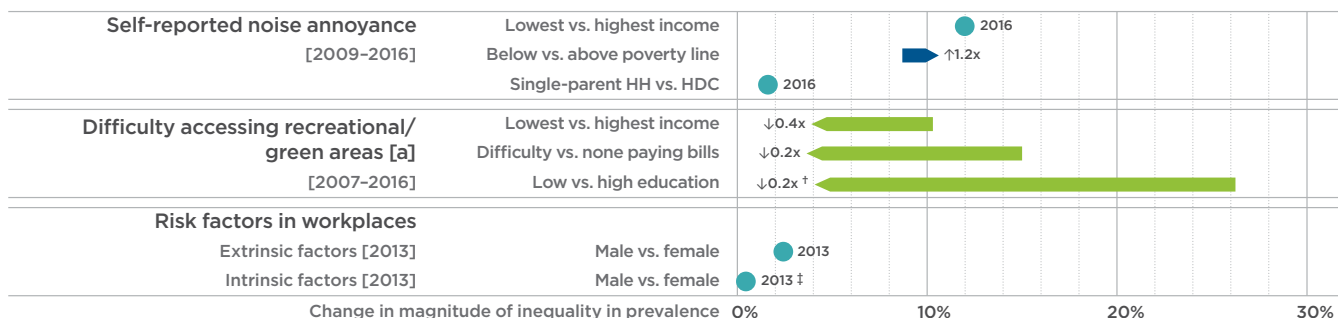
Luxembourg - variation over time of environmental health inequalities



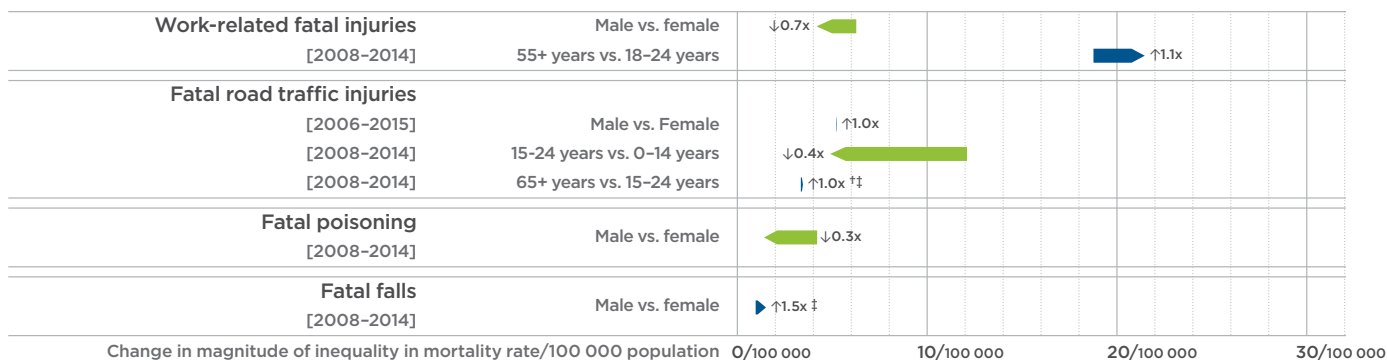
Housing and basic services



Urban and environmental exposures



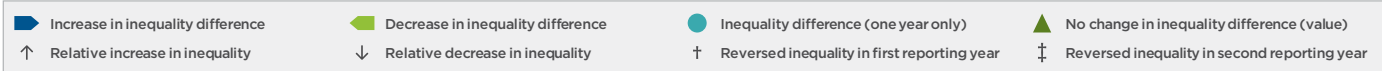
Injuries



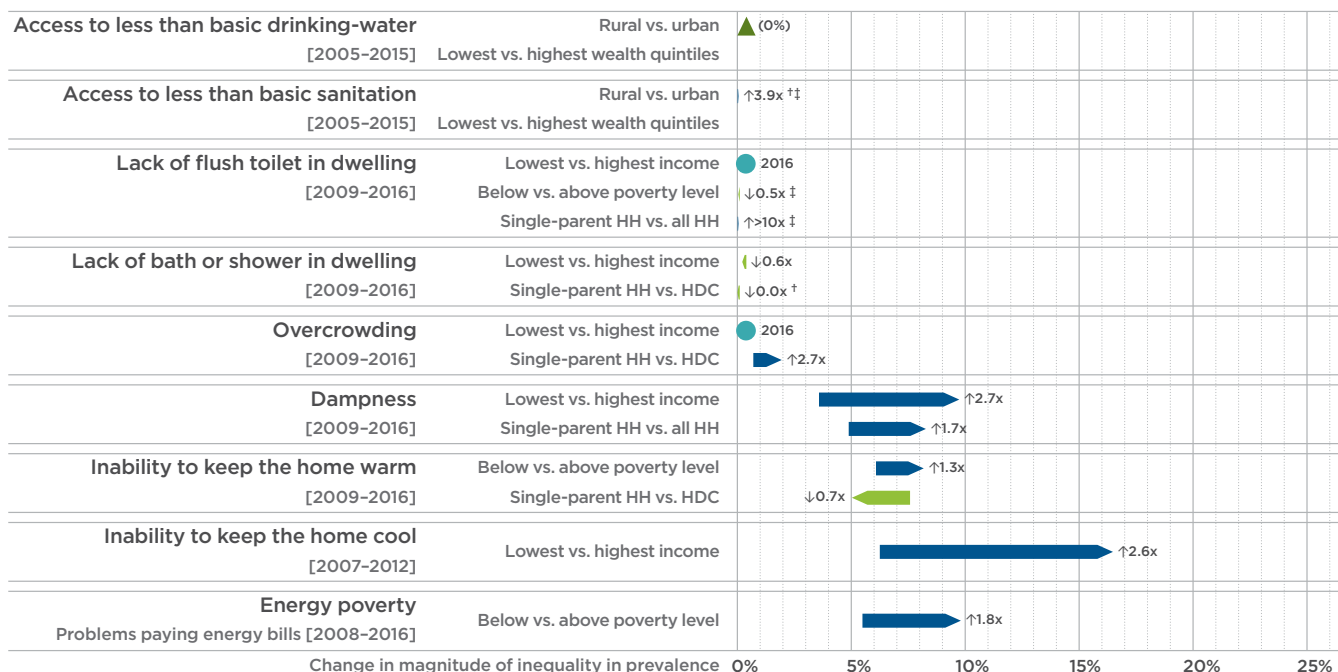
Notes: HDC - households with dependent children; HH - households.

[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable. An empty row indicates that no country data for that indicator were identified.

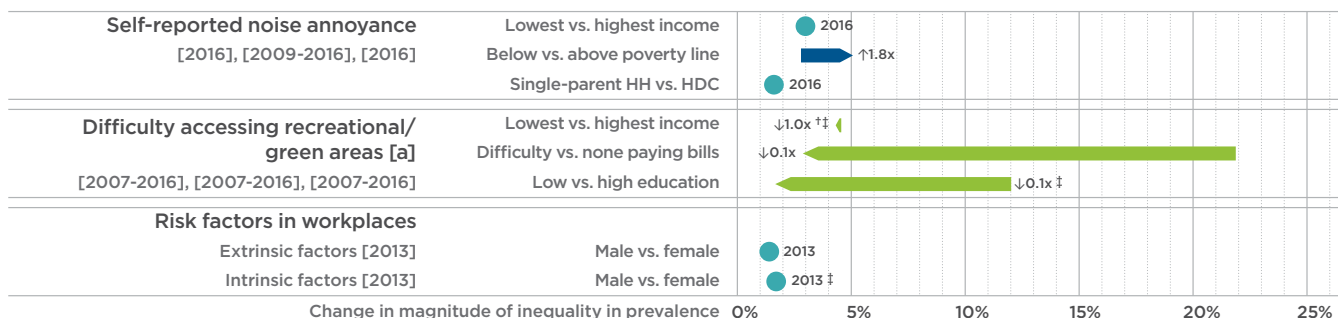
Malta - variation over time of environmental health inequalities



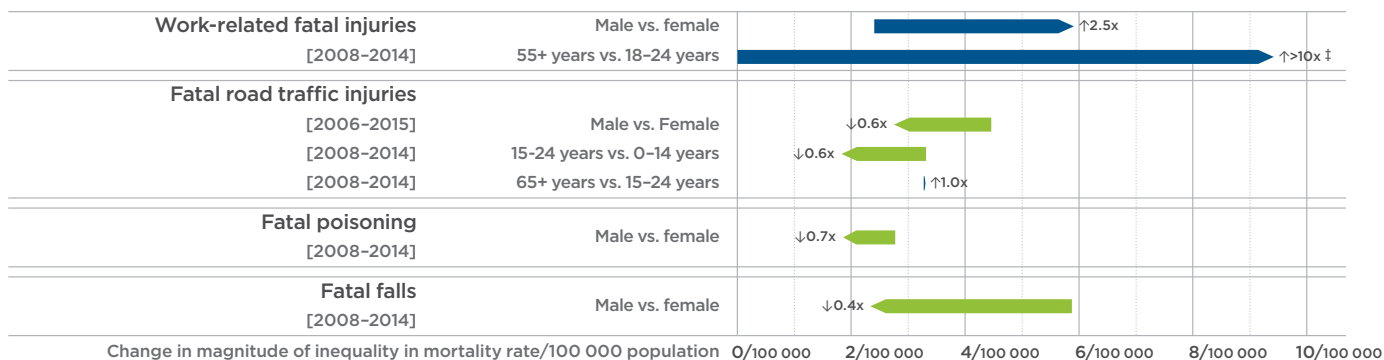
Housing and basic services



Urban and environmental exposures



Injuries



Notes: HDC - households with dependent children; HH - households.

[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

Monaco - variation over time of environmental health inequalities

Increase in inequality difference	Decrease in inequality difference	Inequality difference (one year only)	No change in inequality difference (value)
Relative increase in inequality	Relative decrease in inequality	Reversed inequality in first reporting year	Reversed inequality in second reporting year

Housing and basic services

Access to less than basic drinking-water	Rural vs. urban	(0%) in urban areas [a]								
	Lowest vs. highest wealth quintiles									
Access to less than basic sanitation	Rural vs. urban	(0%) in urban areas [a]								
	Lowest vs. highest wealth quintiles									
Lack of flush toilet in dwelling	Lowest vs. highest income									
	Below vs. above poverty level									
	Single-parent HH vs. all HH									
Lack of bath or shower in dwelling	Lowest vs. highest income									
	Single-parent HH vs. HDC									
Overcrowding	Lowest vs. highest income									
	Single-parent HH vs. HDC									
Dampness	Lowest vs. highest income									
	Single-parent HH vs. all HH									
Inability to keep the home warm	Below vs. above poverty level									
	Single-parent HH vs. HDC									
Inability to keep the home cool	Lowest vs. highest income									
Energy poverty	Below vs. above poverty level									
Problems paying energy bills										
Change in magnitude of inequality in prevalence		0%	5%	10%	15%	20%	25%			

Urban and environmental exposures

Self-reported noise annoyance	Lowest vs. highest income									
	Below vs. above poverty line									
	Single-parent HH vs. HDC									
Difficulty accessing recreational/ green areas [a]	Lowest vs. highest income									
	Difficulty vs. none paying bills									
	Low vs. high education									
Risk factors in workplaces										
Extrinsic factors	Male vs. female									
Intrinsic factors	Male vs. female									
Change in magnitude of inequality in prevalence		0%	5%	10%	15%	20%	25%			

Average air pollution in cities (PM2.5 concentration)	Most polluted vs. least polluted city									
Magnitude of inequality in PM2.5 concentration level		0µg/m ³	5µg/m ³	10µg/m ³	15µg/m ³	20µg/m ³	25µg/m ³			

Injuries

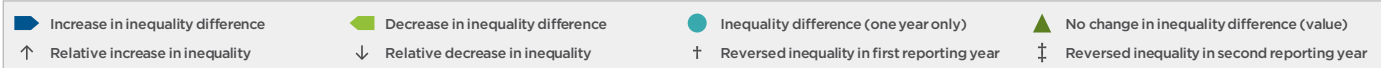
Work-related fatal injuries	Male vs. female									
	55+ years vs. 18-24 years									
Fatal road traffic injuries										
	Male vs. Female									
	15-24 years vs. 0-14 years									
	65+ years vs. 15-24 years									
Fatal poisoning	Male vs. female									
Fatal falls	Male vs. female									
Change in magnitude of inequality in mortality rate/100 000 population		0/100 000	5/100 000	10/100 000	15/100 000	20/100 000	25/100 000			

Notes: HDC – households with dependent children; HH – households.

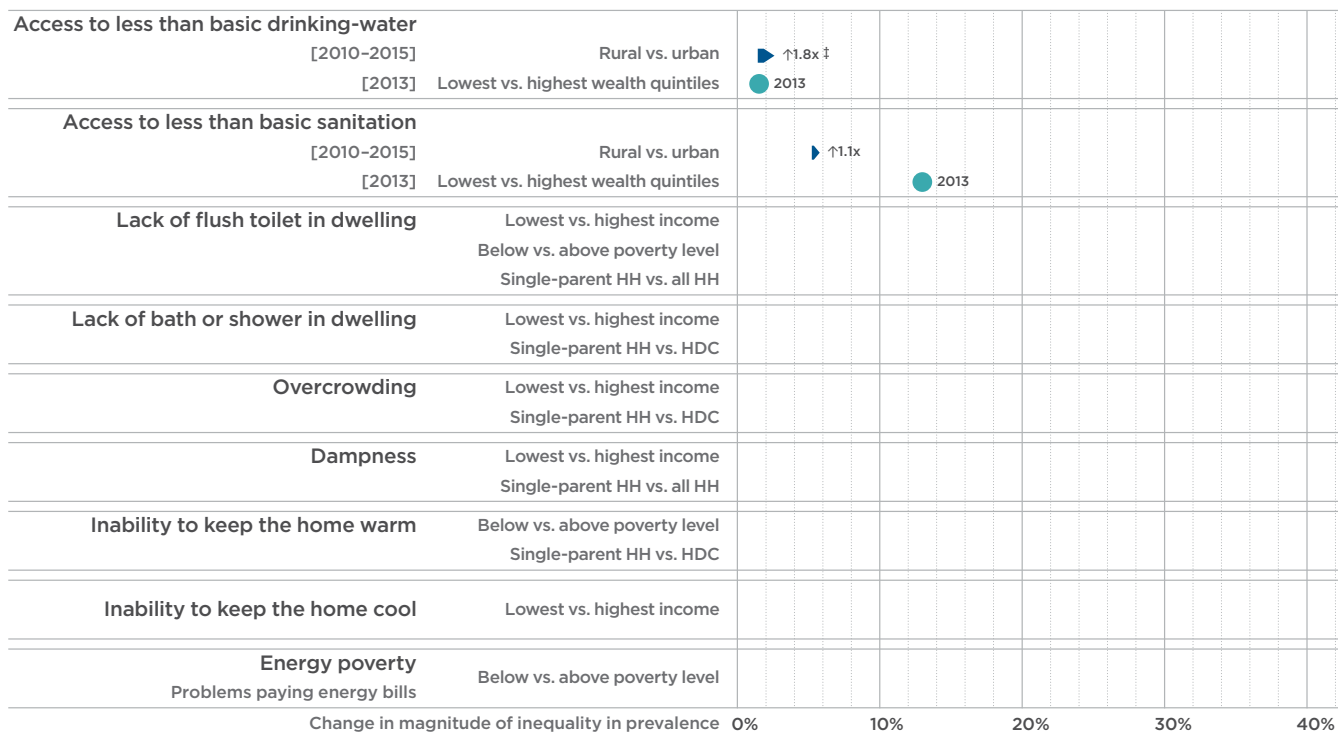
[a] Monaco only reported data for urban areas and thus, no rural-urban inequality value can be calculated.

An empty row indicates that no country data for that indicator were identified.

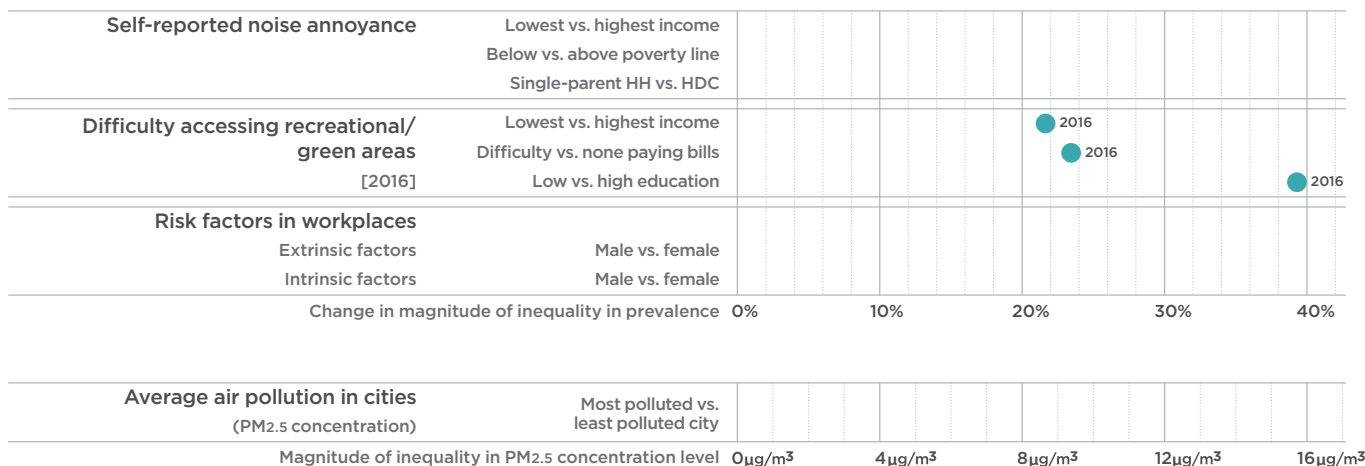
Montenegro - variation over time of environmental health inequalities



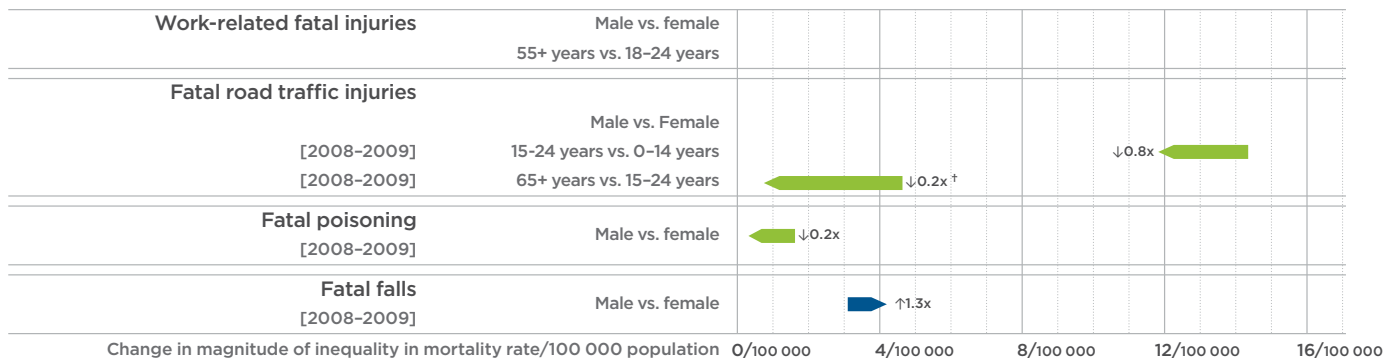
Housing and basic services



Urban and environmental exposures

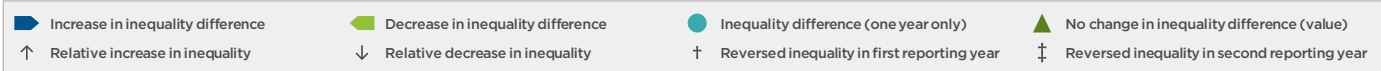


Injuries

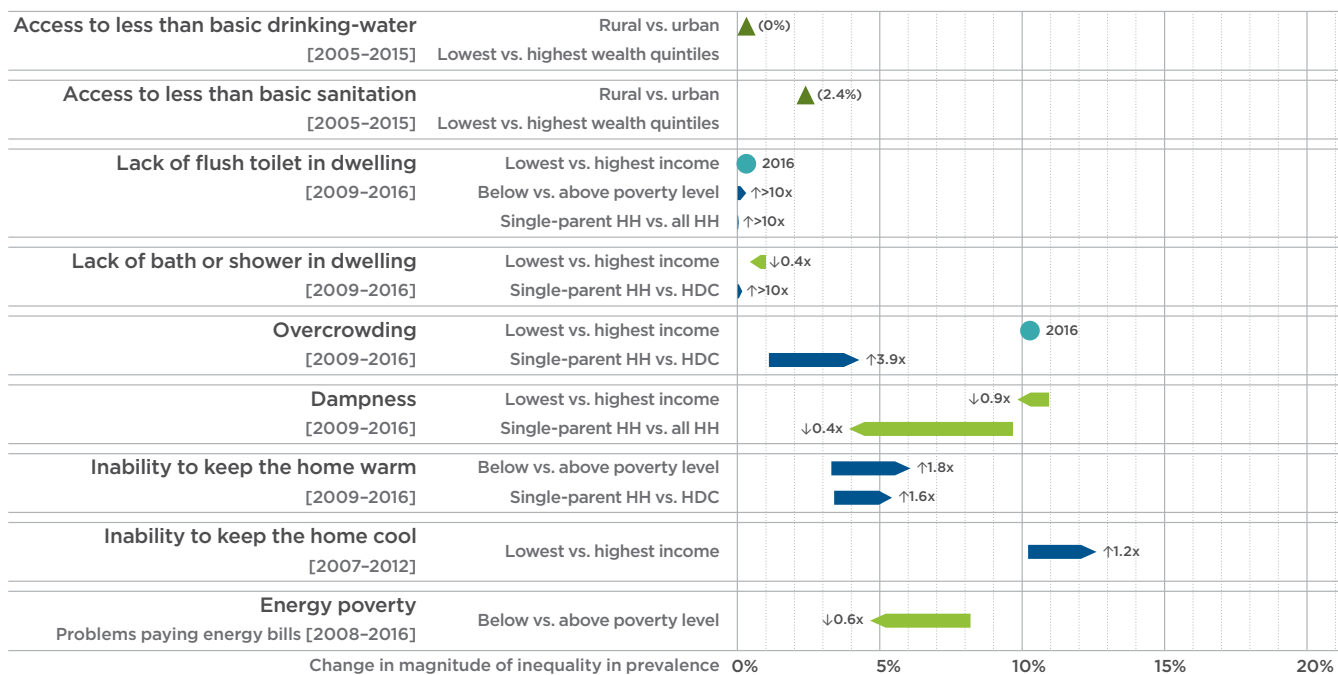


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

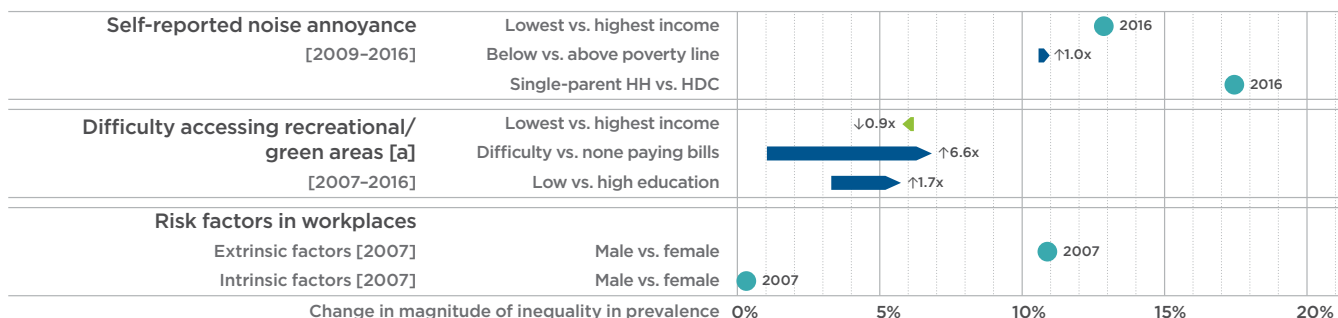
Netherlands - variation over time of environmental health inequalities



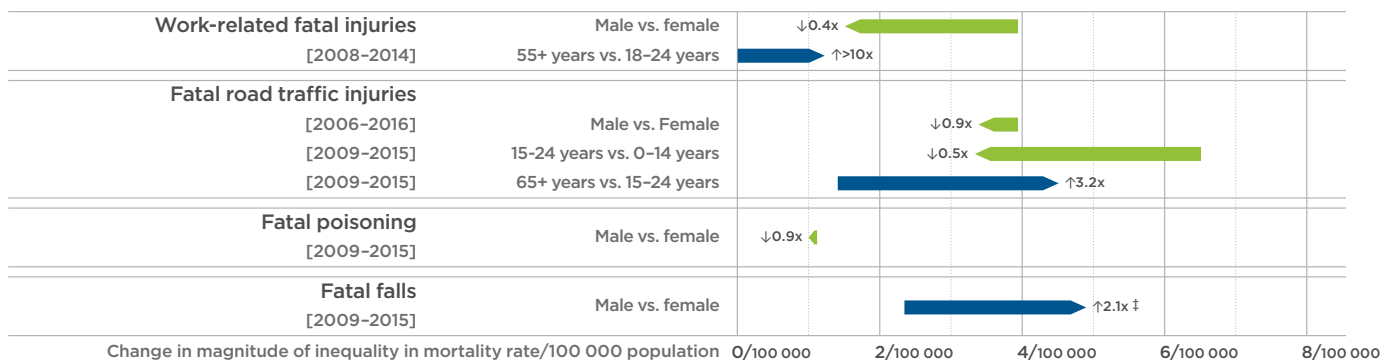
Housing and basic services



Urban and environmental exposures



Injuries

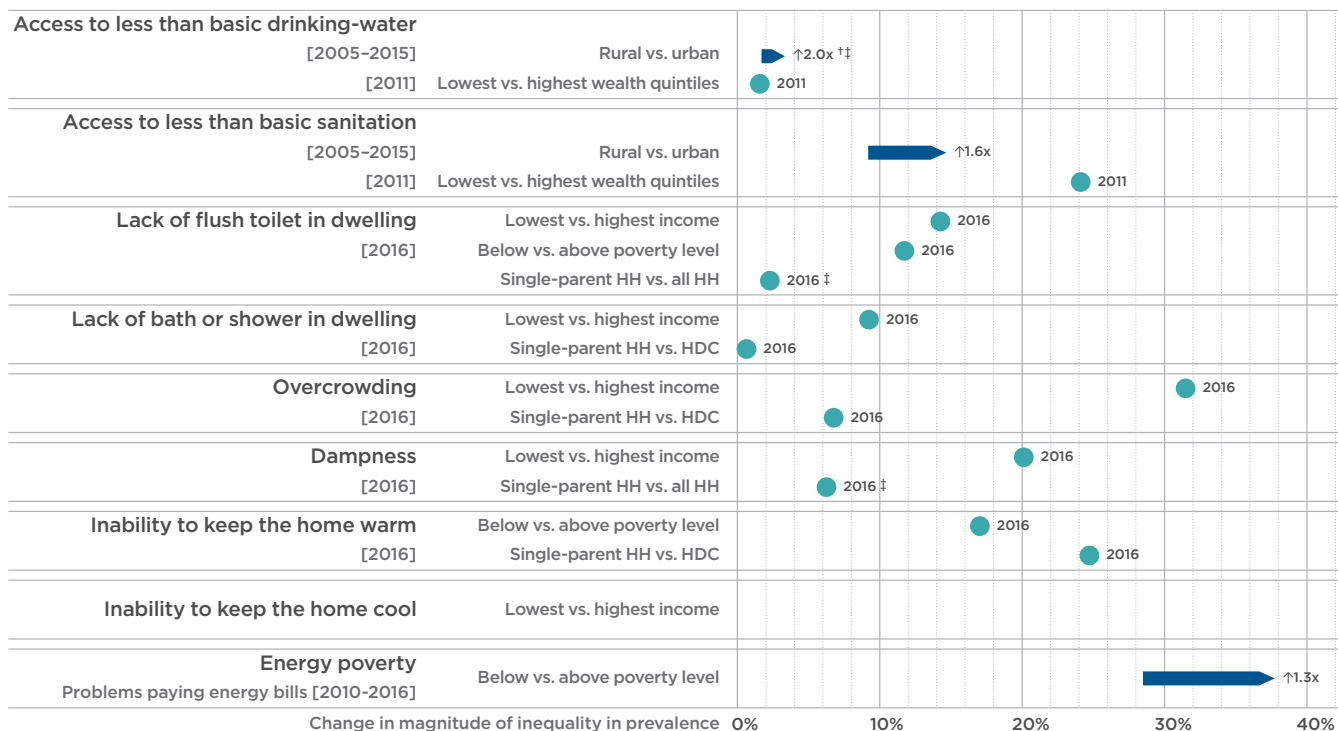


Notes: HDC - households with dependent children; HH - households.
 [a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.
 An empty row indicates that no country data for that indicator were identified.

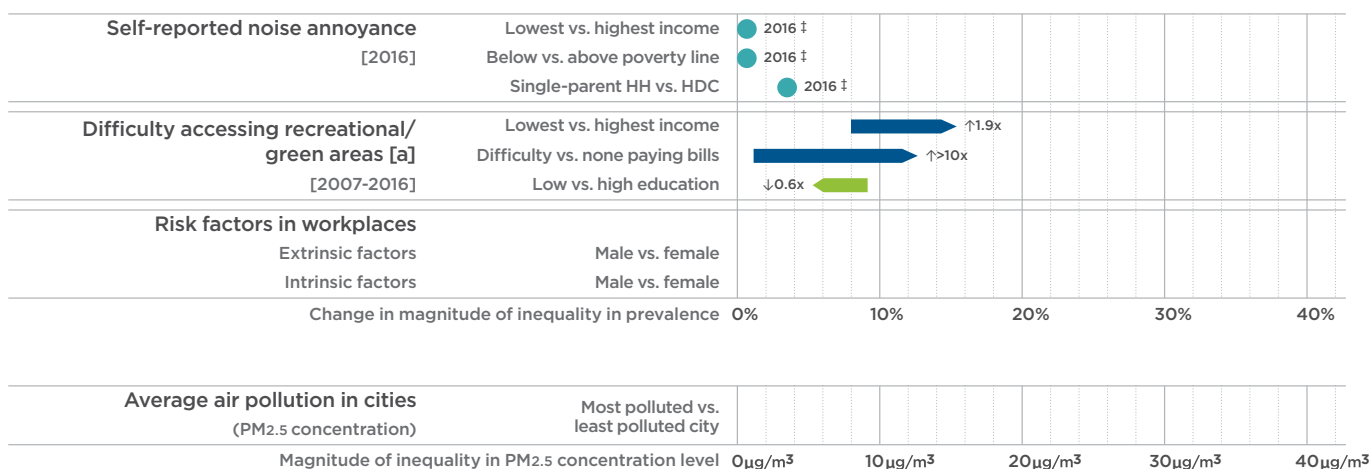
North Macedonia - variation over time of environmental health inequalities



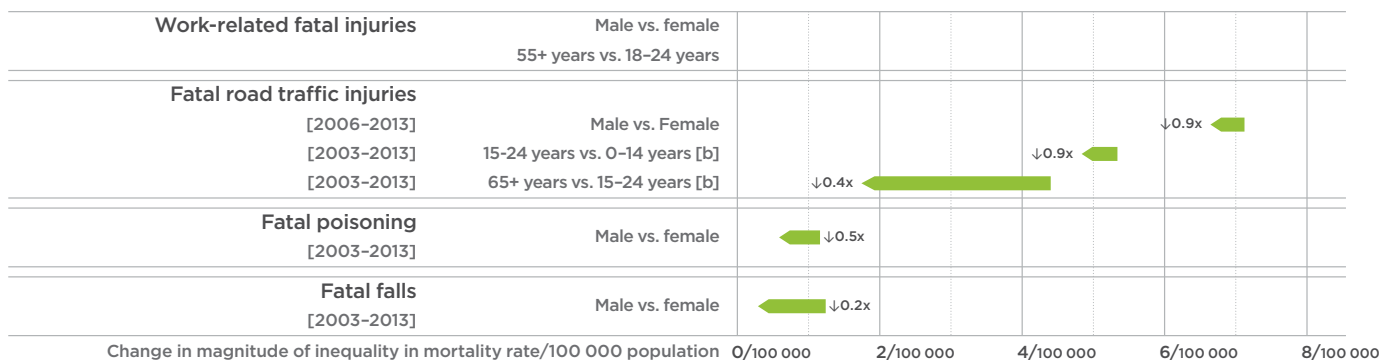
Housing and basic services



Urban and environmental exposures



Injuries



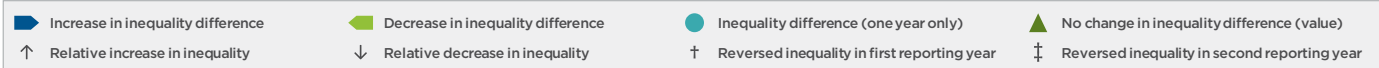
Notes: HDC - households with dependent children; HH - households.

[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

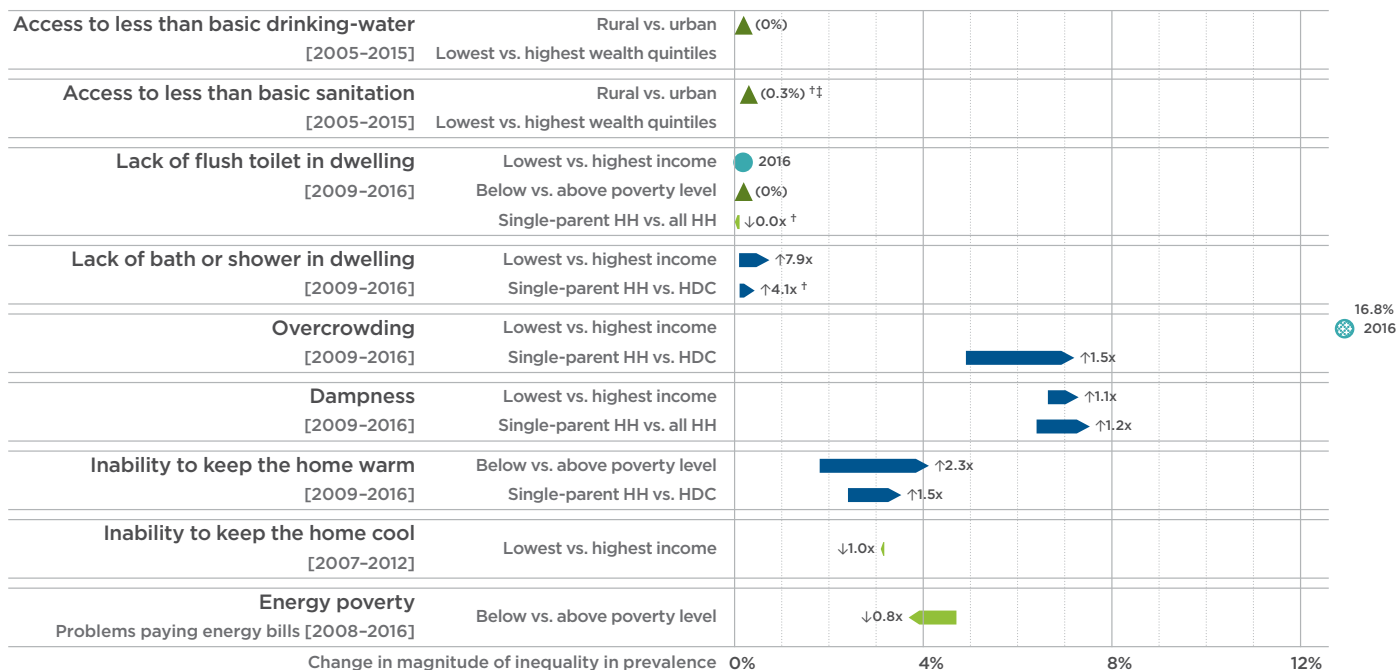
[b] first year of reporting represents fatal transport injuries.

An empty row indicates that no country data for that indicator were identified.

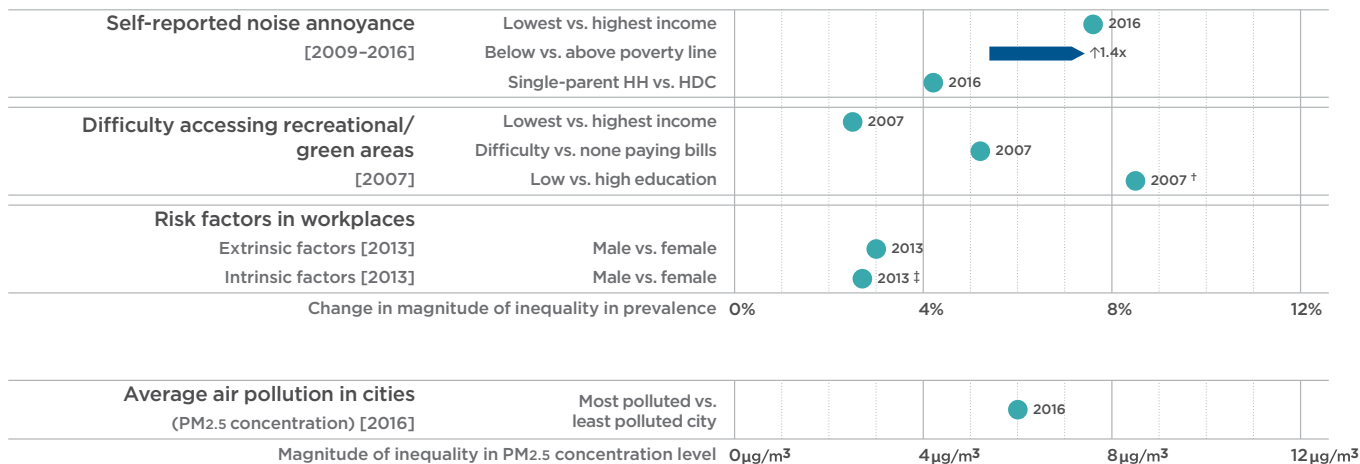
Norway - variation over time of environmental health inequalities



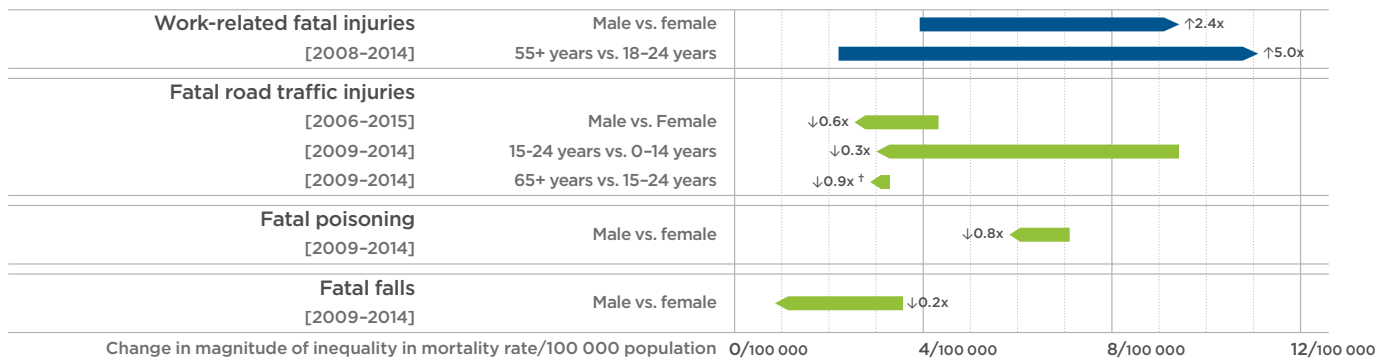
Housing and basic services



Urban and environmental exposures

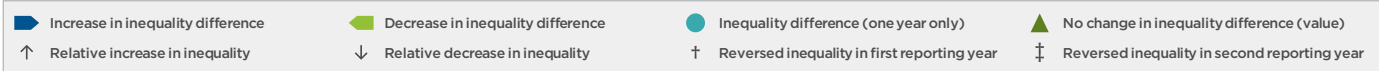


Injuries

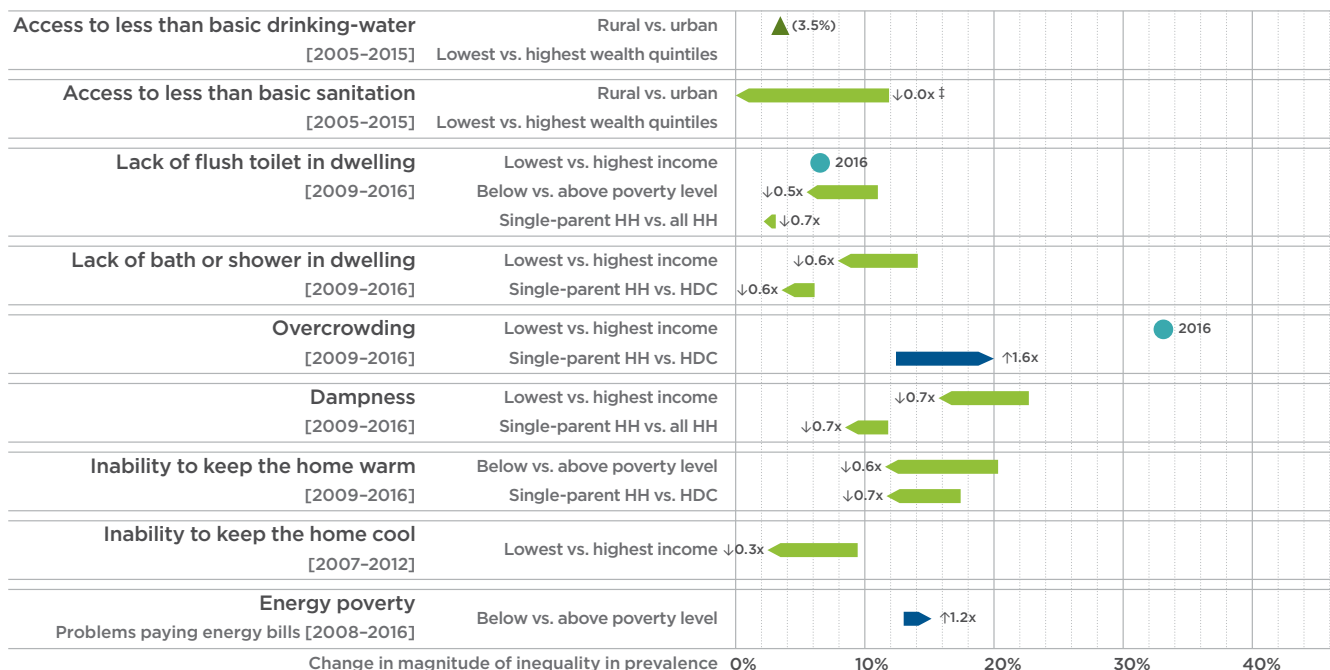


Notes: HDC – households with dependent children; HH – households.
An empty row indicates that no country data for that indicator were identified.

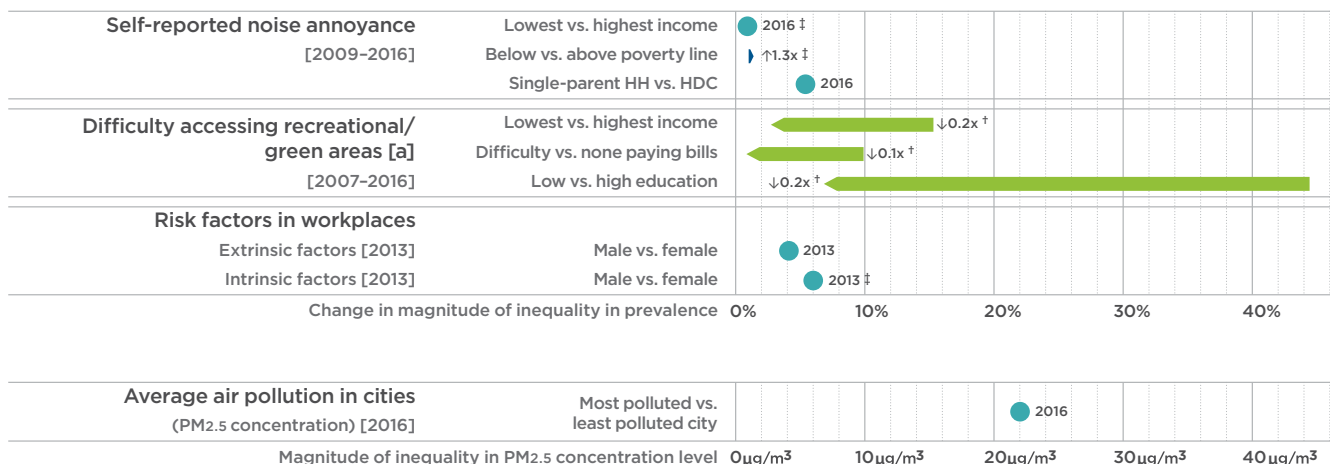
Poland - variation over time of environmental health inequalities



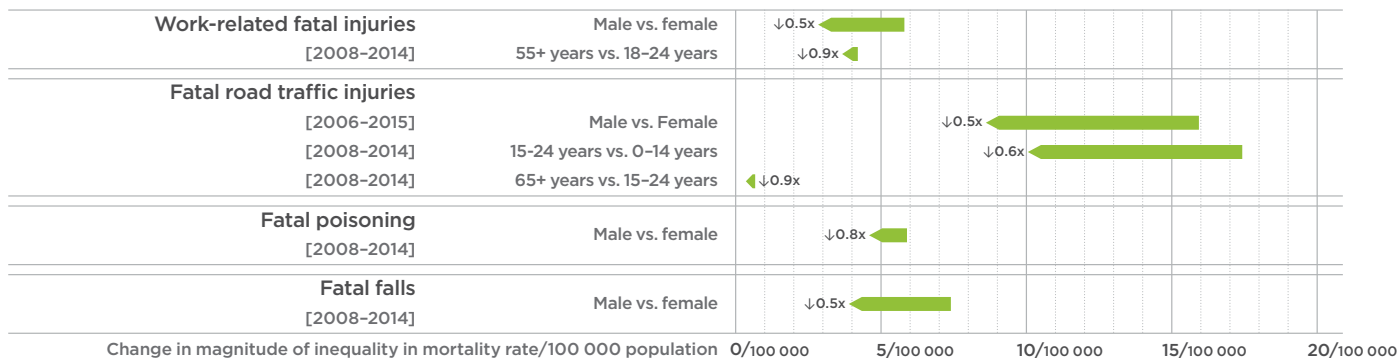
Housing and basic services



Urban and environmental exposures



Injuries

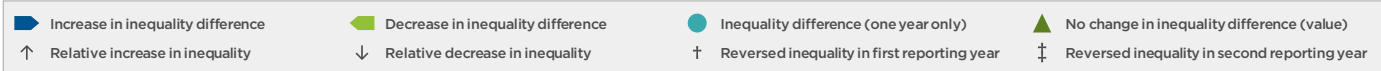


Notes: HDC - households with dependent children; HH - households.

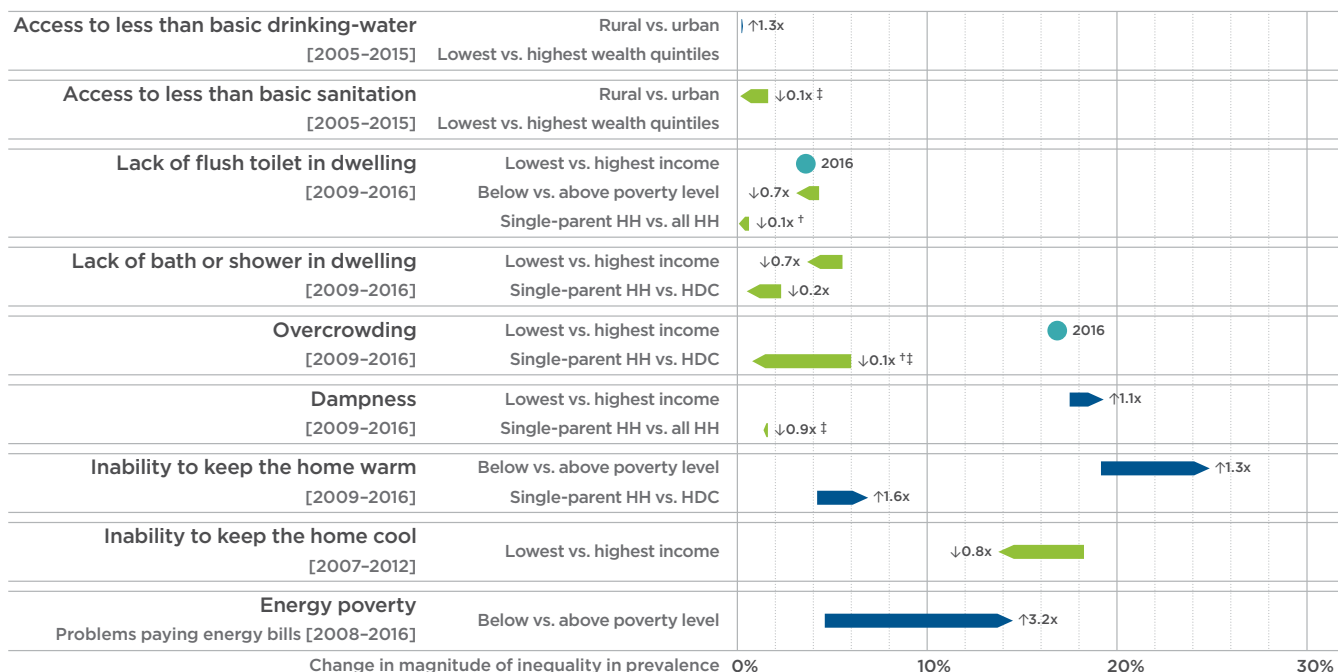
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

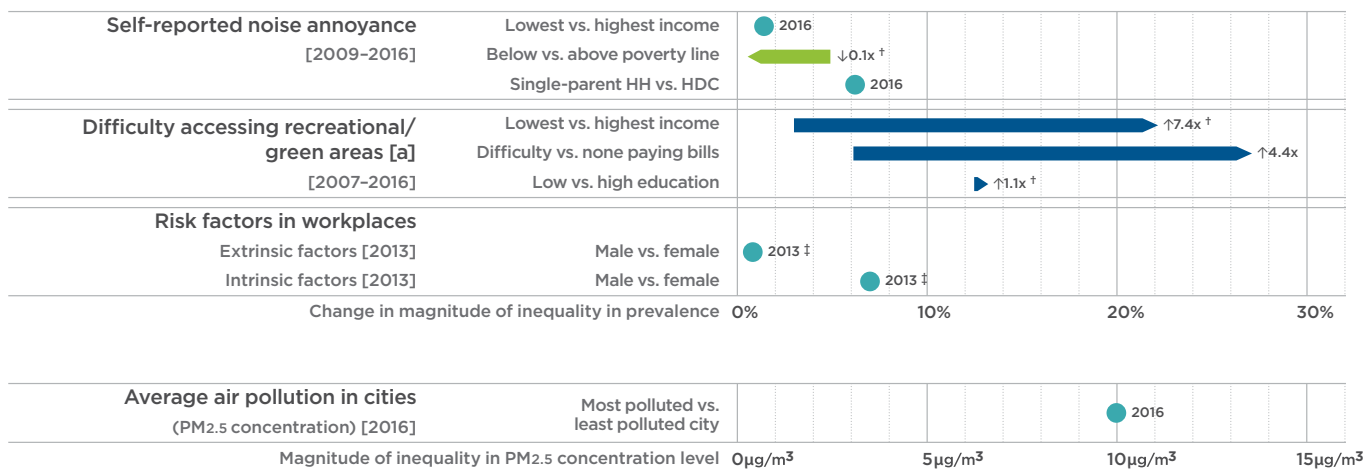
Portugal - variation over time of environmental health inequalities



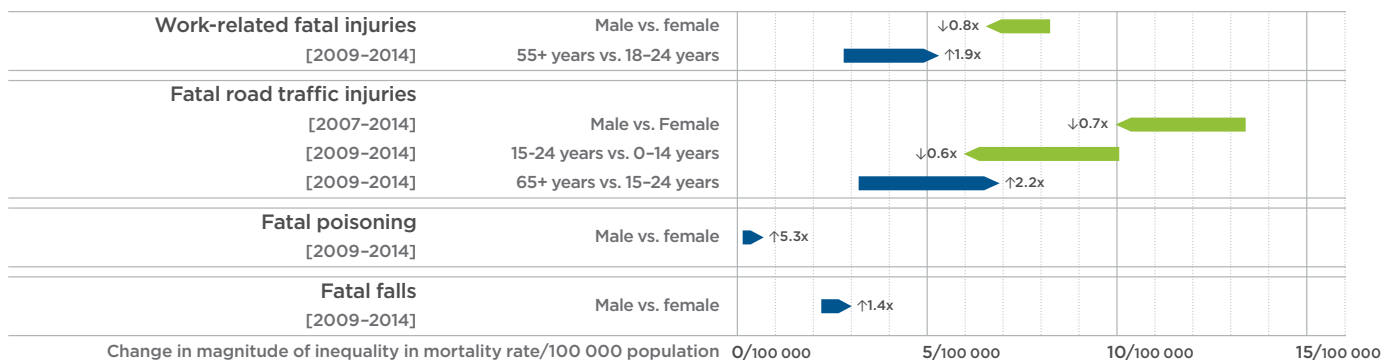
Housing and basic services



Urban and environmental exposures



Injuries

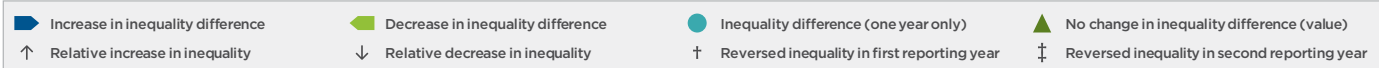


Notes: HDC - households with dependent children; HH - households.

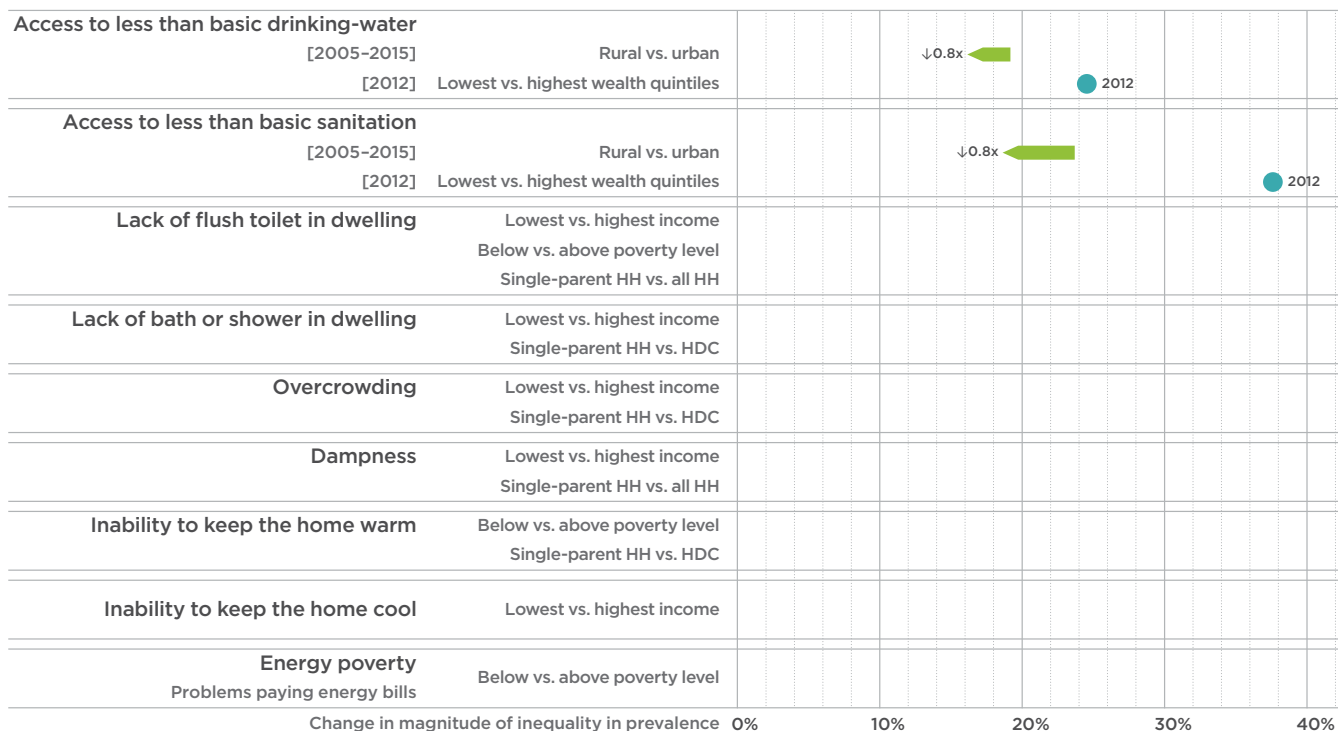
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

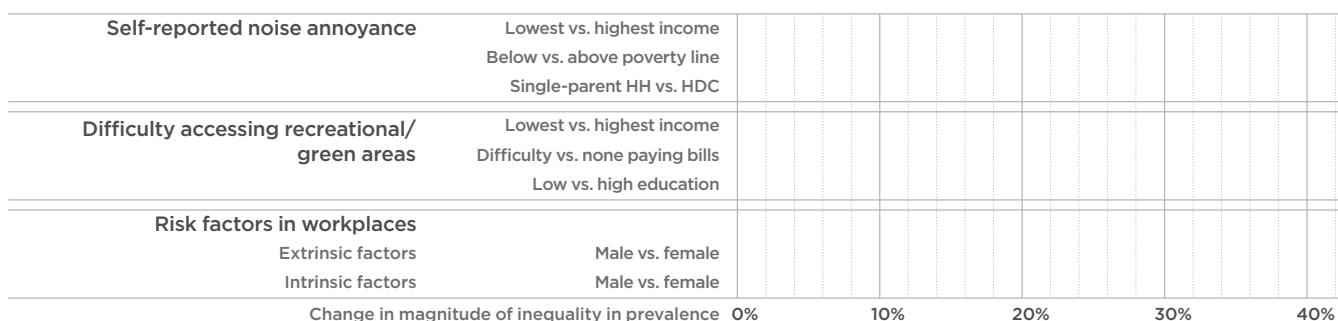
Republic of Moldova - variation over time of environmental health inequalities



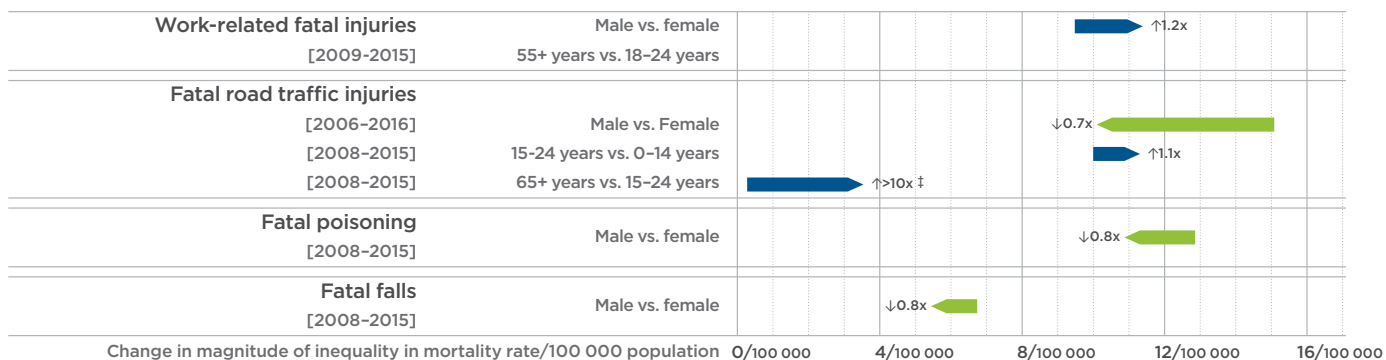
Housing and basic services



Urban and environmental exposures

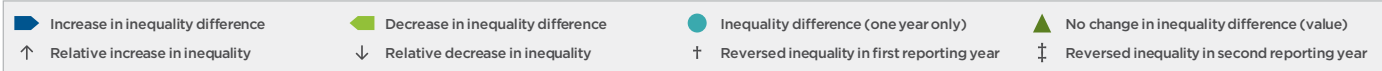


Injuries

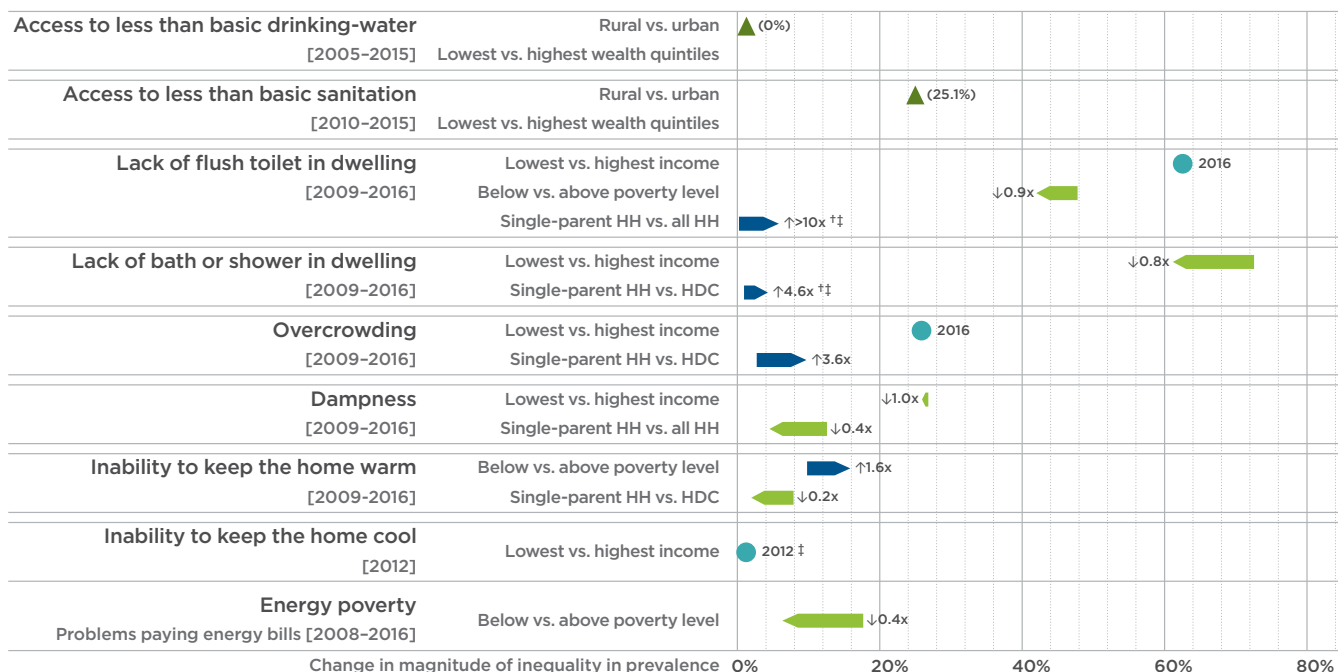


Notes: HDC - households with dependent children; HH - households. An empty row indicates that no country data for that indicator were identified.

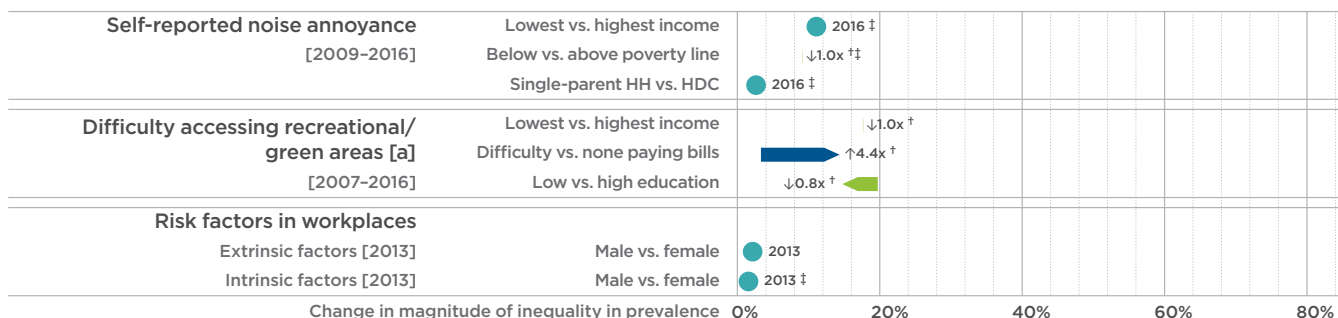
Romania - variation over time of environmental health inequalities



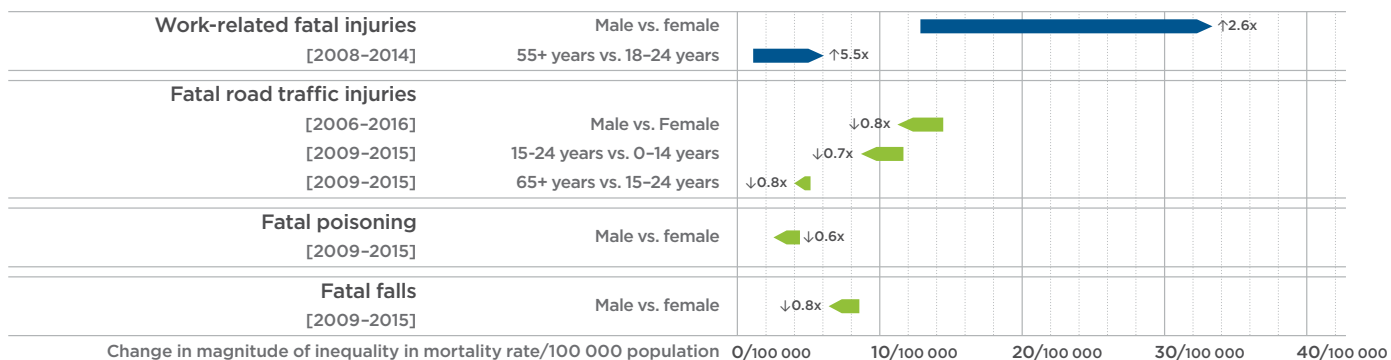
Housing and basic services



Urban and environmental exposures



Injuries

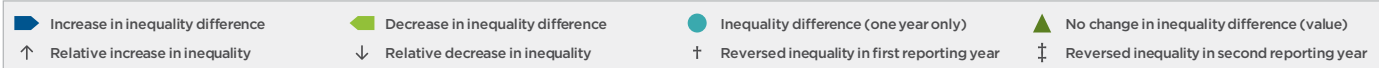


Notes: HDC - households with dependent children; HH - households.

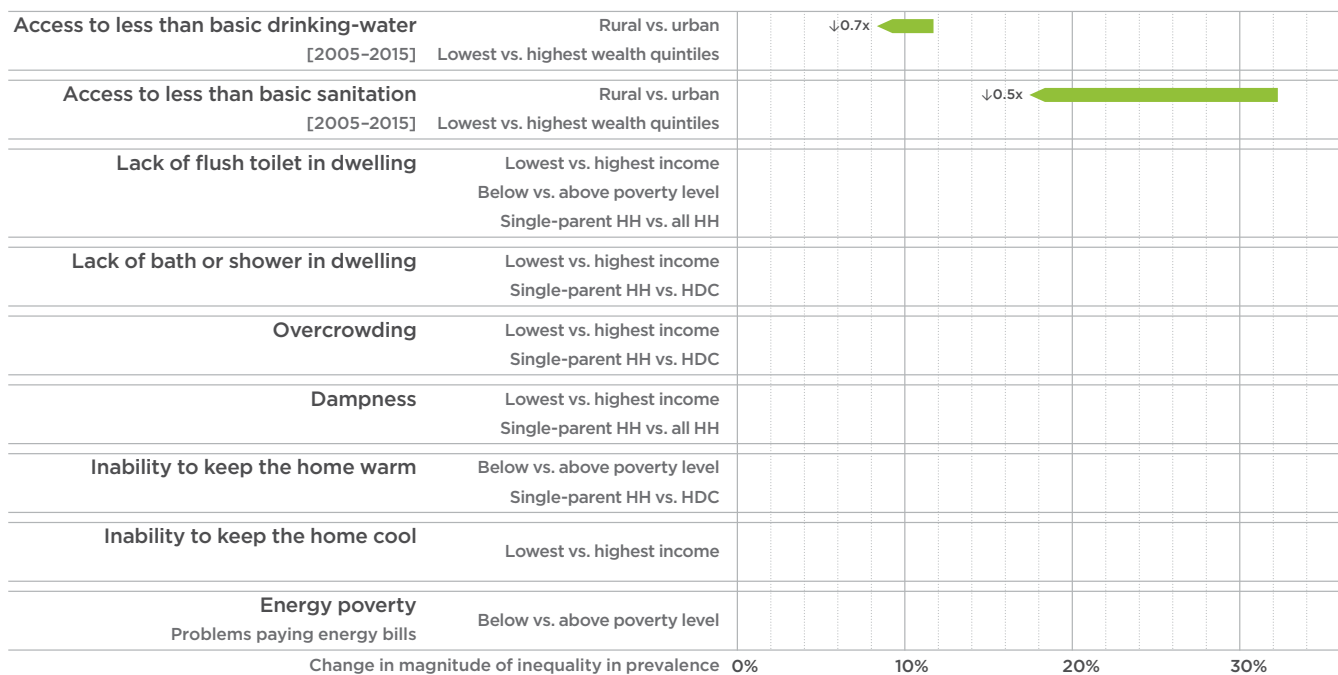
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

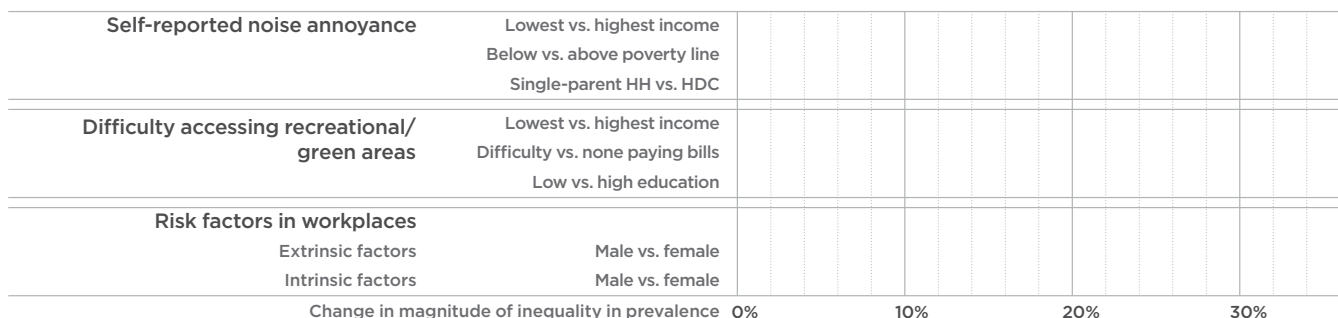
Russian Federation - variation over time of environmental health inequalities



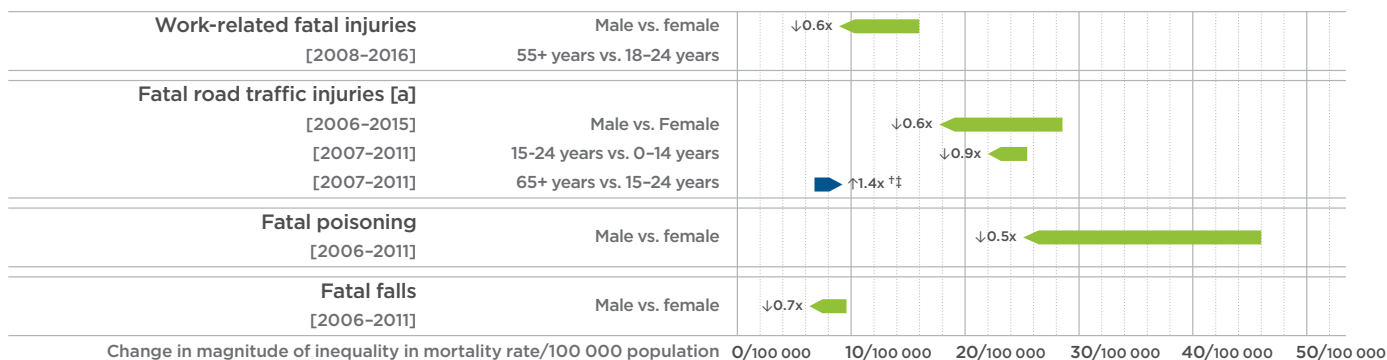
Housing and basic services



Urban and environmental exposures

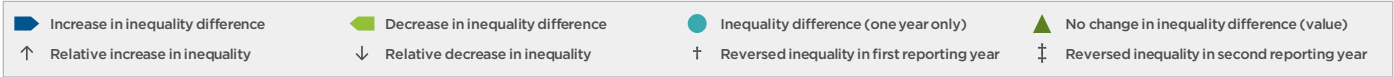


Injuries

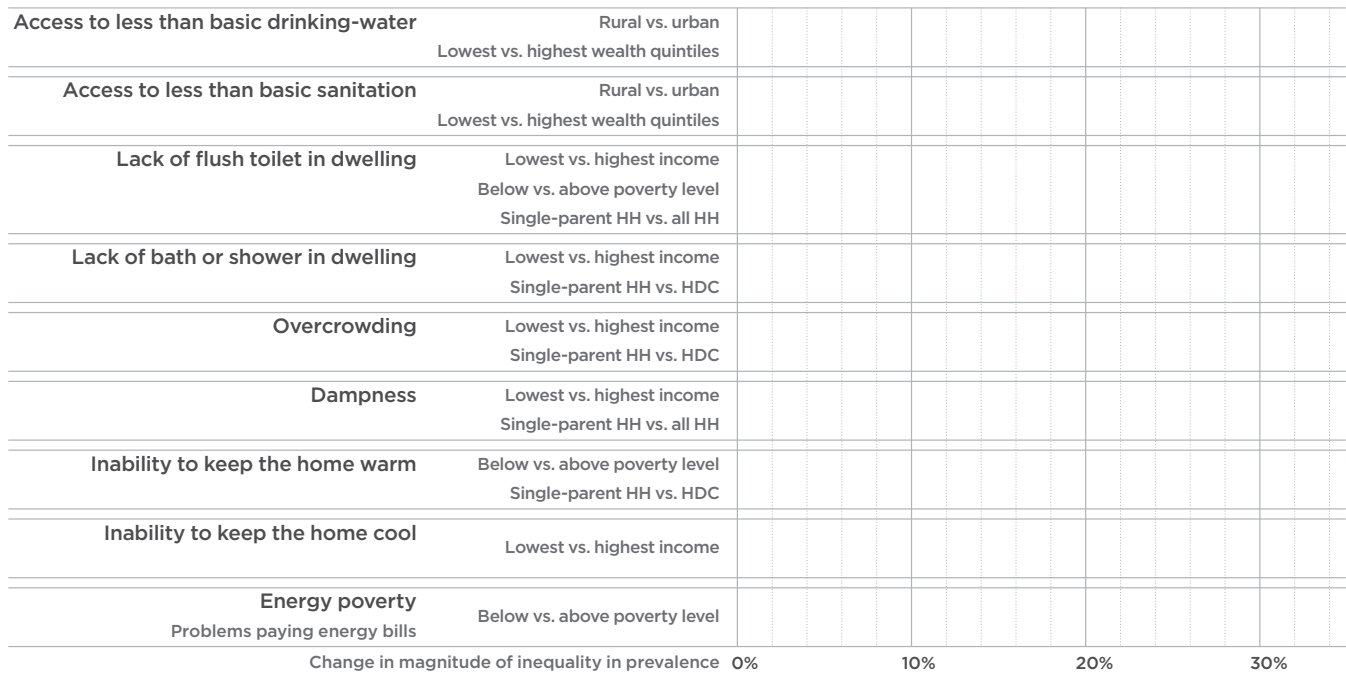


Notes: HDC - households with dependent children; HH - households.
 [a] only data on mortality from all transport injuries were available.
 An empty row indicates that no country data for that indicator were identified.

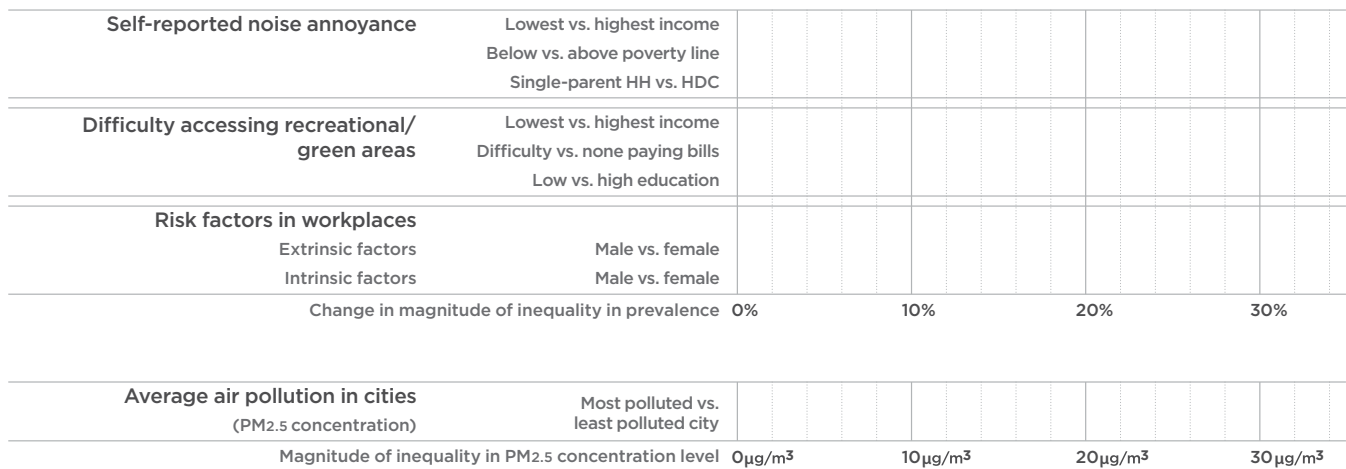
San Marino - variation over time of environmental health inequalities



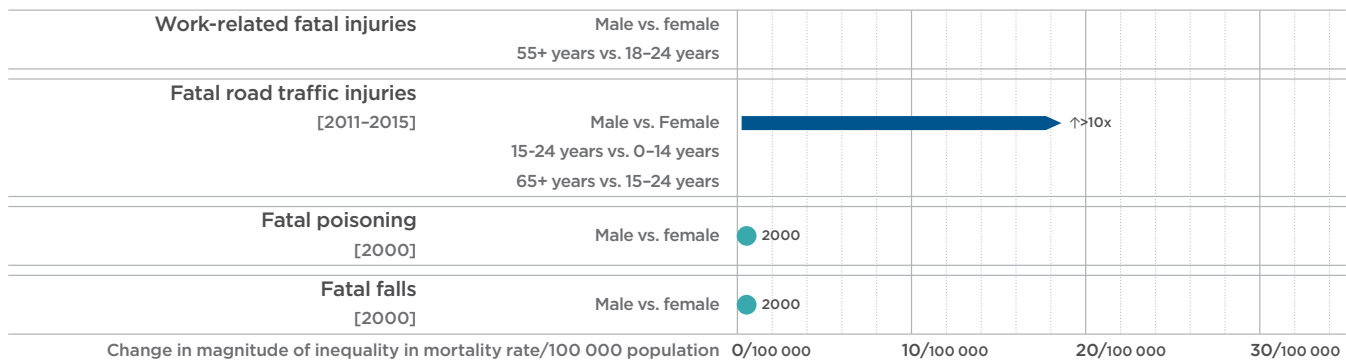
Housing and basic services



Urban and environmental exposures



Injuries

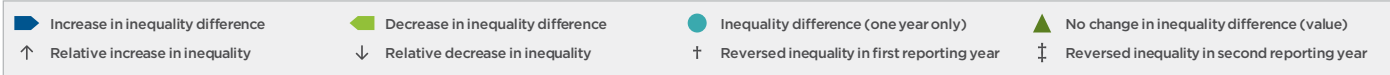


Notes: HDC - households with dependent children; HH - households.

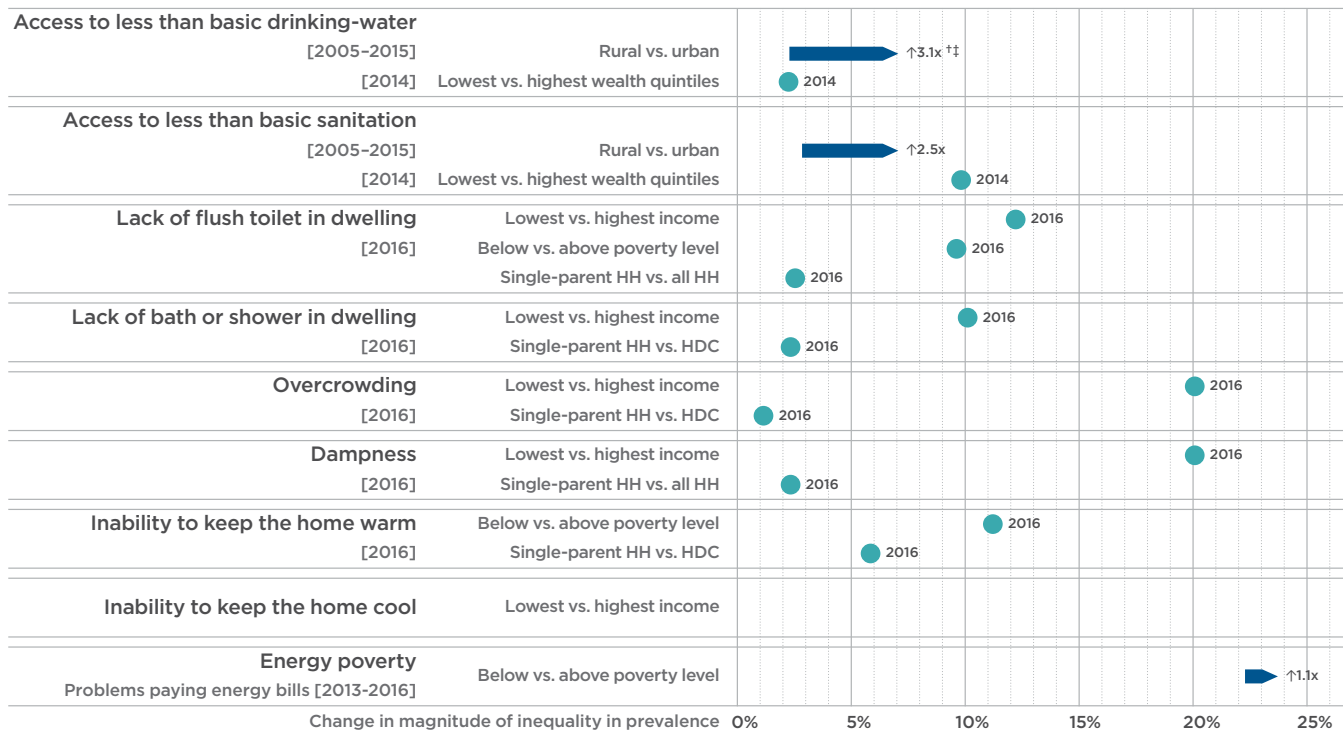
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

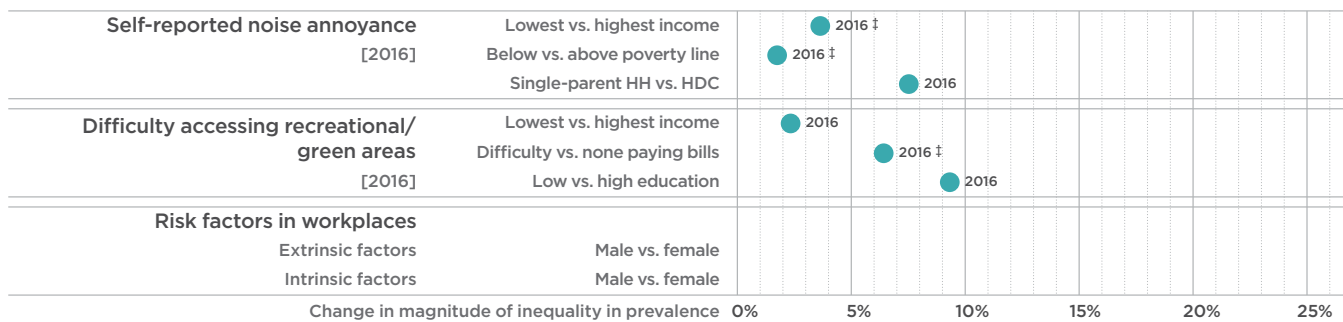
Serbia - variation over time of environmental health inequalities



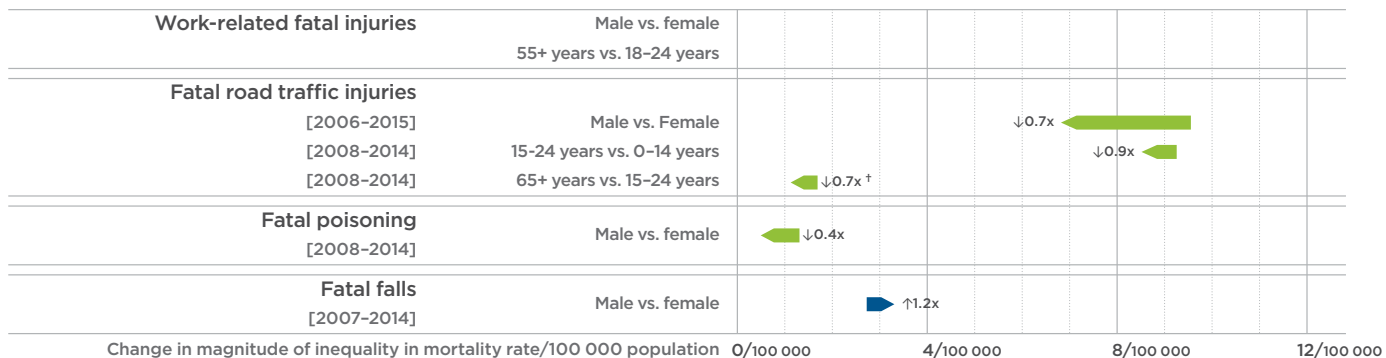
Housing and basic services



Urban and environmental exposures

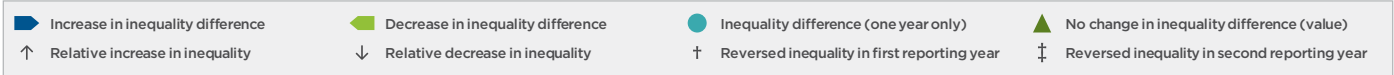


Injuries

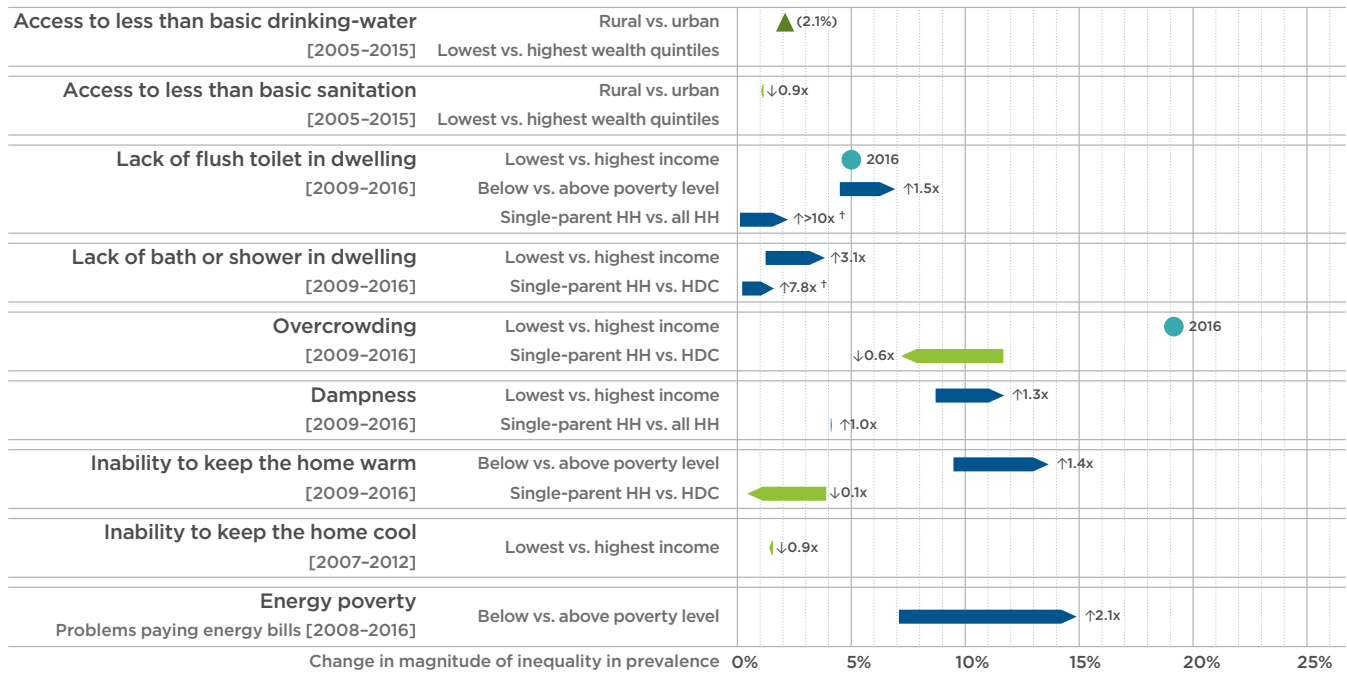


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

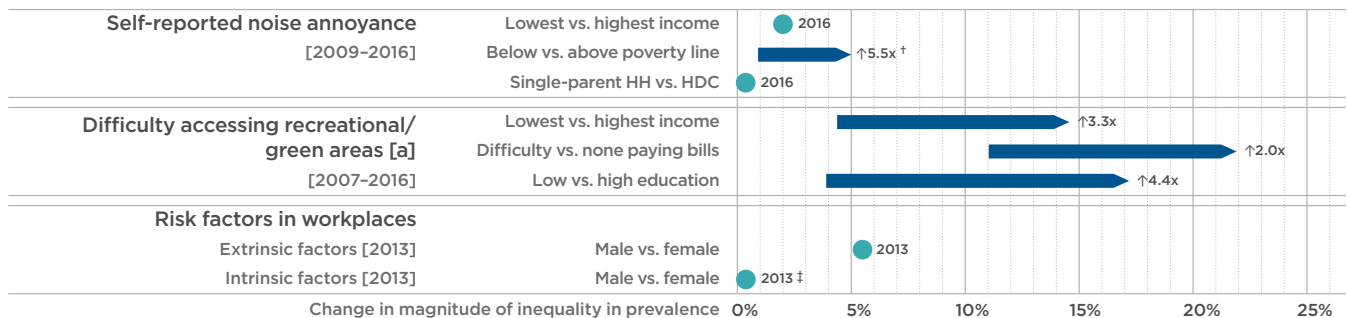
Slovakia - variation over time of environmental health inequalities



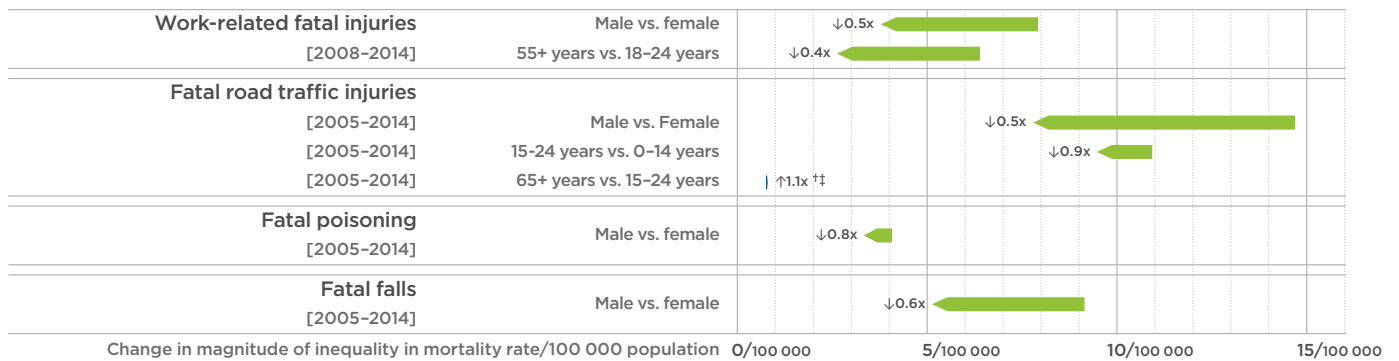
Housing and basic services



Urban and environmental exposures



Injuries

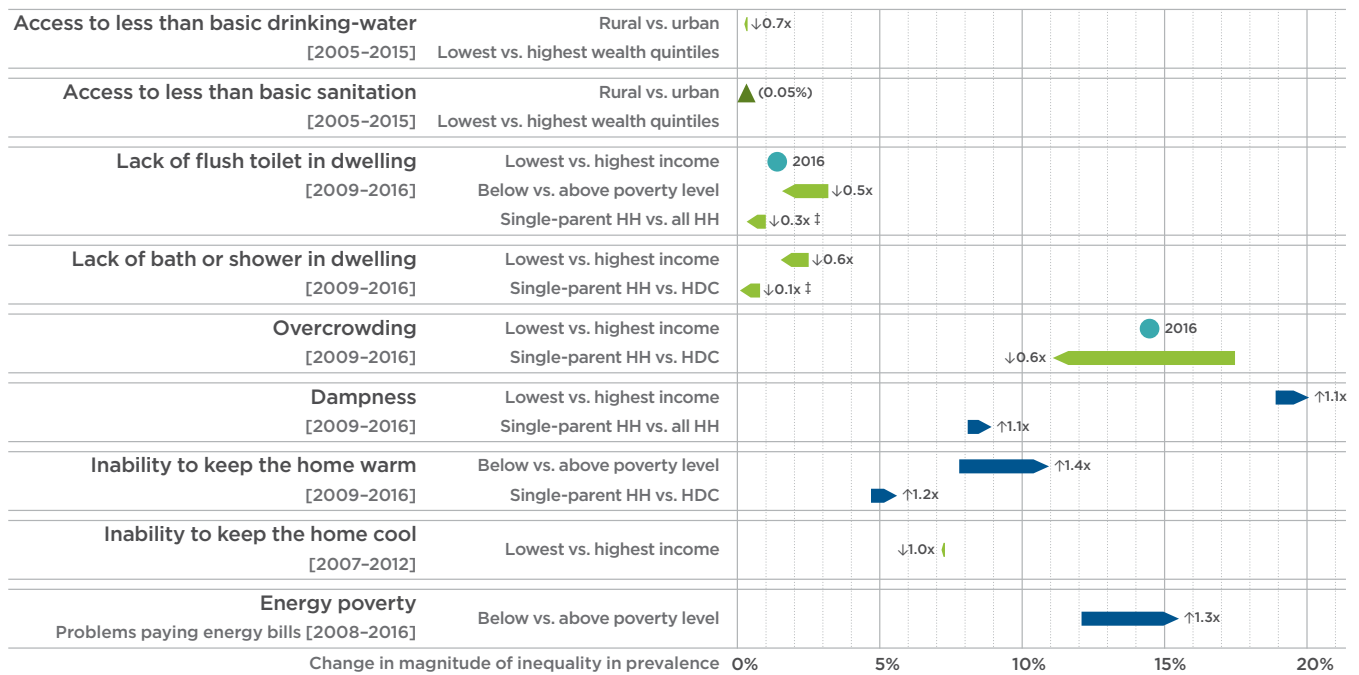


Notes: HDC - households with dependent children; HH - households.
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.
An empty row indicates that no country data for that indicator were identified.

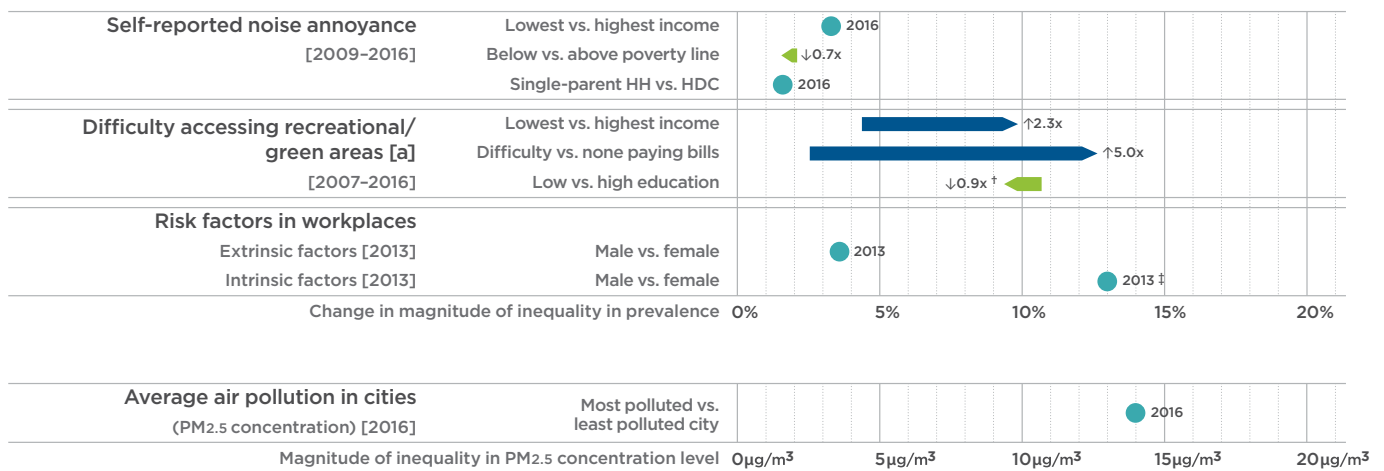
Slovenia - variation over time of environmental health inequalities



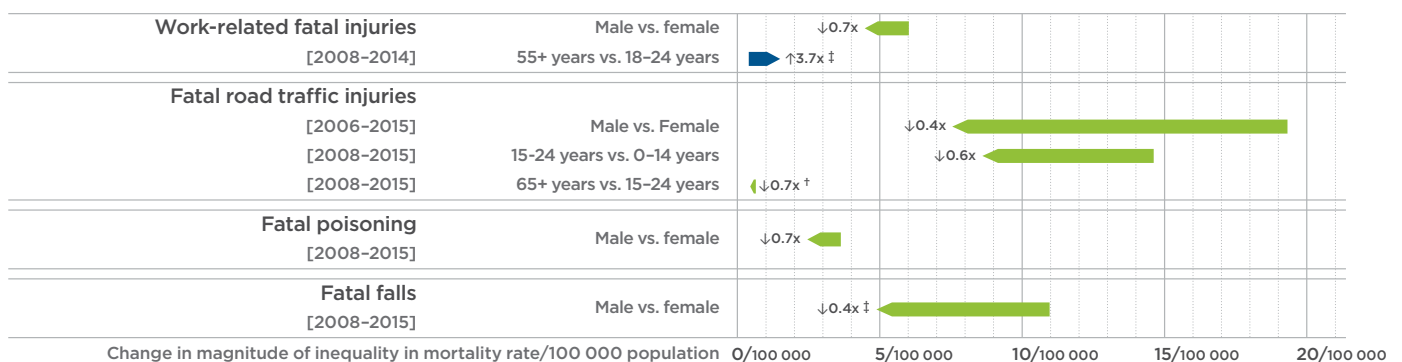
Housing and basic services



Urban and environmental exposures



Injuries

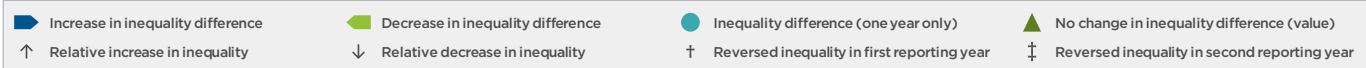


Notes: HDC - households with dependent children; HH - households.

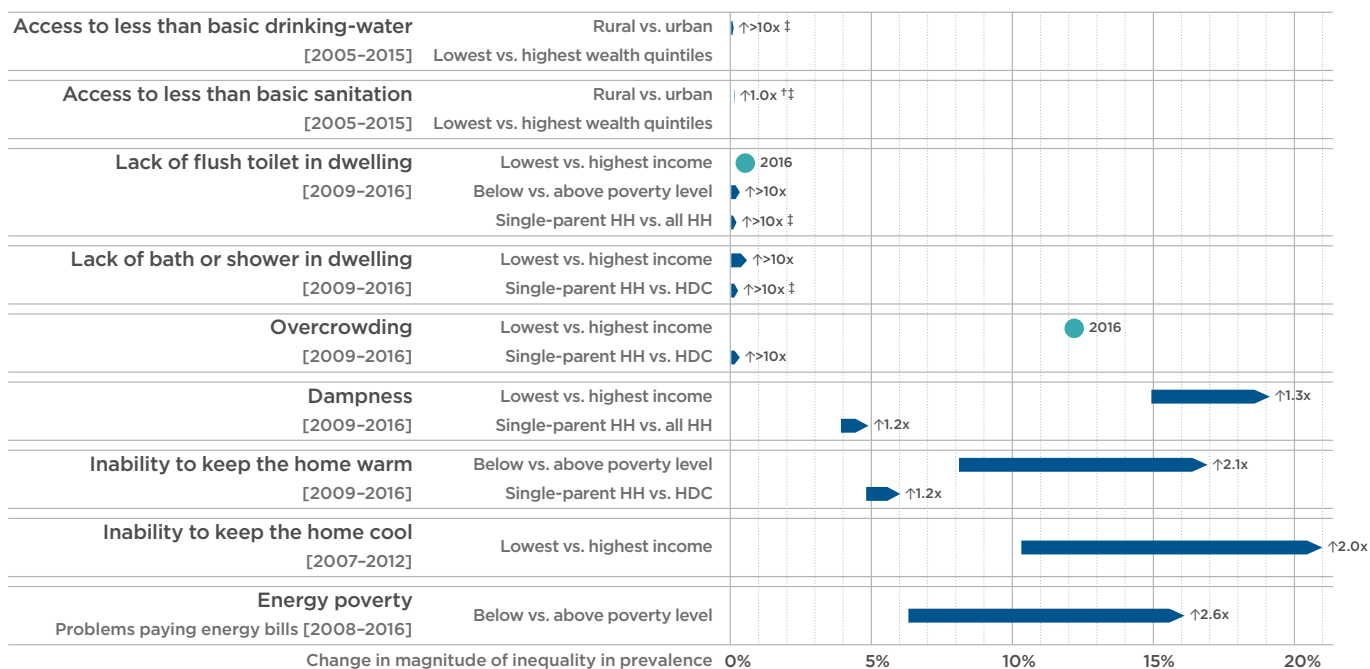
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

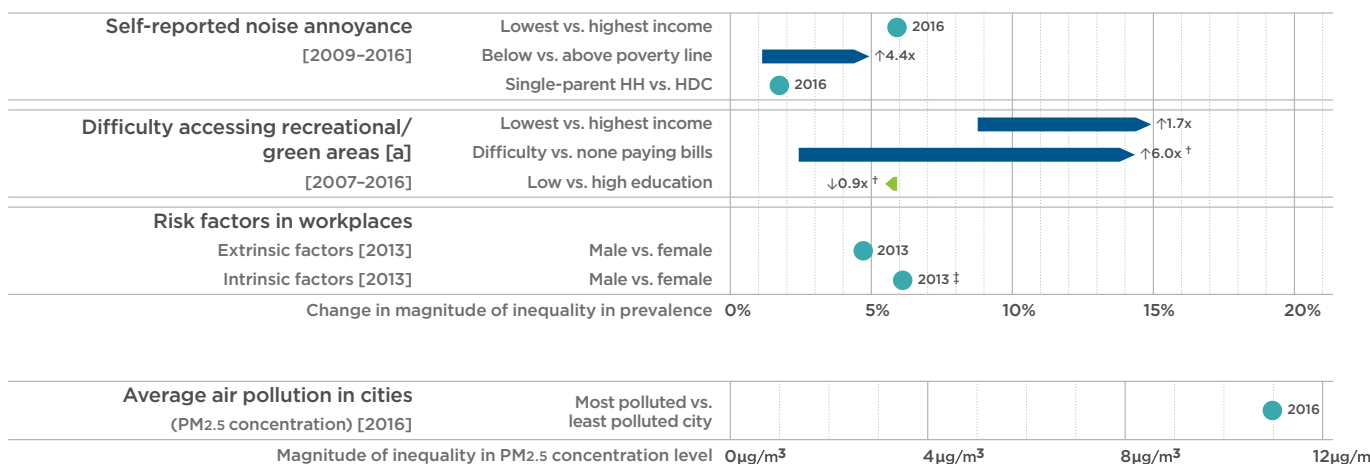
Spain - variation over time of environmental health inequalities



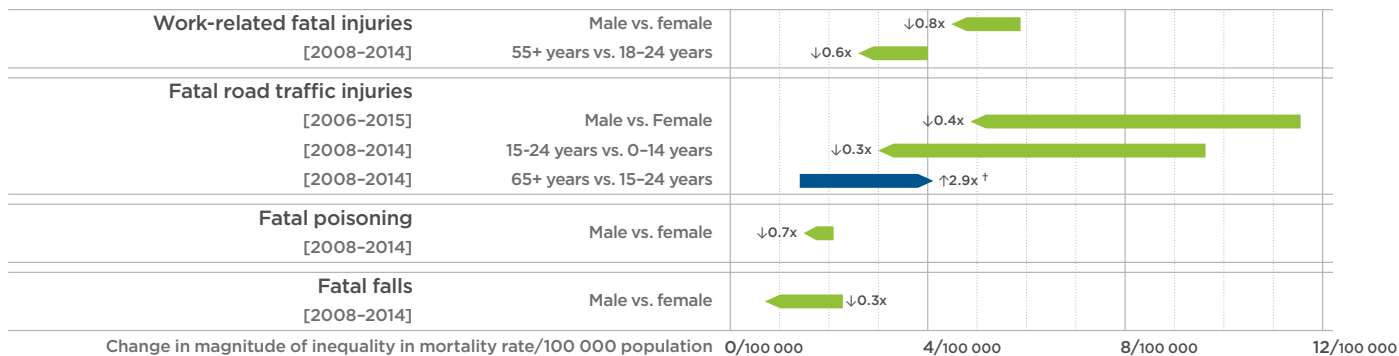
Housing and basic services



Urban and environmental exposures

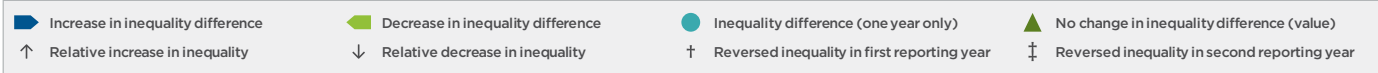


Injuries

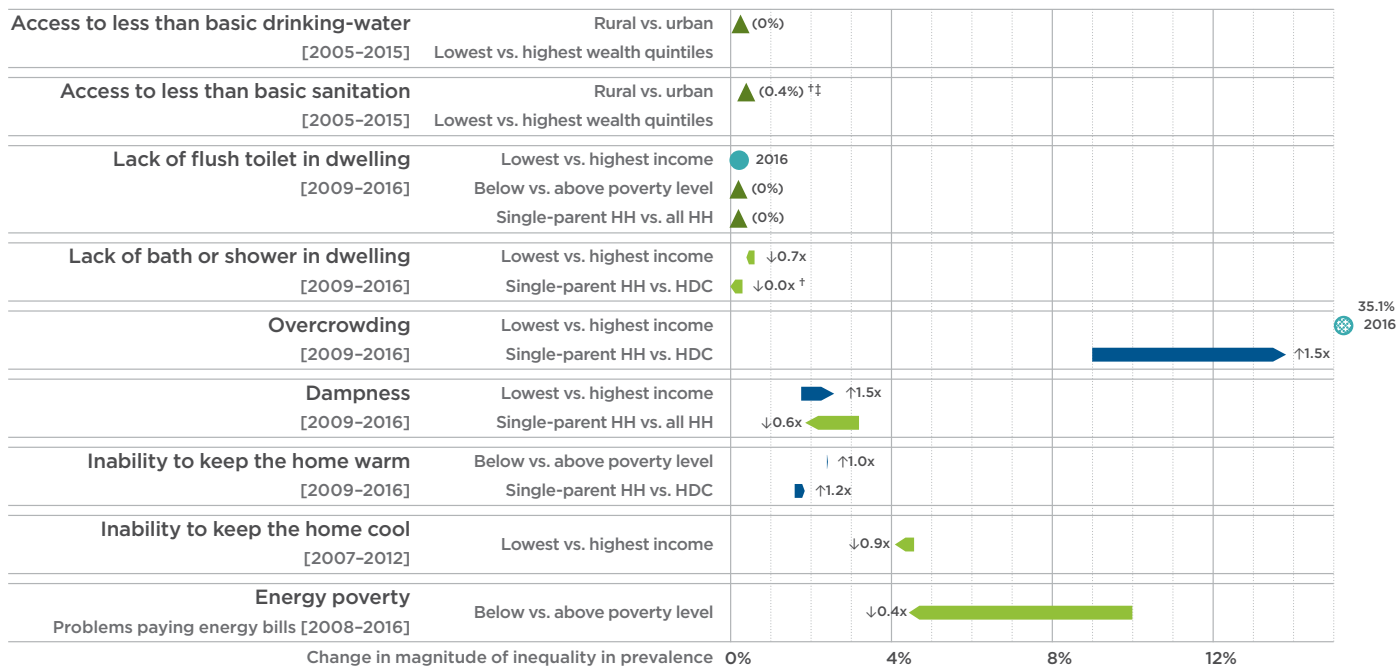


Notes: HDC - households with dependent children; HH - households.
 [a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.
 An empty row indicates that no country data for that indicator were identified.

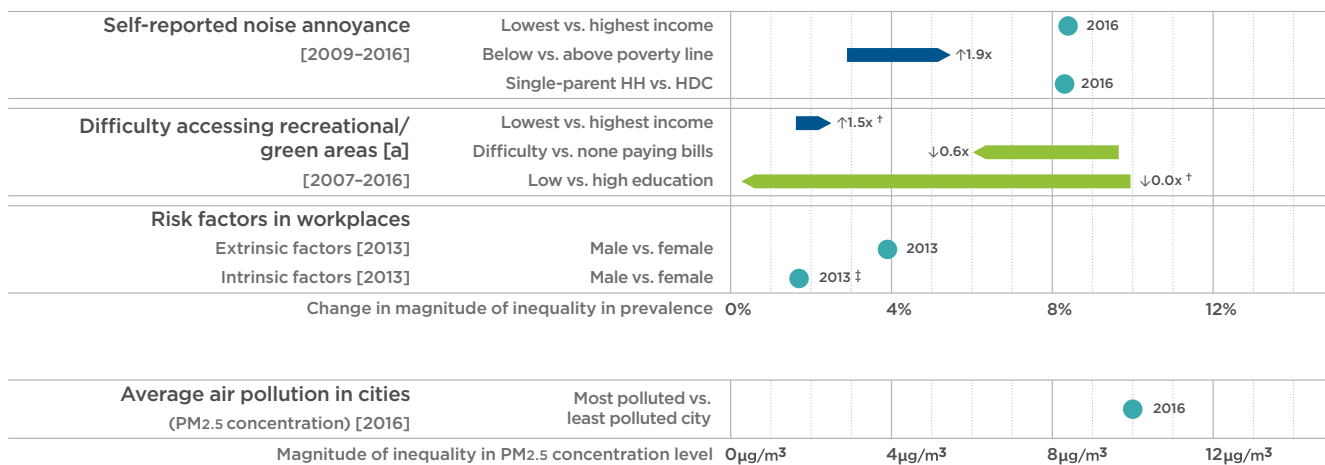
Sweden - variation over time of environmental health inequalities



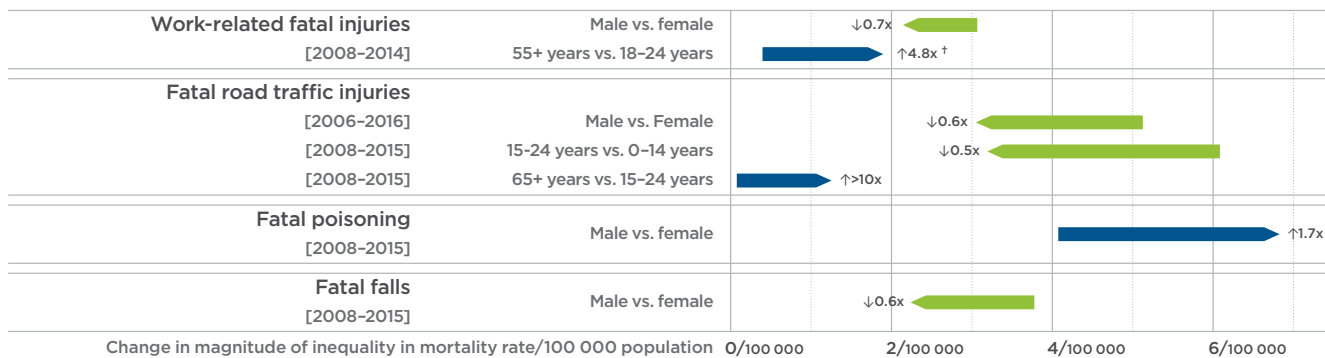
Housing and basic services



Urban and environmental exposures

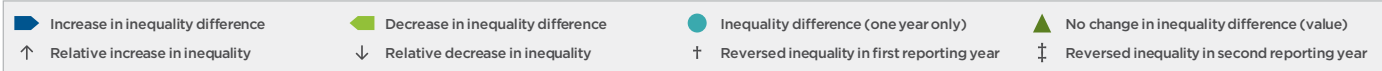


Injuries

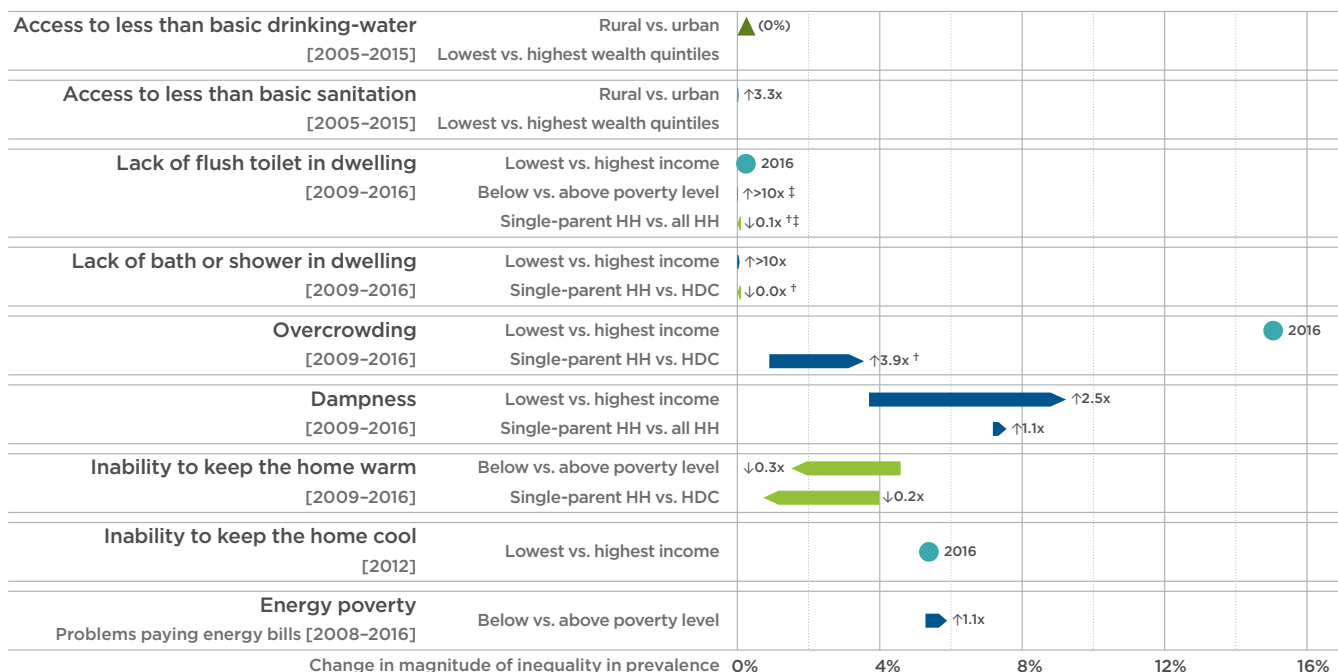


Notes: HDC - households with dependent children; HH - households.
 [a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.
 An empty row indicates that no country data for that indicator were identified.

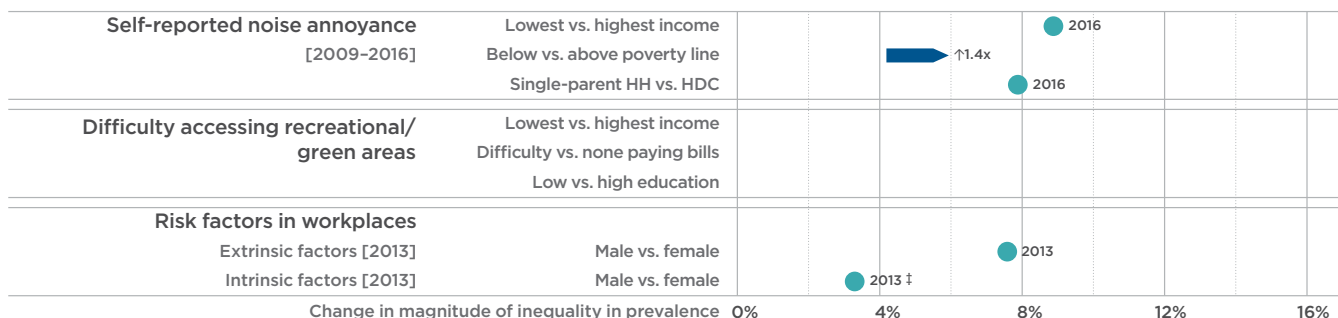
Switzerland - variation over time of environmental health inequalities



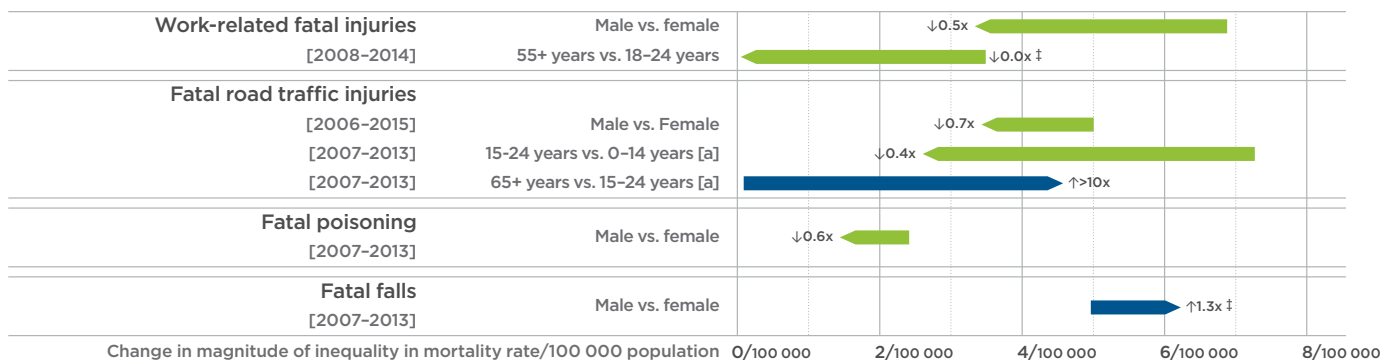
Housing and basic services



Urban and environmental exposures



Injuries

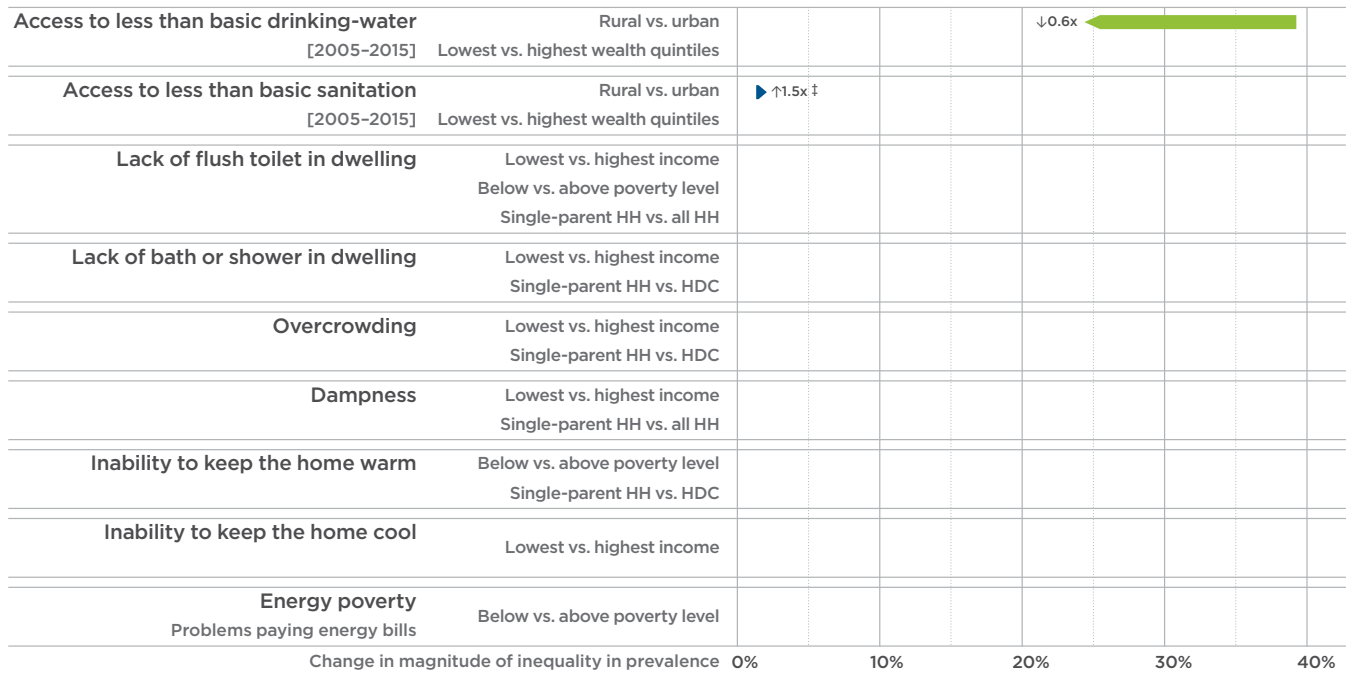


Notes: HDC - households with dependent children; HH - households.
[a] first year of reporting represents fatal transport injuries.
An empty row indicates that no country data for that indicator were identified.

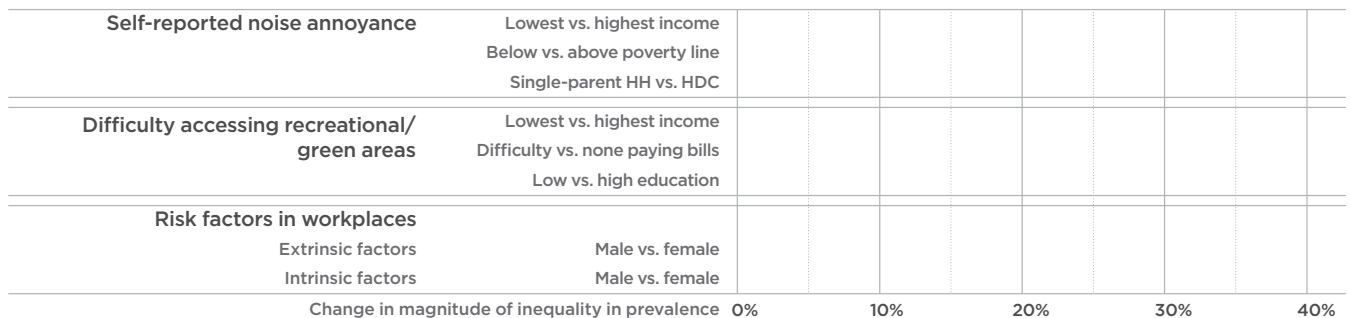
Tajikistan - variation over time of environmental health inequalities



Housing and basic services



Urban and environmental exposures



Injuries

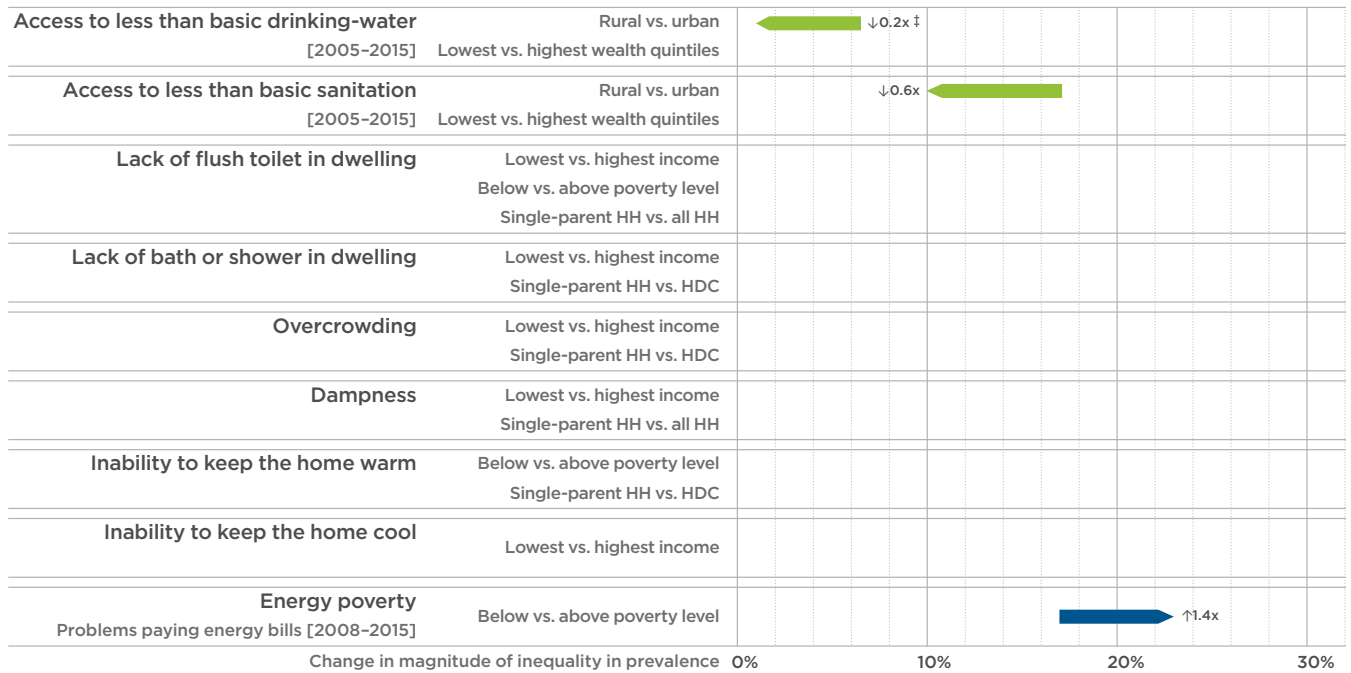


Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

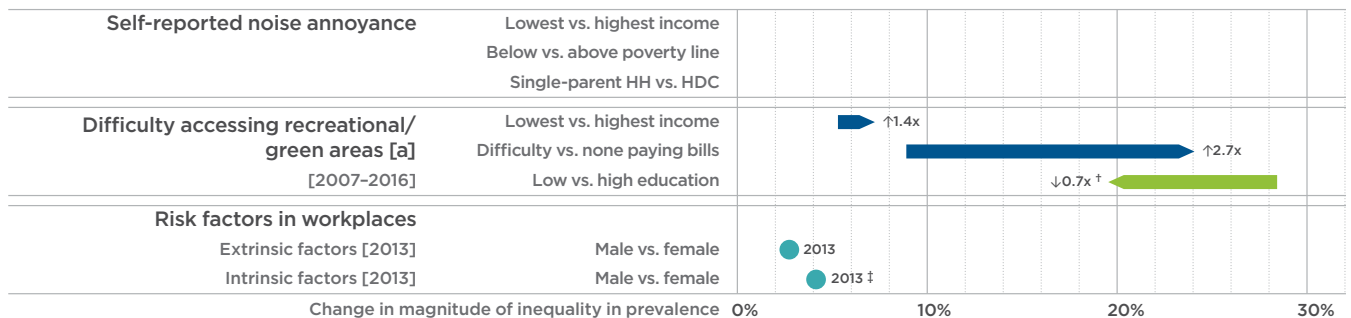
Turkey - variation over time of environmental health inequalities



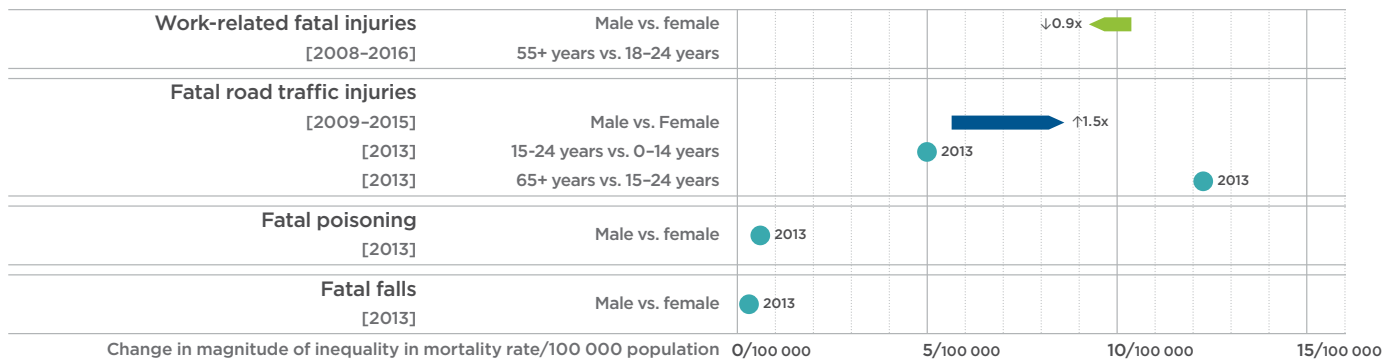
Housing and basic services



Urban and environmental exposures



Injuries

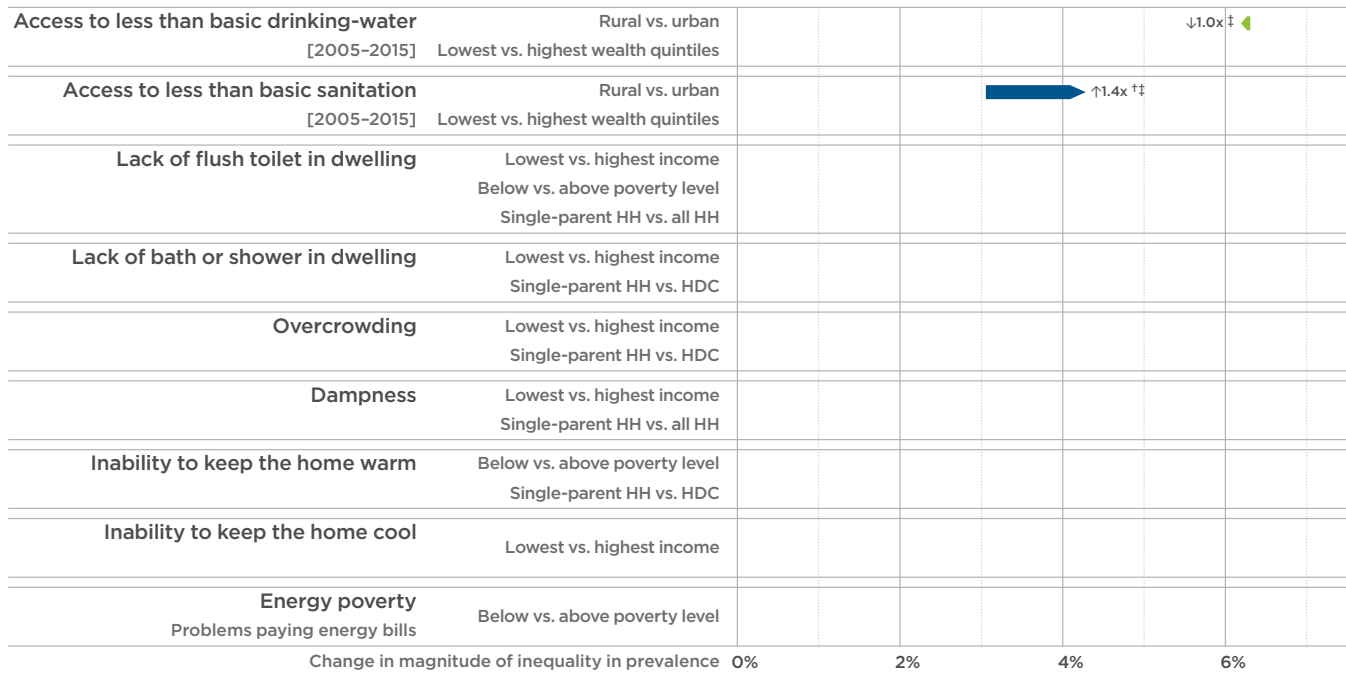


Notes: HDC - households with dependent children; HH - households.
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.
An empty row indicates that no country data for that indicator were identified.

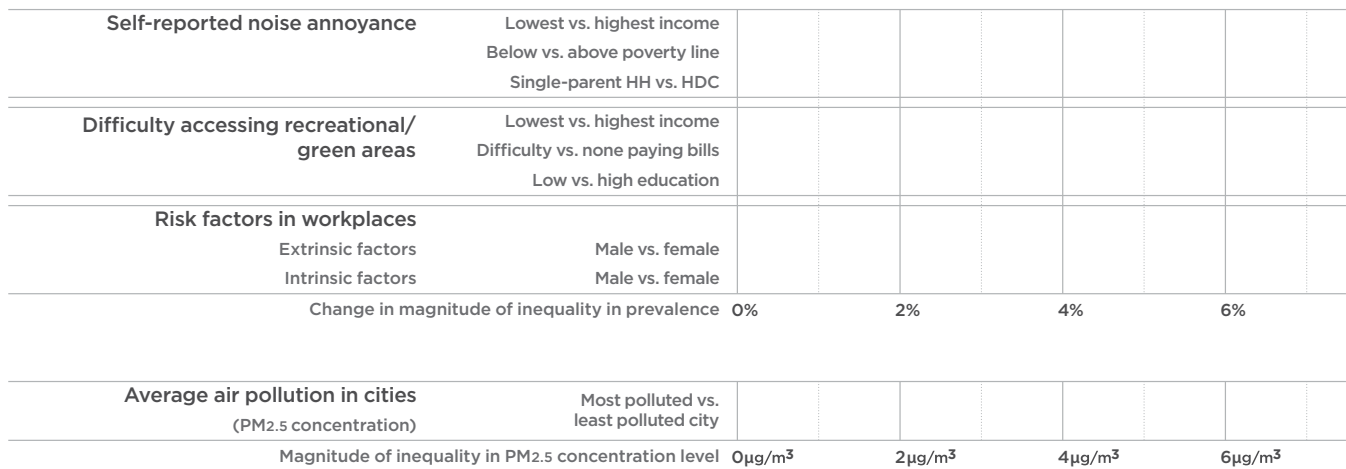
Turkmenistan - variation over time of environmental health inequalities



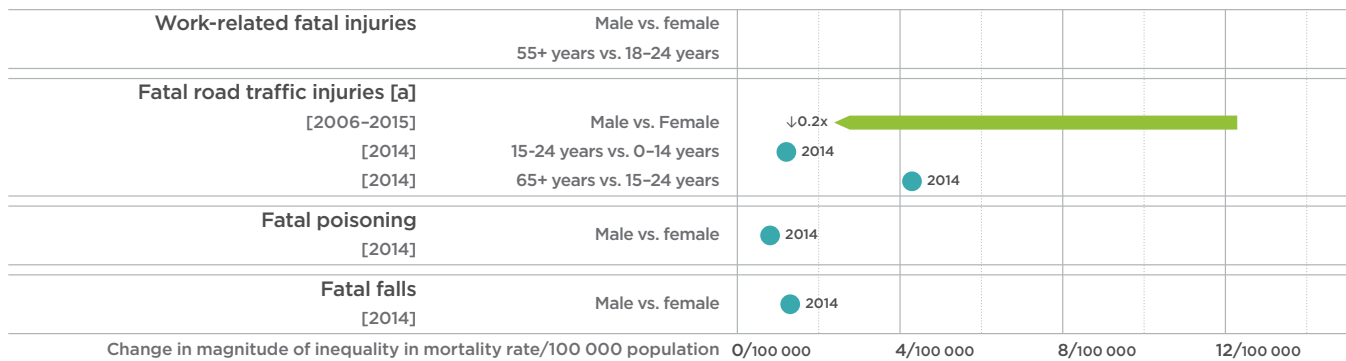
Housing and basic services



Urban and environmental exposures

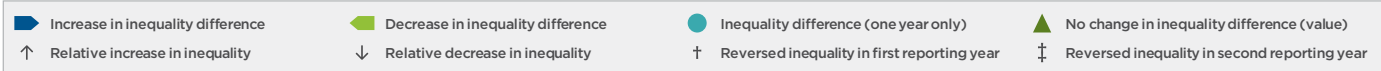


Injuries

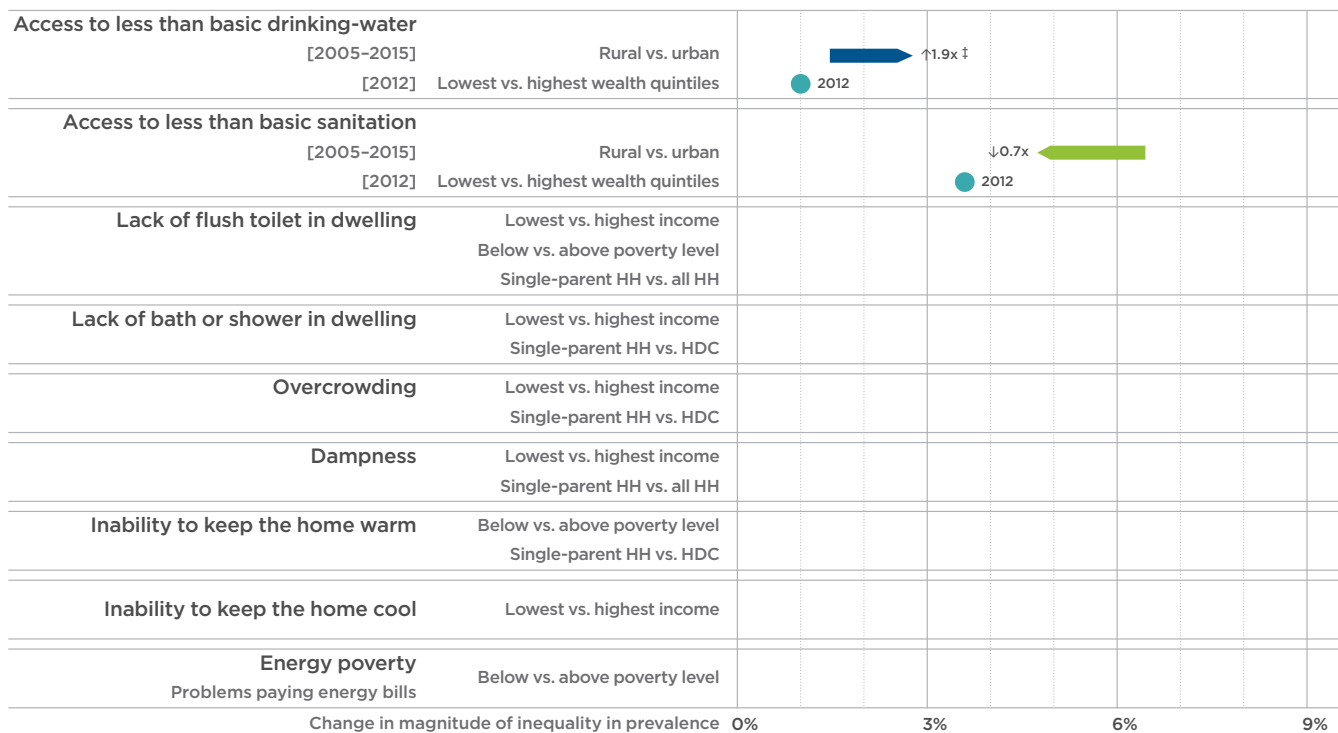


Notes: HDC - households with dependent children; HH - households.
 [a] only data on mortality from all transport injuries were available.
 An empty row indicates that no country data for that indicator were identified.

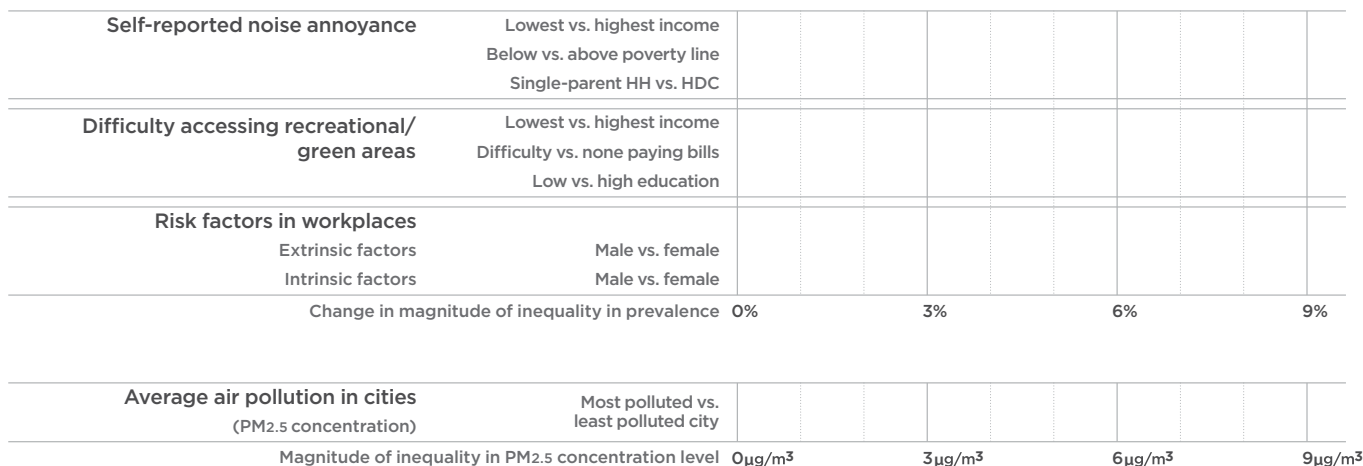
Ukraine - variation over time of environmental health inequalities



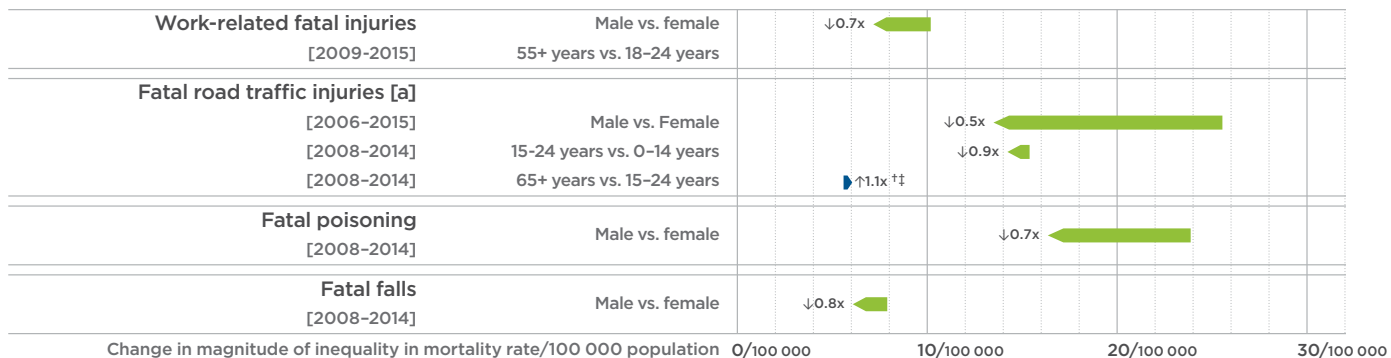
Housing and basic services



Urban and environmental exposures

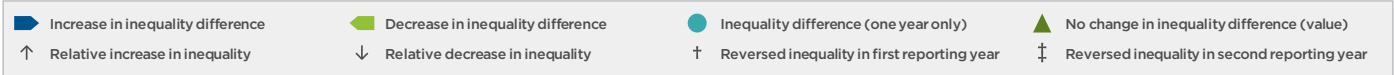


Injuries

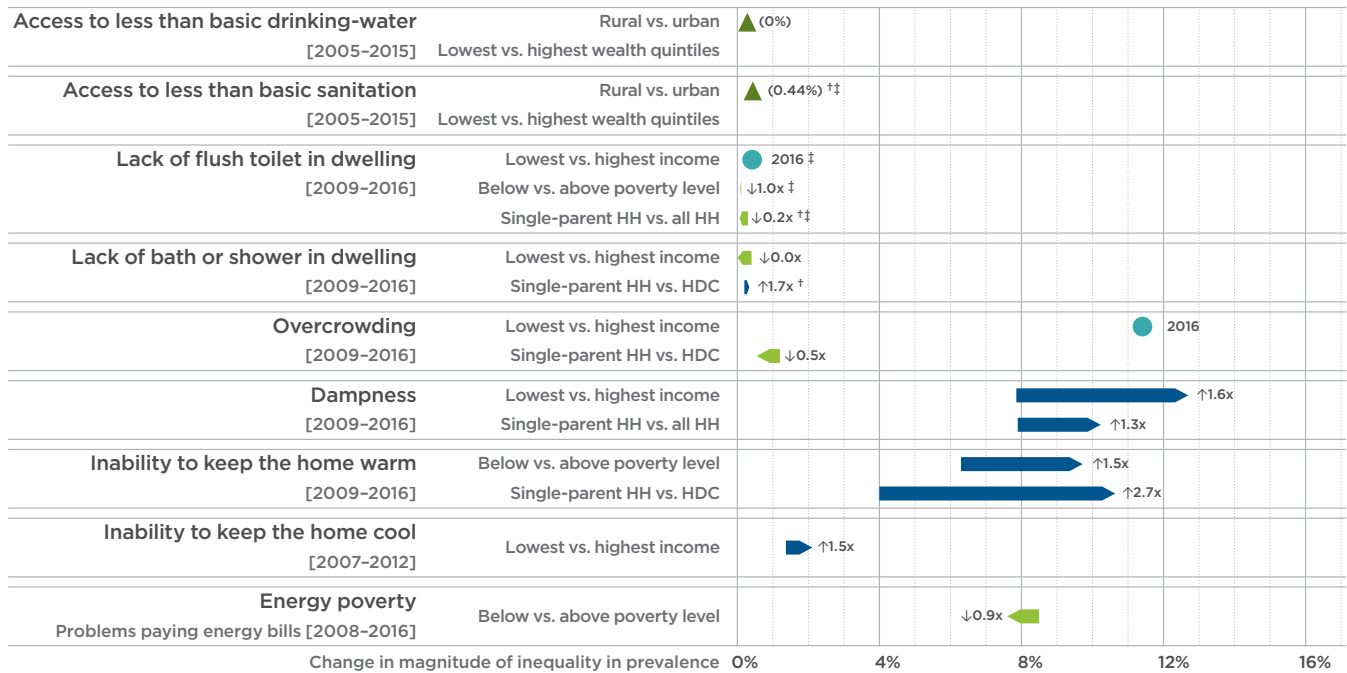


Notes: HDC - households with dependent children; HH - households.
[a] only data on mortality from all transport injuries were available.
An empty row indicates that no country data for that indicator were identified.

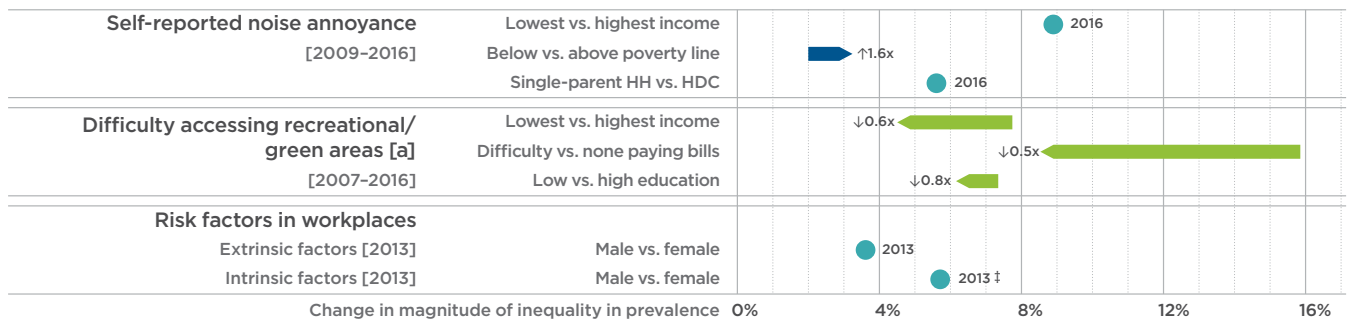
United Kingdom - variation over time of environmental health inequalities



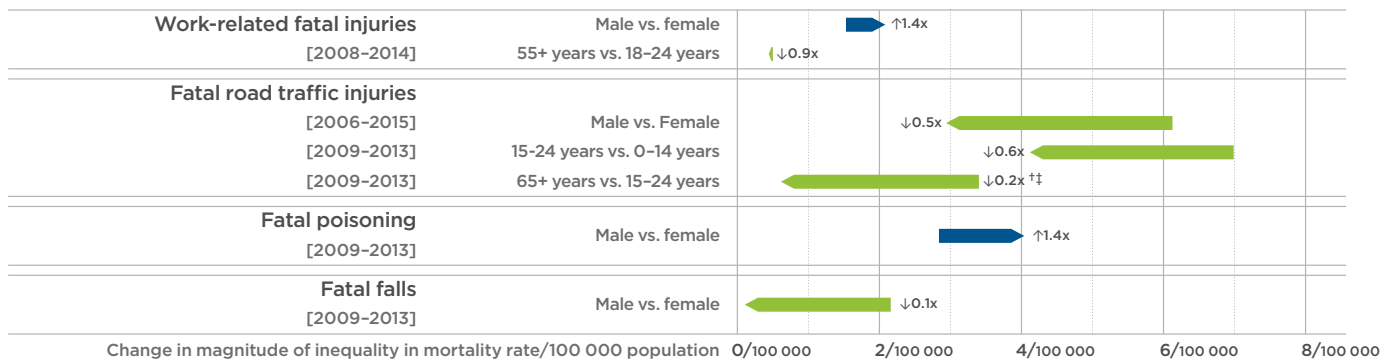
Housing and basic services



Urban and environmental exposures



Injuries

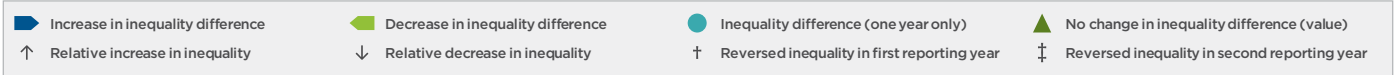


Notes: HDC - households with dependent children; HH - households.

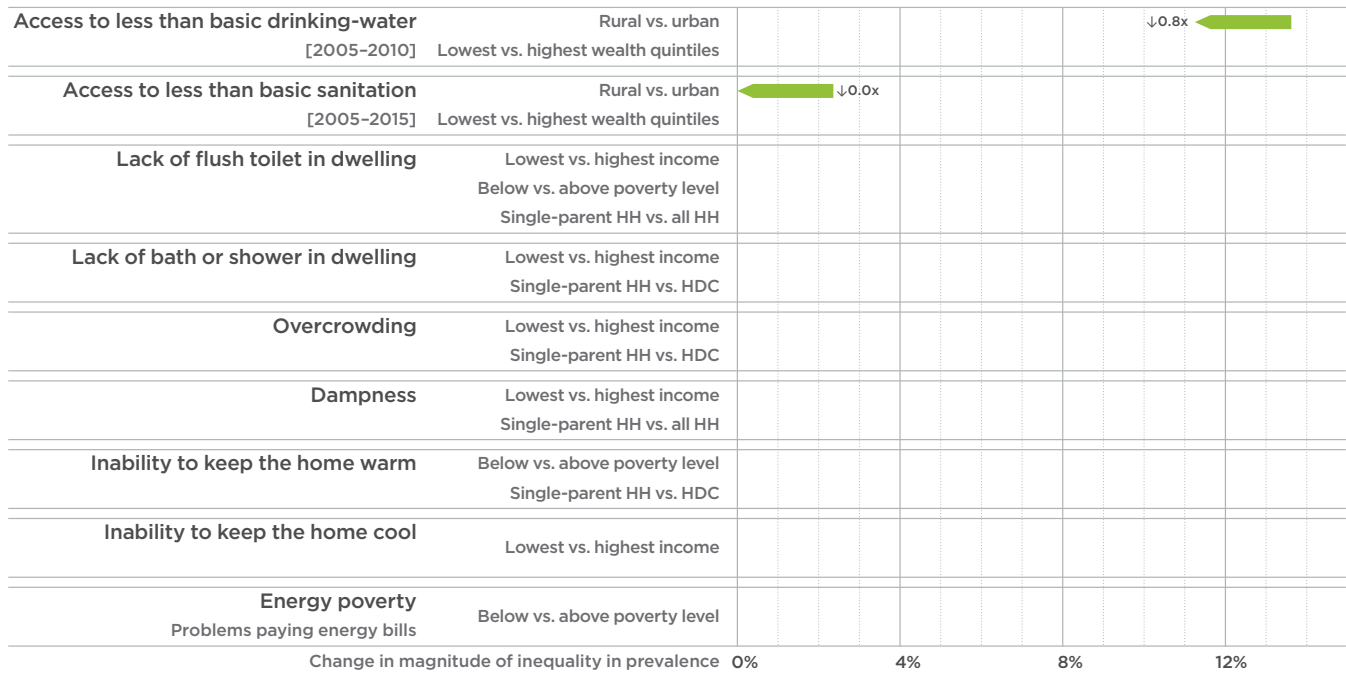
[a] the format of the survey question regarding access to recreational or green spaces has changed over time, so data may not be fully comparable.

An empty row indicates that no country data for that indicator were identified.

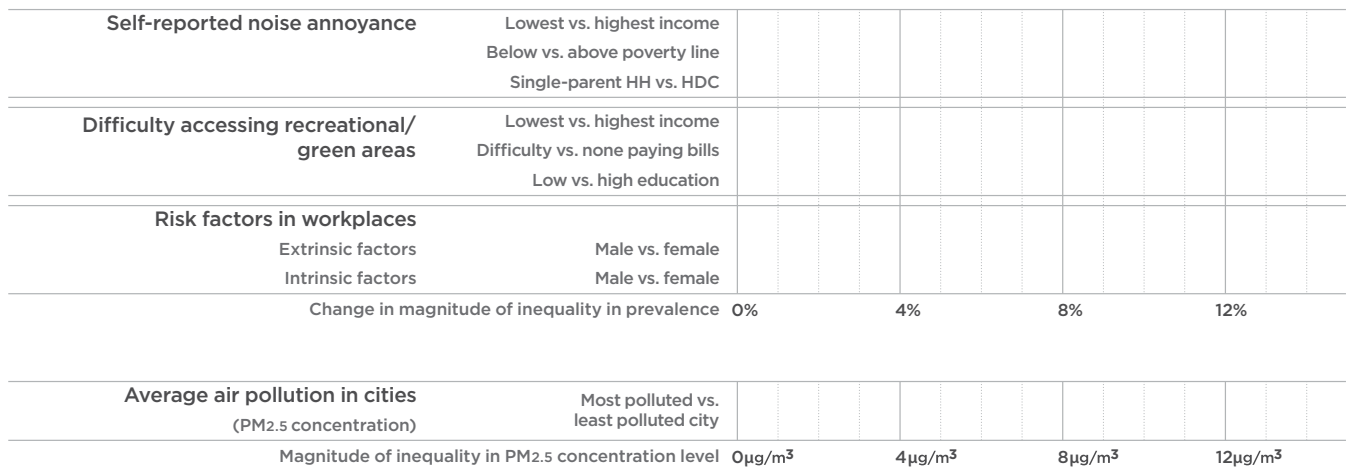
Uzbekistan - variation over time of environmental health inequalities



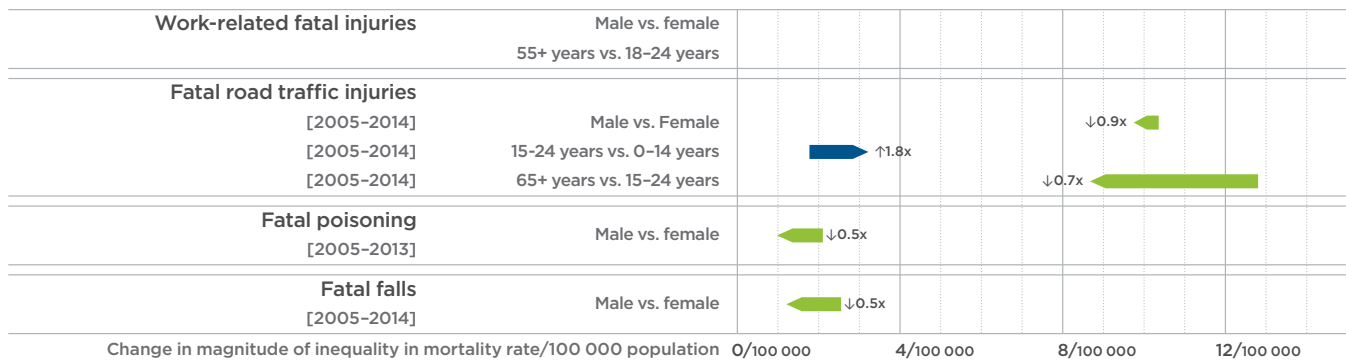
Housing and basic services



Urban and environmental exposures



Injuries



Notes: HDC - households with dependent children; HH - households.
An empty row indicates that no country data for that indicator were identified.

References

- WHO Regional Office for Europe (2010). Parma Declaration on Environment and Health. Fifth Ministerial Conference on Environment and Health. WHO Regional Office for Europe, Copenhagen (http://www.euro.who.int/__data/assets/pdf_file/0011/78608/E93618.pdf, accessed 19 July 2019).
- WHO Regional Office for Europe (2012). Environmental health inequalities in Europe. Assessment report. WHO Regional Office for Europe, Copenhagen (http://www.euro.who.int/__data/assets/pdf_file/0010/157969/e96194.pdf?ua=1, accessed 19 July 2019).
- WHO Regional Office for Europe (2019). Environmental health inequalities in Europe. Second assessment report. WHO Regional Office for Europe, Copenhagen (<https://apps.who.int/iris/bitstream/handle/10665/325176/9789289054157-eng.pdf?sequence=1&isAllowed=y>, accessed 19 July 2019).

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

Member States

Albania
Andorra
Armenia
Austria
Azerbaijan
Belarus
Belgium
Bosnia and Herzegovina
Bulgaria
Croatia
Cyprus
Czechia
Denmark
Estonia
Finland
France
Georgia
Germany
Greece
Hungary
Iceland
Ireland
Israel
Italy
Kazakhstan
Kyrgyzstan
Latvia
Lithuania
Luxembourg
Malta
Monaco
Montenegro
Netherlands
North Macedonia
Norway
Poland
Portugal
Republic of Moldova
Romania
Russian Federation
San Marino
Serbia
Slovakia
Slovenia
Spain
Sweden
Switzerland
Tajikistan
Turkey
Turkmenistan
Ukraine
United Kingdom
Uzbekistan

Environmental determinants are a major contributor to health and well-being but are not distributed equally. In most countries, disadvantaged population groups tend to be significantly more exposed to environmental risks. Major assessment reports published in 2012 and 2019 reviewed the status of environmental health inequalities within countries in the WHO European Region.

This report is a supplement to the second assessment report and presents country profiles on environmental health inequalities related to housing conditions, basic services, urban environments and transport, work settings and injuries.

The profiles provide information on the changes between the first and the second assessment reports, giving quick and effective insight into the inequality increases or reductions over time for many indicators. Knowledge of national inequality features can support environmental and intersectoral action to identify and protect those who carry a disproportionate environmental burden, thereby contributing to a reduction in health inequalities.

World Health Organization Regional Office for Europe

UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark
Tel.: +45 45 33 70 00
Fax: +45 45 33 70 01
Email: eurocontact@who.int
Website: www.euro.who.int